245 Fifth Avenue, Amprior, Ontario K7S 3M3
Phone: (613) 623-3613 ● Fax: (613) 623-8705
Email: alytle@mcgonigalconstruction.ca

McGonigal Construction Ltd.

Transmittal

Attention:	Keith Oster	**From:**	Art Lytle
Company:	Tal-Co	**Date:**	September 30, 2020
Project:	Carleton Place Arena	**Phone:**	
Reference:	Masonry Shop Drawing Re-Submittal	**Pages:**	

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Keith,

Enclosed are the masonry data re-submittals for the Carleton Place Arena project for approval. If you have any questions or concerns, please do not hesitate to contact the undersigned at your earliest convenience.

Thank you,

Chris Chabot
Project Manager

DRAWING REVIEW
The review of this drawing does not in any way relieve the Contractor of responsibility from its actions and compliance with the Contract Documents

ID: CARLETON PLACE ARENA		Contract #: 7558
X	No Comment	Submission #: 1
	Reviewed as Noted	Review By: SC
	Rejected See Remarks	Date: 2020-10-05

Comments:
1. Contractor to verify all dimensions prior to fabrication.
2. All work to the 2012 Ontario Building Code.
3. Refer to EEG drawings S0 for full notes and details.

EASTERN ENGINEERING GROUP INC.
Consulting Engineers, Brockville, ON
Tel: (613)345-0400, Fax: (613)345-0008
www.easteng.com

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title: Carleton Place Arena Addition
Project Number:
Date: 26-Aug-20

***SUBCONTRACTOR*:**
(name & address) McGonigal Construction Ltd.
245 Fifth Avenue, Arnprior, Ontario K7S 3M3

Contact Name: Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number: (613) 623-3613

***SUPPLIER*:**
(name & address) Brampton Brick Ltd
225 Wanless Dr
Brampton, Ontario

Contract Name:
Telephone Number:

***MANUFACTURER*:**
(name & address) Brampton Brick Ltd
225 Wanless Dr
Brampton, Ontario

Contact Name:
Telephone Number:

Specification Name: Masonry

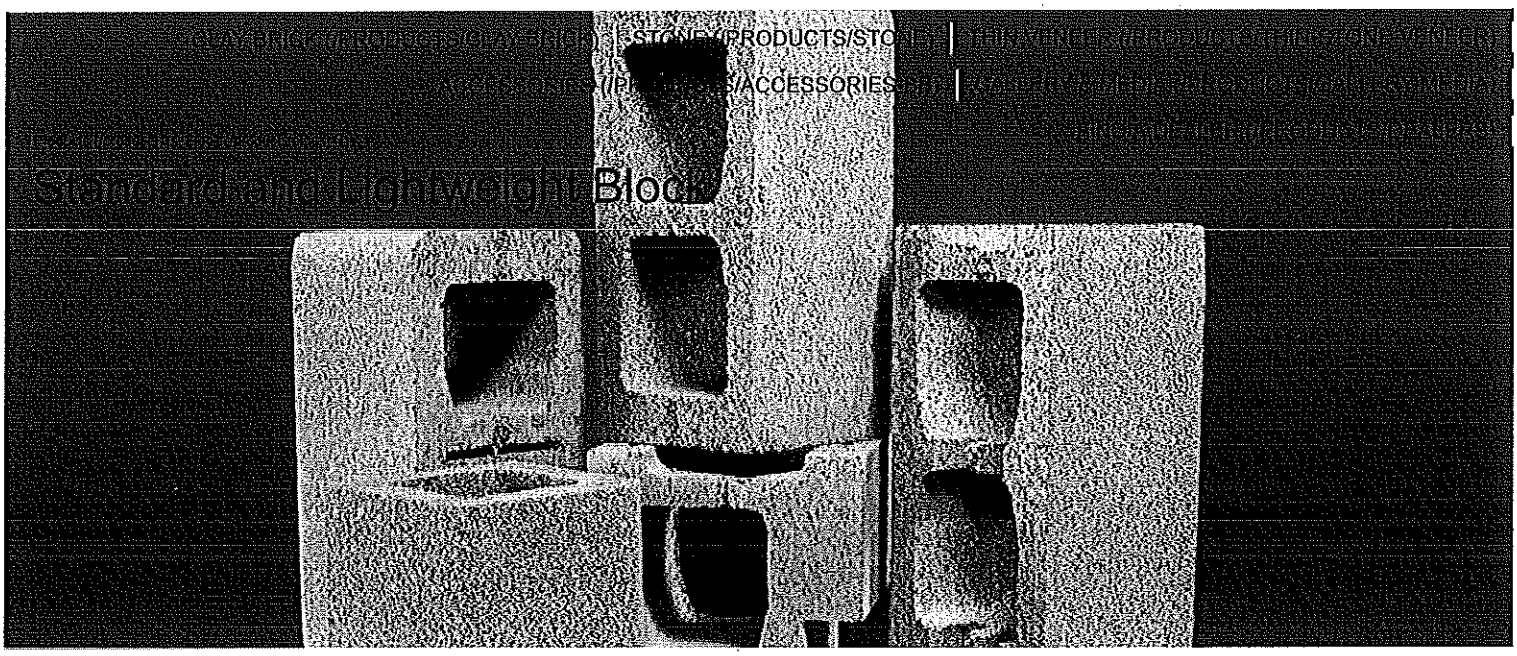
Specification Section: 4200

Paragraph Number:

Product Submission: 90mm Standard Grey Concrete Block (Exterior Veneer)

BRAMPTON BRICK (/)

ENG (/products/block/standard-and-lightweight) | FR (/fr/produits/bloc/bloc-standard-et-l%C3%A9ger)



Download
Product Sheet (https://bramptonbrick.com/sites/default/files/Fire_Rated_Block_Spec_Sheet_web.pdf)

Standard and Lightweight Block

Standard concrete units are primarily used for exterior loadbearing and foundation walls. Lightweight Concrete Block units are used for interior use, particularly because of its higher fire rating and sound absorbing properties. These concrete blocks come in four sizes and six styles, including Ashlar, Frog, Return Corner and Single Bullnose.

Available with RainBloc (/rainbloc). Click the logo to learn about RainBloc®.

RECOMMENDED APPLICATION:

Residential

Commercial

Key Resources: (more below)

BRAMPTON BRICK (/)

CERTIFICATE OF COMPLIANCE FOR 2-HR...
TONBRICK.COM/SITES/DEFAULT/FILES/PDFS/RESOURCES/UL_CERTIFICATE OF COMPLIANCE.PDF)

Product Property	CSA	ASTM	Typical Brampton Brick Range
Compressive Strength (STD-min)	> 15 MPa	> 2000 psi	18-22 MPa
Absorption (STD-max)	< 175 kg/m³	< 13 lb/ft³	155.5 - 164.4 kg/m³
Density (STD-min)	> 2000 kg/m³	> 125 lb/ft³	2049 - 2064 kg/m³
Compressive Strength (L/W-min)	> 15 MPa	> 2000 psi	18-22 MPa
Absorption (L/W-max)	< 175 kg/m³	< 15 lb/ft³	190 - 198 kg/m³
Density (L/W-min)	> 1700 - 1800 kg/m³	> 125 lb/ft³	1750 - 1850 kg/m³

Based on CSA A165.1 and ASTM C90; Water repellent units available upon request. (STD = Standard Weight, L/W = Lightweight)

CERTIFICATE OF COMPLIANCE

Certificate Number	20160324-R25842
Report Reference	R25842-20150623
Issue Date	2016-MARCH-24

Issued to: Brampton Brick Ltd
225 Wanless Dr
Brampton
On L7A 1E9 CANADA

This is to certify that representative samples of CONCRETE BLOCKS

The concrete blocks, designated "BV-FR2 Blocks" shall be constructed using Limestone aggregates, Sand, Type 30 Portland cement and shall comply with the details contained in this procedure.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ULC S120 PRELIMINARY STANDARD FOR CONCRETE MASONRY UNITS

Additional Information: See the ULC Online Certification Directory at www.ulc.ca for additional information

Only those products bearing the ULC Listing Mark should be considered as being covered by ULC's Listing and Follow-Up Service.

The ULC Listing Mark generally includes the following elements: the symbol ULC in a circle: (ULC) with the word "LISTED"; a control number (may be alphanumeric) assigned by ULC; and the product category name (product identifier) as indicated in the appropriate ULC Directory.

To confirm the status, validate the above information via the online directory.

Look for the ULC Listing Mark on the product.

Joseph Hosey, General Manager, Director of Sales - Canada

UNDERWRITERS LABORATORIES OF CANADA INC.

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	26-Aug-20

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

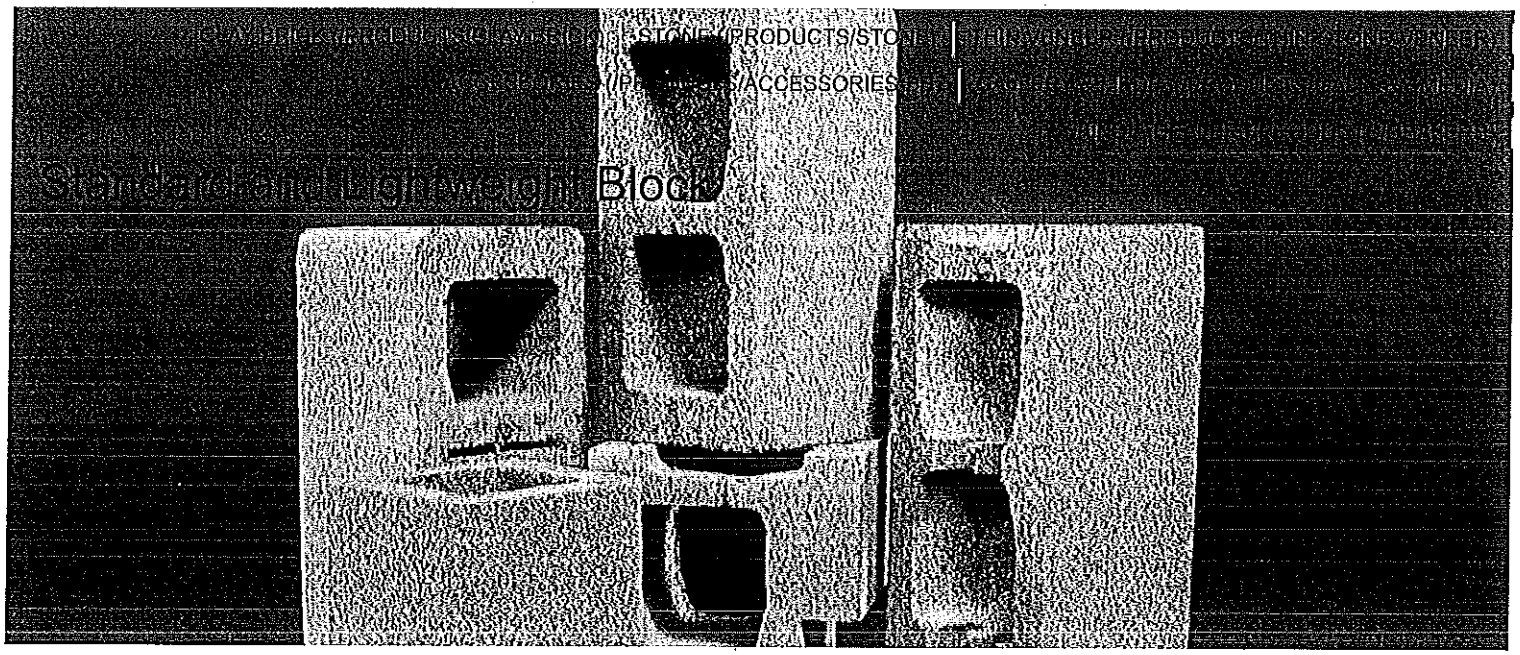
***SUPPLIER*:**	Brampton Brick Ltd
(name & address)	225 Wanless Dr Brampton, Ontario
Contract Name:	
Telephone Number:	

***MANUFACTURER*:**	Brampton Brick Ltd
(name & address)	225 Wanless Dr Brampton, Ontario
Contact Name:	
Telephone Number:	

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Standard Concrete Block

BRAMPTON BRICK (/)

ENG (/products/block/standard-and-lightweight) | FR (/fr/produits/bloc/bloc-standard-et-l%C3%A9ger)



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Available with RainBloc (/rainbloc). Click the logo to learn about RainBloc®.

RECOMMENDED APPLICATION:

Residential

Commercial

Key Resources: (more below)

BRAMPTON BRICK (/)

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Standard(s) for Safety: ULC S120 PRELIMINARY STANDARD FOR CONCRETE MASONRY UNITS

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Joseph Hosey, General Manager, Director of Sales - Canada

UNDERWRITERS LABORATORIES OF CANADA INC.

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SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
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Date:	26-Aug-20

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road
	Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	CRH
(name & address)	2391 Lakeshore Road W
	Mississauga, Ontario
Contact Name:	John Hellyer
Telephone Number:	905-822-1653

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Type N Masonry (For Exterior Concrete Block Veneer)

CRH Canada Group Inc.
2391 Lakeshore Road West
Mississauga, Ontario
L6J 1K1 Canada

T. 905-822-1653
F. 905-822-7445

www.crhcanada.com

GENERAL SPECIFICATION

Mason's Choice®

TYPE 'N' Masonry Cement

PRODUCT:

Grey, **Type N Masonry Cement**

Masonry Cement, Grey Type N as defined by CSA A3002

COMPOSITION:

Masonry cement Type N is a blended material containing Portland cement clinker and plasticizing materials. Type N cement can be used when high-strength mortar is not required to suit the project requirements.

PHYSICAL PROPERTIES - CSA A3002:

		Typical
Fineness		
Retained on 45µm Sieve		7 %
Blaine		575
Soundness		
Expansion		0.1 %
Water Retention Value		82%
Setting Time	Initial »	360 min
	Final »	580 min.
Compressive Strength		
Age Tested	7 day	6 MPa
	28 day	10 MPa
Air Content		19 %
Specific Gravity		2.90

SAFETY DATA SHEET

Section 1: Identification

1.1 Product identifier:

Masonry Cement

Other means of identification:

- Masons Choice Type N
- Masonry Cement Type N
- Masons Choice Type S
- Masonry Cement Type S
- Masons Choice Type M
- Masonry Cement Type M

1.2 Recommended use and restrictions on use:

Identified uses:

Used to bind bricks and blocks in masonry construction, parging, plastering and stucco applications.

Restrictions on use:

Keep out of reach of children.

1.3 Supplier identifier:

CRH Canada Group Inc.
2300 Steeles Ave. W., 4th Floor
Concord, ON, L4K 5X6
Canada
Information Telephone Number: 905-761-7100

CRH US
15225 Day Road
Dundee MI 48131
USA
Information Telephone Number: 734-529-4651

1.4 Emergency telephone number:

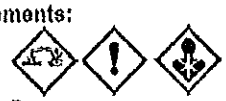
In Canada: 1-613-996-6666 CANUTEC (Call Collect or *666 Cellular) 24-hours
In USA: 800-451-8346 3E COMPANY 24-hours

Section 2: Hazards identification

2.1 Classification:

Skin Corrosion Cat. 1; H314
Eye Damage Cat. 1; H318
Skin Sensitization Cat. 1; H317
Specific Target Organ Toxicity, Single Exposure, Cat. 3; H335
Carcinogenicity (Inhalation) Cat. 1; H350
Specific Target Organ Toxicity, Repeated Exposure (Inhalation), Cat. 1; H372

2.2 Label elements:



Danger.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause cancer if inhaled.
Causes damage to lungs through prolonged or repeated exposure if inhaled.

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts.
Wash hands and exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing, and eye protection or face protection.

SAFETY DATA SHEET

Section 2: Hazards Identification

2.2 Label elements: (continued)

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
IF exposed or concerned: Get medical attention.

Storage

Store locked up.

Disposal

Recycle and or dispose of contents and containers in accordance with local, regional, national and international regulations.

2.3 Other hazards:

Dusts from this product, when combined with water or sweat, produce a corrosive alkaline solution.
The potential exists for static build-up and static discharge when moving cement powders through a plastic, nonconductive or non-grounded pneumatic conveyance system. Static discharge may result in damage to equipment and injury to workers.

Section 3: Composition/Information on Ingredients

Chemical Name	Common name / Other Identifiers	CAS No.	Wt.%	GHS Classification
Portland Cement	Cement	65997-15-1	40 - 75	Skin Irrit. 2; H315 Eye Dam. 1; H318
Limestone	Limestone	1317-65-3	20 - 60	Not classified
Calcium hydroxide	Hydrated lime	1305-62-0	0 - 20	Skin Corr. 1; H314 Eye Dam. 1; H318 STOT SE 3; H335
Magnesium oxide	Magnesium oxide	1309-48-4	0 - 10	Not classified
Calcium sulphate	Gypsum	13397-24-5	0 - 5	Not classified
Calcium oxide	Lime, Quicklime	1305-78-8	0 - 4	Skin Corr. 1; H314 Eye Dam. 1; H318
Crystalline silica, Quartz	Silicon dioxide	14808-60-7	0.1 – 2	Carc. 1; H350 STOT RE1; H372
Chromate compounds	Not available	Not available	Cr VI=6.8 µg/g Trace Equivalent of 6.8 ppm	Not available
Nickel compounds	Not available	Not available	trace	Not available

SAFETY DATA SHEET

Section 4: First Aid Measures

4.1 Description of first aid measures:

Precautions: First aid providers should avoid direct contact with this chemical. Wear chemical protective gloves, if necessary. Take precautions to ensure your own safety before attempting rescue, (e.g. wear appropriate protective equipment).

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of dry cement requires immediate medical attention. Call a poison center or doctor. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Eye Contact: Immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or Doctor. Take care not to rinse contaminated water into the unaffected eye or onto face.

Skin Contact: Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Heavy exposure to dry cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. Burns should be treated promptly by a doctor.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention immediately or transport victim to an emergency treatment center.

4.2 Most important symptoms and effects, both acute and delayed:

Inhalation: High concentrations of airborne dusts are severely irritating to the upper respiratory tract with symptoms such as coughing, sneezing and shortness of breath. Long-term inhalation exposure to dusts containing respirable size crystalline silica can cause silicosis and lung cancer.

Eye Contact: Severely irritating in contact with eyes. Causes eye damage which may be permanent and may cause blindness. Solid particles react with moisture in the eye to form clumps of moist compound which may be difficult to remove.

Skin Contact: Dusts from this product, when combined with water or sweat, produce a severely irritating alkaline solution and burning of the skin. Wet Portland cement can cause caustic burns, sometimes referred to as cement burns. Cement burns may result in blisters, dead or hardened skin, or black or green skin. In severe cases, these burns may extend to the bone and cause disfiguring scars or disability.

Workers cannot rely on pain or discomfort to alert them to cement burns because cement burns may not cause immediate pain or discomfort. By the time the worker becomes aware of a cement burn, much damage has already been done. Cement burns can get worse even after skin contact with cement has ended. Any person experiencing a cement burn is advised to see a health care professional immediately.

May cause an allergic skin reaction from trace amounts of sensitizing metals in cement. Symptoms of an allergy range from mild rashes to severe skin ulcers.

Ingestion: Severely irritating to the mouth, throat and gastro-intestinal system if swallowed. Symptoms may include severe pain and burning of the mouth, throat, esophagus and gastrointestinal tract with nausea, vomiting and diarrhea. If aspiration into the lungs occurs during vomiting, severe lung damage may result.

4.3 Immediate medical attention and special treatment needed:

Corrosive material; get immediate medical attention if inhaled, if swallowed or if in eyes.

Section 5: Firefighting Measures

5.1 Extinguishing media:

Use extinguishing media appropriate to the surrounding fire conditions. Use flooding quantities of water as a spray.

Unsuitable extinguishing media: Use caution when using water. Do not get water inside closed containers; contact with water will generate heat. Water jet may cause spattering of the corrosive solution. Use caution when using CO_2; it may scatter the dry powder.

SAFETY DATA SHEET

5.2 Specific hazards arising from the product:
Product is not flammable or combustible.
Bulk powder of this product may heat spontaneously when damp with water.
Corrosive; reacts with water releasing heat and forming an alkaline solution.

5.3 Special protective equipment and precautions for firefighters:
As for any fire, evacuate the area and fight the fire from a safe distance. Firefighters must wear full protective equipment including self-contained breathing apparatus with chemical protection clothing when firefighters are exposed to decomposition products from this material.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:
Wear adequate personal protective equipment, including an appropriate respirator as indicated in Section 8. Isolate spill area, preventing entry by unauthorized persons. Do not touch spilled material. Do not breathe dusts.

6.2 Environmental precautions:
Avoid releases to the environment and prevent material from entering sewers, natural waterways or storm water management systems.

6.3 Methods and material for containment and cleaning up:
Move containers from spill area. Avoid dust generation and prevent wind dispersal. Do not dry sweep or blow with compressed air. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labelled waste container. Small spills may be picked up with a damp mop.

6.4 Additional information:
See Section 8 for information on selection of personal protective equipment.
See Section 13 for information on disposal of spilled product and contaminated absorbents.

Section 7: Handling and Storage

7.1 Precautions for safe handling:
Before handling, it is important that engineering controls are operating, protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts.
Wash hands and exposed skin thoroughly after handling. Wash with plenty of water and pH neutral soap; do not use waterless hand cleaners such as alcohol-based gels. Clean nail beds and creases between fingers. Dry hands thoroughly with a clean towel before putting on gloves.
Avoid wearing watches and rings at work; wet cement can collect next to the skin and cause burns.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Prevent eye contact: Wear protective gloves, protective clothing and eye protection or face protection.
Follow good practices for safe glove removal.

Static Hazard: Properly ground all pneumatic conveyance systems. Static discharge may result in damage to equipment and injury to workers.

Do not enter a confined space that stores or contains Portland cement unless appropriate procedures and protections are in place. Cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

7.2 Conditions for safe storage:
Store in a dry, well-ventilated area, away from incompatible materials. Keep containers closed.
Protect from moisture/humidity.
Store in a place accessible by authorized persons only.
Store away from food and animal feed.
Keep out of reach of children.

SAFETY DATA SHEET

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:

Occupational Exposure Limits: Consult local authorities for acceptable exposure limits.

Ingredient	ACGIH® TLV®	U.S. OSHA PEL	Ontario (Canada) TWA
Portland cement (respirable)*	1 mg/m^3	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Refer to ACGIH® TVL®
Calcium oxide	2 mg/m^3	5 mg/m^3	Refer to ACGIH® TVL®
Calcium hydroxide	5 mg/m^3	5 mg/m^3	Refer to ACGIH® TVL®
Magnesium oxide	10 mg/m^3	15 mg/m^3 (total dust)	Refer to ACGIH® TVL®
Limestone	Not available	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Not available
Calcium sulphate	10 mg/m^3	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Refer to ACGIH® TVL®
Crystalline silica (Quartz)	0.025 mg/m^3 (respirable)	quartz (total dust): 30 mg/m^3 / (%SiO2 + 2) quartz (respirable): 10 mg/m^3 / (%SiO2 + 2)	0.1 mg/m^3 (respirable) Designated Substance

* value for particulate matter containing no asbestos and less than 1% crystalline silica.

Other Exposure Limits:

NIOSH REL for Portland Cement = 10 mg/m^3 IDLH (Immediately Dangerous to Life or Health) = 5 000 mg/m^3
NIOSH REL for Calcium oxide = 2 mg/m^3 IDLH = 25 mg/m^3

8.2 Exposure controls:

Engineering Controls: Handle product in closed system or area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Ensure regular cleaning of equipment, work area and clothing.

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection. Have equipment available for use in emergencies such as spills or fire.

8.3 Individual Protection Measures:

Eye/Face Protection: Wear approved safety glasses with side-shields or chemical safety goggles. Wear a face-shield or full-face respirator when needed to prevent exposure to airborne dusts. Contact lenses should not be worn.

Skin Protection: Wear waterproof, snug-fitting alkali-resistant gloves, boots, knee and elbow pads to prevent skin exposure. Wear protective clothing with long-sleeves and long pants. Protective clothing can be taped inside gloves and boots. Evaluate resistance under conditions of use and maintain protective clothing carefully. Contact safety supplier for specifications.

Respiratory Protection: Approved respiratory protective equipment (RPE) is required. An approved respirator, N95 rating or higher, must be available in case of accidental releases. Consult with respirator manufacturer to determine respirator selection, use and limitations.

A respiratory protection program that meets the regulatory requirement, such as OSHA's 29 CFR 1910.134, ANSI Z88.2 or Canadian Standards Association (CSA) Standard Z94.4, must be followed whenever workplace conditions warrant a respirator's use.

Other Protection: Have adequate washing facilities and eyewash fountain readily available in the work area for immediate emergency use.

Every attempt should be made to avoid skin and eye contact with cement. Do not get powder inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Wash clothing and shoes thoroughly before reuse.

Do not eat, drink or smoke where this material is handled, stored and processed. Wash hands thoroughly before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be monitored to ensure they comply with the requirements of environmental protection legislation.

SAFETY DATA SHEET

OSHA guidance for Portland Cement:
Good Practices for Glove Selection and Use

- Provide the proper gloves for employees who may come into contact with wet Portland cement. Consult the glove supplier or the cement manufacturer's MSDS for help in choosing the proper gloves. Butyl or nitrile gloves (rather than cotton or leather gloves) are frequently recommended for caustic materials such as Portland cement.
- Use only well-fitting gloves. Loose-fitting gloves let cement in. Often the use of gloves and clothing makes exposure worse when cement gets inside or soaks through the garment. Use glove liners for added comfort.
- Wash your hands before putting on gloves. Wash your hands *every time* that you remove your gloves.
- Dry your hands with a clean cloth or paper towel before putting on gloves.
- Protect your arms and hands by wearing a long sleeve shirt with the sleeves duct-taped to your gloves to prevent wet cement from getting inside the gloves. Cement trapped against the skin inside a glove or boot can cause a cement burn.
- Follow proper procedures for removing gloves, whether reusing or disposing them.
- Clean reusable gloves after use. Before removing gloves, clean the outside by rinsing or wiping off any wet cement. Follow the manufacturer's instructions for glove cleaning. Place clean and dry gloves in a plastic storage bag and store them in a cool, dry place away from tools.
- Throw out grossly contaminated or worn-out gloves.
- Keep the inside of gloves clean and dry.
- Do not use barrier creams or "invisible gloves." These products are not effective in protecting the skin from Portland cement hazards.

Good Practices for Use of Boots and Other Protective Clothing and Equipment

- Wear waterproof boots when necessary to prevent wet cement from coming into contact with your skin. It is as important to protect your legs, ankles, and feet from skin contact with wet cement as it is to protect your hands.
- Boots need to be high enough to prevent wet cement from getting inside. Tuck pants inside and wrap duct tape around the top of the boots to prevent wet cement from entering.
- Select boots that are sturdy, strong enough to resist punctures and tears, and slip resistant.
- Change protective boots if they become ineffective or contaminated on the inside with wet cement while in use.
- Change out of any work clothes that become contaminated with wet cement and keep contaminated work clothes separate from your street clothes.
- When kneeling on wet cement use waterproof kneepads or dry kneeboards to prevent the knees from coming into contact with the cement.
- Wear proper eye protection when working with Portland cement.

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Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:	
Appearance:	Solid; grey or white powder
Odour:	Odourless
Odour threshold:	Not applicable
pH:	>12
Melting point/freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability:	Not flammable or combustible
Upper/lower flammability or explosive limits:	Not applicable
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Relative density:	3.1 – 3.2 (water = 1)
Solubility (ies):	Slightly soluble in water (0.1 – 1%)
Partition coefficient (n-octanol/water):	Not applicable
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable

Section 10: Stability and Reactivity

10.1 Reactivity:
Reacts slowly with water forming hydrated compounds, releasing heat and a strongly alkaline solution.

10.2 Chemical Stability:
Stable at normal ambient and anticipated storage and handling conditions.

10.3 Possibility of Hazardous Reactions:
Aqueous solutions are highly alkaline and may corrode aluminum.

10.4 Conditions to Avoid:
Avoid unintentional contact with water / moisture and with strong acids and other incompatible materials.

10.5 Incompatible Materials:
Strong acids - Incompatible with strong acids; may react vigorously.
Water - reaction generates heat.
Aluminum – Aluminum powder and other alkali earth elements will react in the presence of water liberating extremely flammable hydrogen gas. Calcium oxide is corrosive to aluminum metal.
Fluoride compounds – cement dissolves in HF producing corrosive silicon tetrafluoride gas.
Reacts with Ammonium salts.

10.6 Hazardous Decomposition Products:
In contact with water and moisture, generates corrosive calcium hydroxide.

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Section 11: Toxicological Information

11.1 Likely routes of exposure:

Eye and Skin contact, Inhalation of dust.

11.2 Acute toxicity data:

Data not available for the mixture.

Skin corrosion / irritation:

Based on information for Portland Cement and Calcium oxide : Human experience has shown Portland cement can cause caustic burns when in prolonged contact with the skin.
Irritating or corrosive to mouth, throat and gastro-intestinal tract.

Serious eye damage / irritation:

Based on information for Portland Cement and Calcium oxide: Causes serious eye damage and possible blindness. Damage may be permanent if treatment is not immediate.

STOT (Specific Target Organ Toxicity) Single Exposure:

Breathing dusts causes respiratory irritation. Inflammation of the respiratory passages, ulceration and perforation of the nasal septum and pneumonia has been attributed to the inhalation of dust containing calcium oxide.

Aspiration hazard:

This material is corrosive; if aspiration into the lungs occurs during vomiting, severe lung damage may result.

11.3 Chronic toxicity:

STOT (Specific Target Organ Toxicity) Repeated Exposure:

Prolonged and repeated breathing of dust may cause lung disease. The extent and severity of lung injury correlates with the length of exposure and dust concentration. Inflammation of the respiratory passages, ulceration and perforation of the nasal septum and pneumonia has been attributed to the inhalation of dust containing calcium oxide.

Contains crystalline silica. Long-term exposure to fine airborne crystalline silica dust may cause silicosis a form of pulmonary fibrosis that can cause shortness of breath, cough and reduced lung function. Particles with diameters less than 1 micrometer are considered most hazardous.

Respiratory and / or skin sensitization:

Product may contain trace concentrations of Chromate and Nickel compounds that can cause an allergic skin reaction, allergic contact dermatitis, or ACD. Once sensitized, brief skin contact with very small amounts of Cr VI may result in inflammation, rash, itching or severe skin ulcers. ACD is long-lasting and employees can remain sensitized to Chromium VI for many years.
Not known to be a respiratory sensitizer.

Germ cell mutagenicity:

Not available

Reproductive effects:

Not available

Developmental effects:

Not available

Effects on or via lactation:

Data are not available.

Carcinogenicity:

Portland cement is not classifiable as a human carcinogen.
Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity.

Interactions with other chemicals:

Not available

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Section 12: Ecological Information

12.1 Toxicity:

Harmful to aquatic life. Contact with water forms an alkaline solution. Avoid release to the environment.

Data for Calcium oxide:

96 hour LC_{50} freshwater fish *Cyprinus carpio* = 1 070 mg/L (static).

Chronic 46 day NOEC freshwater fish *Oreochromis niloticus* juvenile(fledgling, hatchling, weanling)= 100 mg/L

12.2 Persistence and degradability:

Not readily biodegradable

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Not available

Section 13: Disposal Considerations

13.1 Disposal methods:

Dispose as an inert, non-metallic mineral in accordance with applicable federal, state/provincial and local regulations. Avoid generating dust during disposal. Avoid contact with skin and eyes. See Section 8 for personal protection measures. Prevent material from entering sewers, drains, ditches or waterways.

Section 14: Transport Information

14.1 UN Number

Cement is not covered by International transport regulations (IMDG, UN Model Regulations).

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not available

14.6 Special precautions for user

Not available

14.7 U.S. Hazardous Materials Regulation (DOT 49CFR):

Not regulated except for transport by aircraft.

14.8 Canada Transportation of Dangerous Goods (TDG) Regulations:

Not regulated except for transport by aircraft.

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

USA

TSCA Status:

Substances are listed on the TSCA inventory or are exempt.

Canada

NSNR Status:

Substances are listed on the on the DSL or are exempt.

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International Inventories:

Australia:	Substances are listed on the Inventory of Chemical Substances (AICS).
China:	Substances are listed on the Inventory. Portland cement IECSC 25714.
European Union:	Portland Cement EC # 266-043-4. All other substances are listed on EINECS.
Japan:	Not available.
Korea:	Substances are listed on the Inventory. Portland cement KE-29067
Mexico:	Substances are listed on the Inventory (INSQ) or are exempt.
New Zealand:	Substances are listed on the Inventory.
Philippines:	Substances are listed on the Inventory of Chemicals and Chemical Substances (PICCS).

Section 16: Other Information

Revision date:

February 25, 2016

References and sources for data:

CCOHS, Cheminfo
RTECS, Registry of Toxic Effects of Chemical Substances
NIOSH, Pocket Guide to Chemical Hazards.
Portland Cement Association

Methods for classification of mixtures:

USA: Haz Com Standard 29 CFR 1910.1200 (2012)
Canada: Controlled Products Regulations.
UNECE, Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Legend to abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists
GHS- Globally Harmonized System for Classification and Labeling.
OEL– Occupational exposure limit
OSHA - Occupational Safety and Health Administration
TWA – Time weighted average
TLV - Threshold Limit Value
WHMIS – Canada Workplace Hazardous Materials Information System.

Additional Information:

While the information provided in this document is believed to provide a useful summary of the hazards of Masonry cement and Portland cement, the information in this document cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. The data furnished in this document do not address hazards that may be posed by other materials when mixed with Masonry cement. Users should review other relevant safety data sheets before working with this product. The information presented in the Safety Data Sheet is based on current knowledge and publications and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be interpreted as guaranteeing any specific property of the product.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CRH CANADA GROUP INC. / CRH US., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

M'GONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	26-Aug-20

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	CRH
(name & address)	2391 Lakeshore Road W Mississauga, Ontario
Contact Name:	John Hellyer
Telephone Number:	905-822-1653

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Type "S" Masonry (For Interior Concrete Block)

CRH Canada Group Inc.
2391 Lakeshore Road West
Mississauga, Ontario
L5J 1K1 Canada

T. 905-822-1653
F. 905-822-7445

www.crhcanada.com

GENERAL SPECIFICATION

Mason's Choice®

TYPE 'S' Masonry Cement

PRODUCT:

Grey, **Type S Masonry Cement**

Masonry Cement, Grey Type S as defined by CSA A3002

COMPOSITION:

Masonry cement Type S is a blended material containing Portland cement clinker and plasticizing materials. Type S cement can be used when higher-strength mortars are required to suit the project requirements.

PHYSICAL PROPERTIES: CSA A3002 Masonry Cement

		Typical
Fineness		
Retained on 45µm Sieve		7 %
Blaine		425
Soundness		
Expansion		0.1 %
Water Retention Value		82%
Setting Time	Initial »	300 min
	Final »	490 min.
Compressive Strength		
Age Tested	7 day	13 MPa
	28 day	20 MPa
Air Content		17 %
Specific Gravity		2.99

SAFETY DATA SHEET

Section 1: Identification

1.1 Product identifier:

Masonry Cement

Other means of identification:

- Masons Choice Type N
- Masonry Cement Type N
- Masons Choice Type S
- Masonry Cement Type S
- Masons Choice Type M
- Masonry Cement Type M

1.2 Recommended use and restrictions on use:

Identified uses:

Used to bind bricks and blocks in masonry construction, parging, plastering and stucco applications.

Restrictions on use:

Keep out of reach of children.

1.3 Supplier identifier:

CRH Canada Group Inc.
2300 Steeles Ave. W., 4th Floor
Concord, ON, L4K 5X6
Canada
Information Telephone Number: 905-761-7100

CRH US
15225 Day Road
Dundee MI 48131
USA
Information Telephone Number: 734-529-4651

1.4 Emergency telephone number:

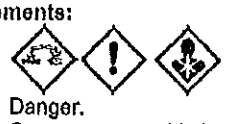
In Canada: 1-613-996-6666 CANUTEC (Call Collect or *666 Cellular) 24-hours
In USA: 800-451-8346 3E COMPANY 24-hours

Section 2: Hazards Identification

2.1 Classification:

Skin Corrosion Cat. 1; H314
Eye Damage Cat. 1; H318
Skin Sensitization Cat. 1; H317
Specific Target Organ Toxicity, Single Exposure, Cat. 3; H335
Carcinogenicity (Inhalation) Cat. 1; H350
Specific Target Organ Toxicity, Repeated Exposure (Inhalation), Cat. 1; H372

2.2 Label elements:



Danger.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause cancer if inhaled.
Causes damage to lungs through prolonged or repeated exposure if inhaled.

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts.
Wash hands and exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, protective clothing, and eye protection or face protection.

SAFETY DATA SHEET

Section 2: Hazards Identification

2.2 Label elements: (continued)

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
IF exposed or concerned: Get medical attention.

Storage

Store locked up.

Disposal

Recycle and or dispose of contents and containers in accordance with local, regional, national and international regulations.

2.3 Other hazards:

Dusts from this product, when combined with water or sweat, produce a corrosive alkaline solution.
The potential exists for static build-up and static discharge when moving cement powders through a plastic, nonconductive or non-grounded pneumatic conveyance system. Static discharge may result in damage to equipment and injury to workers.

Section 3: Composition/Information on Ingredients

Chemical Name	Common name / Other Identifiers	CAS No.	Wt.%	GHS Classification
Portland Cement	Cement	65997-15-1	40 - 75	Skin Irrit. 2; H315 Eye Dam. 1; H318
Limestone	Limestone	1317-65-3	20 - 60	Not classified
Calcium hydroxide	Hydrated lime	1305-62-0	0 - 20	Skin Corr. 1; H314 Eye Dam. 1; H318 STOT SE 3; H335
Magnesium oxide	Magnesium oxide	1309-48-4	0 - 10	Not classified
Calcium sulphate	Gypsum	13397-24-5	0 - 5	Not classified
Calcium oxide	Lime, Quicklime	1305-78-8	0 - 4	Skin Corr. 1; H314 Eye Dam. 1; H318
Crystalline silica, Quartz	Silicon dioxide	14808-60-7	0.1 – 2	Carc. 1; H350 STOT RE1; H372
Chromate compounds	Not available	Not available	Cr VI=6.8 µg/g Trace Equivalent of 6.8 ppm	Not available
Nickel compounds	Not available	Not available	trace	Not available

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Section 4: First Aid Measures

4.1 Description of first aid measures:

Precautions: First aid providers should avoid direct contact with this chemical. Wear chemical protective gloves, if necessary. Take precautions to ensure your own safety before attempting rescue, (e.g. wear appropriate protective equipment).

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of dry cement requires immediate medical attention. Call a poison center or doctor. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Eye Contact: Immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or Doctor. Take care not to rinse contaminated water into the unaffected eye or onto face.

Skin Contact: Take off immediately all contaminated clothing. Rinse skin with water or shower.
Get medical attention immediately. Heavy exposure to dry cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. Burns should be treated promptly by a doctor.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention immediately or transport victim to an emergency treatment center.

4.2 Most important symptoms and effects, both acute and delayed:

Inhalation: High concentrations of airborne dusts are severely irritating to the upper respiratory tract with symptoms such as coughing, sneezing and shortness of breath. Long-term inhalation exposure to dusts containing respirable size crystalline silica can cause silicosis and lung cancer.

Eye Contact: Severely irritating in contact with eyes. Causes eye damage which may be permanent and may cause blindness. Solid particles react with moisture in the eye to form clumps of moist compound which may be difficult to remove.

Skin Contact: Dusts from this product, when combined with water or sweat, produce a severely irritating alkaline solution and burning of the skin. Wet Portland cement can cause caustic burns, sometimes referred to as cement burns. Cement burns may result in blisters, dead or hardened skin, or black or green skin. In severe cases, these burns may extend to the bone and cause disfiguring scars or disability.

Workers cannot rely on pain or discomfort to alert them to cement burns because cement burns may not cause immediate pain or discomfort. By the time the worker becomes aware of a cement burn, much damage has already been done. Cement burns can get worse even after skin contact with cement has ended. Any person experiencing a cement burn is advised to see a health care professional immediately.

May cause an allergic skin reaction from trace amounts of sensitizing metals in cement. Symptoms of an allergy range from mild rashes to severe skin ulcers.

Ingestion: Severely irritating to the mouth, throat and gastro-intestinal system if swallowed. Symptoms may include severe pain and burning of the mouth, throat, esophagus and gastrointestinal tract with nausea, vomiting and diarrhea. If aspiration into the lungs occurs during vomiting, severe lung damage may result.

4.3 Immediate medical attention and special treatment needed:

Corrosive material; get immediate medical attention if inhaled, if swallowed or if in eyes.

Section 5: Firefighting Measures

5.1 Extinguishing media:

Use extinguishing media appropriate to the surrounding fire conditions. Use flooding quantities of water as a spray.

Unsuitable extinguishing media: Use caution when using water. Do not get water inside closed containers; contact with water will generate heat. Water jet may cause spattering of the corrosive solution. Use caution when using CO_2; it may scatter the dry powder.

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5.2 Specific hazards arising from the product:

Product is not flammable or combustible.
Bulk powder of this product may heat spontaneously when damp with water.
Corrosive; reacts with water releasing heat and forming an alkaline solution.

5.3 Special protective equipment and precautions for firefighters:

As for any fire, evacuate the area and fight the fire from a safe distance. Firefighters must wear full protective equipment including self-contained breathing apparatus with chemical protection clothing when firefighters are exposed to decomposition products from this material.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear adequate personal protective equipment, including an appropriate respirator as indicated in Section 8. Isolate spill area, preventing entry by unauthorized persons. Do not touch spilled material. Do not breathe dusts.

6.2 Environmental precautions:

Avoid releases to the environment and prevent material from entering sewers, natural waterways or storm water management systems.

6.3 Methods and material for containment and cleaning up:

Move containers from spill area. Avoid dust generation and prevent wind dispersal. Do not dry sweep or blow with compressed air. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labelled waste container. Small spills may be picked up with a damp mop.

6.4 Additional information:

See Section 8 for information on selection of personal protective equipment.
See Section 13 for information on disposal of spilled product and contaminated absorbents.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Before handling, it is important that engineering controls are operating, protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dusts.
Wash hands and exposed skin thoroughly after handling. Wash with plenty of water and pH neutral soap; do not use waterless hand cleaners such as alcohol-based gels. Clean nail beds and creases between fingers. Dry hands thoroughly with a clean towel before putting on gloves.
Avoid wearing watches and rings at work; wet cement can collect next to the skin and cause burns.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Prevent eye contact: Wear protective gloves, protective clothing and eye protection or face protection.
Follow good practices for safe glove removal.

Static Hazard: Properly ground all pneumatic conveyance systems. Static discharge may result in damage to equipment and injury to workers.

Do not enter a confined space that stores or contains Portland cement unless appropriate procedures and protections are in place. Cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

7.2 Conditions for safe storage:

Store in a dry, well-ventilated area, away from incompatible materials. Keep containers closed.
Protect from moisture/humidity.
Store in a place accessible by authorized persons only.
Store away from food and animal feed.
Keep out of reach of children.

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Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:

Occupational Exposure Limits: Consult local authorities for acceptable exposure limits.

Ingredient	ACGIH® TLV®	U.S. OSHA PEL	Ontario (Canada) TWA
Portland cement (respirable)*	1 mg/m^3	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Refer to ACGIH® TVL®
Calcium oxide	2 mg/m^3	5 mg/m^3	Refer to ACGIH® TVL®
Calcium hydroxide	5 mg/m^3	5 mg/m^3	Refer to ACGIH® TVL®
Magnesium oxide	10 mg/m^3	15 mg/m^3 (total dust)	Refer to ACGIH® TVL®
Limestone	Not available	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Not available
Calcium sulphate	10 mg/m^3	15 mg/m^3 (total dust) 5 mg/m^3 (respirable)	Refer to ACGIH® TVL®
Crystalline silica (Quartz)	0.025 mg/m^3 (respirable)	quartz (total dust): 30 mg/m^3 / (%SiO2 + 2) quartz (respirable): 10 mg/m^3 / (%SiO2 + 2)	0.1 mg/m^3 (respirable) Designated Substance

* value for particulate matter containing no asbestos and less than 1% crystalline silica.

Other Exposure Limits:

NIOSH REL for Portland Cement = 10 mg/m^3 IDLH (Immediately Dangerous to Life or Health) = 5 000 mg/m^3
NIOSH REL for Calcium oxide = 2 mg/m^3 IDLH = 25 mg/m^3

8.2 Exposure controls:

Engineering Controls: Handle product in closed system or area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Ensure regular cleaning of equipment, work area and clothing.

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection. Have equipment available for use in emergencies such as spills or fire.

8.3 Individual Protection Measures:

Eye/Face Protection: Wear approved safety glasses with side-shields or chemical safety goggles. Wear a face-shield or full-face respirator when needed to prevent exposure to airborne dusts. Contact lenses should not be worn.

Skin Protection: Wear waterproof, snug-fitting alkali-resistant gloves, boots, knee and elbow pads to prevent skin exposure. Wear protective clothing with long-sleeves and long pants. Protective clothing can be taped inside gloves and boots. Evaluate resistance under conditions of use and maintain protective clothing carefully. Contact safety supplier for specifications.

Respiratory Protection: Approved respiratory protective equipment (RPE) is required. An approved respirator, N95 rating or higher, must be available in case of accidental releases. Consult with respirator manufacturer to determine respirator selection, use and limitations.

A respiratory protection program that meets the regulatory requirement, such as OSHA's 29 CFR 1910.134, ANSI Z88.2 or Canadian Standards Association (CSA) Standard Z94.4, must be followed whenever workplace conditions warrant a respirator's use.

Other Protection: Have adequate washing facilities and eyewash fountain readily available in the work area for immediate emergency use.

Every attempt should be made to avoid skin and eye contact with cement. Do not get powder inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Wash clothing and shoes thoroughly before reuse.

Do not eat, drink or smoke where this material is handled, stored and processed. Wash hands thoroughly before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be monitored to ensure they comply with the requirements of environmental protection legislation.

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OSHA guidance for Portland Cement:
Good Practices for Glove Selection and Use

- Provide the proper gloves for employees who may come into contact with wet Portland cement. Consult the glove supplier or the cement manufacturer's MSDS for help in choosing the proper gloves. Butyl or nitrile gloves (rather than cotton or leather gloves) are frequently recommended for caustic materials such as Portland cement.
- Use only well-fitting gloves. Loose-fitting gloves let cement in. Often the use of gloves and clothing makes exposure worse when cement gets inside or soaks through the garment. Use glove liners for added comfort.
- Wash your hands before putting on gloves. Wash your hands *every time* that you remove your gloves.
- Dry your hands with a clean cloth or paper towel before putting on gloves.
- Protect your arms and hands by wearing a long sleeve shirt with the sleeves duct-taped to your gloves to prevent wet cement from getting inside the gloves. Cement trapped against the skin inside a glove or boot can cause a cement burn.
- Follow proper procedures for removing gloves, whether reusing or disposing them.
- Clean reusable gloves after use. Before removing gloves, clean the outside by rinsing or wiping off any wet cement. Follow the manufacturer's instructions for glove cleaning. Place clean and dry gloves in a plastic storage bag and store them in a cool, dry place away from tools.
- Throw out grossly contaminated or worn-out gloves.
- Keep the inside of gloves clean and dry.
- Do not use barrier creams or "invisible gloves." These products are not effective in protecting the skin from Portland cement hazards.

Good Practices for Use of Boots and Other Protective Clothing and Equipment

- Wear waterproof boots when necessary to prevent wet cement from coming into contact with your skin. It is as important to protect your legs, ankles, and feet from skin contact with wet cement as it is to protect your hands.
- Boots need to be high enough to prevent wet cement from getting inside. Tuck pants inside and wrap duct tape around the top of the boots to prevent wet cement from entering.
- Select boots that are sturdy, strong enough to resist punctures and tears, and slip resistant.
- Change protective boots if they become ineffective or contaminated on the inside with wet cement while in use.
- Change out of any work clothes that become contaminated with wet cement and keep contaminated work clothes separate from your street clothes.
- When kneeling on wet cement use waterproof kneepads or dry kneeboards to prevent the knees from coming into contact with the cement.
- Wear proper eye protection when working with Portland cement.

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Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance:	Solid; grey or white powder
Odour:	Odourless
Odour threshold:	Not applicable
pH:	>12
Melting point/freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability:	Not flammable or combustible
Upper/lower flammability or explosive limits:	Not applicable
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Relative density:	3.1 – 3.2 (water = 1)
Solubility (ies):	Slightly soluble in water (0.1 – 1%)
Partition coefficient (n-octanol/water):	Not applicable
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable

Section 10: Stability and Reactivity

10.1 Reactivity:

Reacts slowly with water forming hydrated compounds, releasing heat and a strongly alkaline solution.

10.2 Chemical Stability:

Stable at normal ambient and anticipated storage and handling conditions.

10.3 Possibility of Hazardous Reactions:

Aqueous solutions are highly alkaline and may corrode aluminum.

10.4 Conditions to Avoid:

Avoid unintentional contact with water / moisture and with strong acids and other incompatible materials.

10.5 Incompatible Materials:

Strong acids - Incompatible with strong acids; may react vigorously.
Water - reaction generates heat.
Aluminum – Aluminum powder and other alkali earth elements will react in the presence of water liberating extremely flammable hydrogen gas. Calcium oxide is corrosive to aluminum metal.
Fluoride compounds – cement dissolves in HF producing corrosive silicon tetrafluoride gas.
Reacts with Ammonium salts.

10.6 Hazardous Decomposition Products:

In contact with water and moisture, generates corrosive calcium hydroxide.

SAFETY DATA SHEET

Section 11: Toxicological Information

11.1 Likely routes of exposure:

Eye and Skin contact, Inhalation of dust.

11.2 Acute toxicity data:

Data not available for the mixture.

Skin corrosion / irritation:

Based on information for Portland Cement and Calcium oxide : Human experience has shown Portland cement can cause caustic burns when in prolonged contact with the skin.
Irritating or corrosive to mouth, throat and gastro-intestinal tract.

Serious eye damage / irritation:

Based on information for Portland Cement and Calcium oxide: Causes serious eye damage and possible blindness. Damage may be permanent if treatment is not immediate.

STOT (Specific Target Organ Toxicity) Single Exposure:

Breathing dusts causes respiratory irritation. Inflammation of the respiratory passages, ulceration and perforation of the nasal septum and pneumonia has been attributed to the inhalation of dust containing calcium oxide.

Aspiration hazard:

This material is corrosive; if aspiration into the lungs occurs during vomiting, severe lung damage may result.

11.3 Chronic toxicity:

STOT (Specific Target Organ Toxicity) Repeated Exposure:

Prolonged and repeated breathing of dust may cause lung disease. The extent and severity of lung injury correlates with the length of exposure and dust concentration. Inflammation of the respiratory passages, ulceration and perforation of the nasal septum and pneumonia has been attributed to the inhalation of dust containing calcium oxide.

Contains crystalline silica. Long-term exposure to fine airborne crystalline silica dust may cause silicosis a form of pulmonary fibrosis that can cause shortness of breath, cough and reduced lung function. Particles with diameters less than 1 micrometer are considered most hazardous.

Respiratory and / or skin sensitization:

Product may contain trace concentrations of Chromate and Nickel compounds that can cause an allergic skin reaction, allergic contact dermatitis, or ACD. Once sensitized, brief skin contact with very small amounts of Cr VI may result in inflammation, rash, itching or severe skin ulcers. ACD is long-lasting and employees can remain sensitized to Chromium VI for many years.
Not known to be a respiratory sensitizer.

Germ cell mutagenicity:

Not available

Reproductive effects:

Not available

Developmental effects:

Not available

Effects on or via lactation:

Data are not available.

Carcinogenicity:

Portland cement is not classifiable as a human carcinogen.
Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity.

Interactions with other chemicals:

Not available

SAFETY DATA SHEET

Section 12: Ecological Information

12.1 Toxicity:

Harmful to aquatic life. Contact with water forms an alkaline solution. Avoid release to the environment.

Data for Calcium oxide:

96 hour LC_{50} freshwater fish *Cyprinus carpio* = 1 070 mg/L (static).

Chronic 46 day NOEC freshwater fish *Oreochromis niloticus* juvenile(fledgling, hatchling, weanling)= 100 mg/L

12.2 Persistence and degradability:

Not readily biodegradable

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Not available

Section 13: Disposal Considerations

13.1 Disposal methods:

Dispose as an inert, non-metallic mineral in accordance with applicable federal, state/provincial and local regulations. Avoid generating dust during disposal. Avoid contact with skin and eyes. See Section 8 for personal protection measures. Prevent material from entering sewers, drains, ditches or waterways.

Section 14: Transport Information

14.1 UN Number

Cement is not covered by international transport regulations (IMDG, UN Model Regulations).

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not available

14.6 Special precautions for user

Not available

14.7 U.S. Hazardous Materials Regulation (DOT 49CFR):

Not regulated except for transport by aircraft.

14.8 Canada Transportation of Dangerous Goods (TDG) Regulations:

Not regulated except for transport by aircraft.

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

USA

TSCA Status:

Substances are listed on the TSCA Inventory or are exempt.

Canada

NSNR Status:

Substances are listed on the on the DSL or are exempt.

SAFETY DATA SHEET

International Inventories:

Australia: Substances are listed on the Inventory of Chemical Substances (AICS).

China: Substances are listed on the Inventory. Portland cement IECSC 25714.

European Union: Portland Cement EC # 266-043-4. All other substances are listed on EINECS.

Japan: Not available.

Korea: Substances are listed on the Inventory. Portland cement KE-29067

Mexico: Substances are listed on the Inventory (INSQ) or are exempt.

New Zealand: Substances are listed on the Inventory.

Philippines: Substances are listed on the Inventory of Chemicals and Chemical Substances (PICCS).

Section 16: Other Information

Revision date:

February 25, 2016

References and sources for data:

CCOHS, CheminfO
RTECS, Registry of Toxic Effects of Chemical Substances
NIOSH, Pocket Guide to Chemical Hazards.
Portland Cement Association

Methods for classification of mixtures:

USA: Haz Com Standard 29 CFR 1910.1200 (2012)
Canada: Controlled Products Regulations.
UNECE, Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Legend to abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists
GHS- Globally Harmonized System for Classification and Labeling.
OEL– Occupational exposure limit
OSHA - Occupational Safety and Health Administration
TWA – Time weighted average
TLV - Threshold Limit Value
WHMIS – Canada Workplace Hazardous Materials Information System.

Additional Information:

While the information provided in this document is believed to provide a useful summary of the hazards of Masonry cement and Portland cement, the information in this document cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. The data furnished in this document do not address hazards that may be posed by other materials when mixed with Masonry cement. Users should review other relevant safety data sheets before working with this product. The information presented in the Safety Data Sheet is based on current knowledge and publications and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be interpreted as guaranteeing any specific property of the product.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CRH CANADA GROUP INC. / CRH US., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

M'GONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	26-Aug-20

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

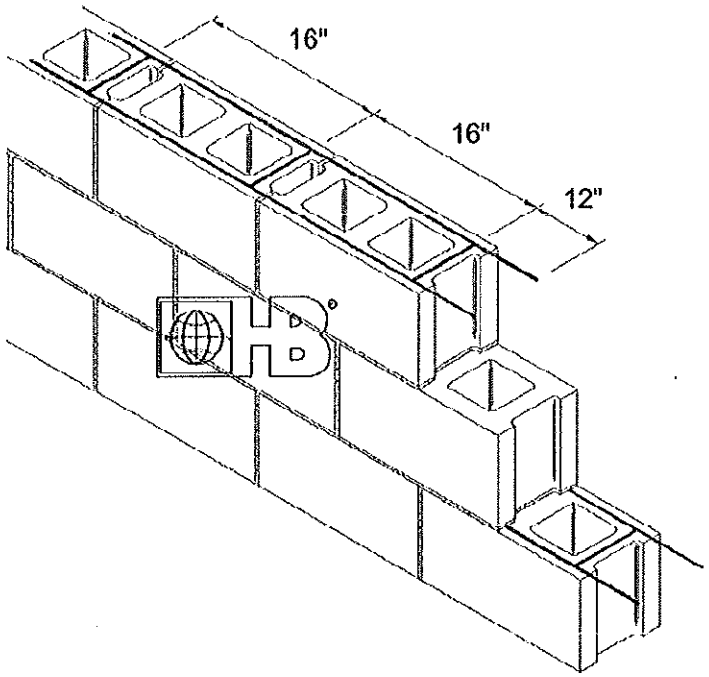
***SUPPLIER*:**	Givesco
(name & address)	795 rue de Vernon
	Gatineau, Quebec
Contract Name:	Peter Champagne
Telephone Number:	819-770-5582

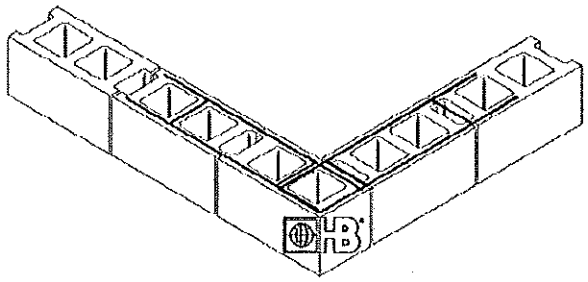
***MANUFACTURER*:**	Blok Lok
(name & address)	12 Ashbridge Circle
	Woodbridge, Ontario
Contact Name:	
Telephone Number:	905-266-2277

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Blok Lok - BL 10 (Mill Galvanized)

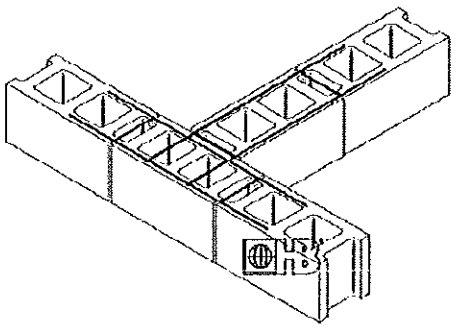
BLOK-LOK
A HOHMANN & BARNARD COMPANY

Ladder Reinforcement
BL-10 Ladder Reinforcement





Prefabricated Corner



Prefabricated Tee

DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY

Material Conformances - Joint Reinforcement
Blok-Lok joint reinforcement products conform to
ASTM A951/A951M (Standard Specification for Steel Wire for Masonry Joint Reinforcement)
ACI / ASCE 530 (Building Code Requirements for Masonry Structures)
CSA standard A370-14.

Wire: (Carbon Steel): Prefabricated construction from cold-drawn steel wire conforming to ASTM A 82:
Tensile Strength - 80,000 p.s.i.
Yield Point - 70,000 p.s.i. minimum

Wire Diameter:
9 gauge (.148" or W1.7)
3/16" (.187" or W2.8)
Side Rods and Cross Rods available in any combination of the above.
Cross Rods welded 16" O.C.
First Cross Rods welded 12" in from each end to allow lap splices per code requirements.

Note: Bed joint alignment for connecting wythes recommended.

Blok-Lok manufactures steel wire products from a minimum of 95% recycled material.

Finishes:

- [x] Mill Galvanized Coating: ASTM A 641 (0.1 oz/ft²)
- [ ] Hot-Dip Galvanized after fabrication: ASTM A 153 (1.5 oz/ft²)
- [ ] Stainless Steel: ASTM A 580 - AISI Type 304 (Type 316 available on special order).

Note: Blok-Lok recommends Stainless Steel for maximum protection against corrosion.

Wire Size:

- [ ] Standard:
  9 Gauge Side Rods x 9 Gauge Cross Rods
- [x] Heavy Duty:
  3/16" Side Rods x 9 Gauge Cross Rods
- [ ] Extra Heavy Duty:
  3/16" Side Rods x 3/16" Cross Rods

Block Size:

- [ ] 4"
- [x] 6"
- [x] 8"
- [ ] 10"
- [ ] 12"
- [ ] 14"
- [ ] 16"

Note: For Corner or Tee, state width of block walls.

12 Ashbridge Circle | Woodbridge, Ontario, L4L 3R5, Canada
T: 905.266.2277 | **F:** 905.266.2272 | **USA:** 1.800.561.3026
sales@blok-lok.com | www.blok-lok.com

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SHOP DRAWING & SAMPLE SUBMITTAL

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Project Number:	
Date:	August 26, 2020

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
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Contract Name:	Peter Champagne
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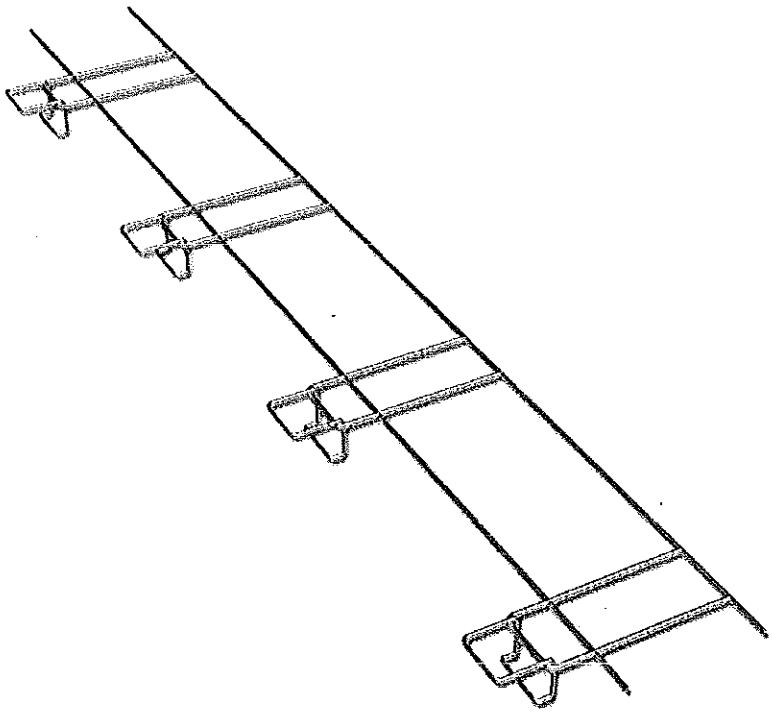
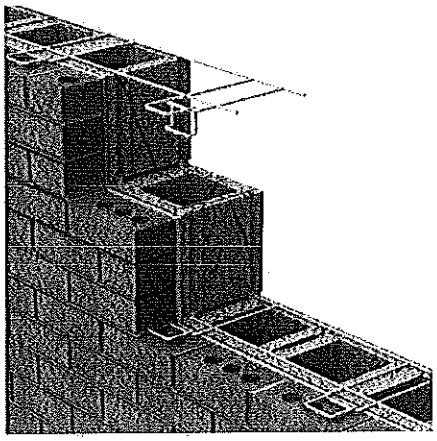
***MANUFACTURER*:**	Blok Lok
(name & address)	12 Ashbridge Circle
	Woodbridge, Ontario
Contact Name:	
Telephone Number:	905-266-2277

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	BL-40 Adjustable Ladder Type Reinforcing

BLOK-LOK
A HOHMANN & BARNARD COMPANY

Ladder Reinforcement
BL-40 Ladder Reinforcement





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CSA standard A370-14.

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Tensile Strength - 80,000 p.s.i.
Yield Point - 70,000 p.s.i. minimum

Wire Diameter:
9 gauge (.148" or W1.7)
3/16" (.187" or W2.8)
Side Rods and Box Ties available in any combination of the above.
Box Ties lap-welded 16" O.C.

Note: Bed joint alignment for connecting wythes recommended.

Blok-Lok manufactures steel wire products from a minimum of 95% recycled material.

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- [x] Hot-Dip Galvanized after fabrication: ASTM A 153 (1.5 oz/ft²)
- [ ] Stainless Steel: ASTM A 580 - AISI Type 304 (Type 316 available on special order).

Note: Blok-Lok recommends Stainless Steel for maximum protection against corrosion.

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- [ ] 16"

Note: For Corner or Tee, state width of block walls.

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Telephone Number:	(613) 623-3613

***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road
	Ottawa, Quebec
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	Dow Insulation
(name & address)	450 1st SW Suite 2100
	Calgary, AB
Contact Name:	
Telephone Number:	866-583-2583

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	100mm CavityMate Insulation (600x2400mm, butt edge)

STYROFOAM™ Brand CAVITYMATE™ Plus Extruded Polystyrene Foam Insulation

1. PRODUCT NAME
STYROFOAM™ CAVITYMATE™ Plus Extruded Polystyrene Foam Insulation

2. MANUFACTURER
The Dow Chemical Company
Dow Building Solutions
200 Larkin Midland, MI 48674
1-866-583-BLUE (2583)
Fax 1-989-832-1465

www.dowbuildingsolutions.com

3. PRODUCT DESCRIPTION
Basic Use
STYROFOAM™ CAVITYMATE™ Plus Extruded Polystyrene Foam Insulation is a moisture-resistant, durable and lightweight foam board designed specifically for use in wet cavity wall environments. Sized to fit snugly between wall ties, STYROFOAM™ CAVITYMATE™ Plus Insulation saves time and money on the job site. Its closed-cell structure provides exceptional long-term thermal performance and moisture control.

4. TECHNICAL DATA
Applicable Standards
STYROFOAM™ CAVITYMATE™ Plus Insulation meets ASTM C578 – Standard Specification for Rigid Cellular Polystyrene Thermal Insulation, which includes:
- C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- E96 – Standard Test Methods for Water Vapor Transmission of Materials
- D696 – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer
- C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics

Physical Properties
STYROFOAM™ CAVITYMATE™ Plus Insulation exhibits the properties and characteristics indicated in Tables 3 and 4 when tested as represented.

Environmental Data
STYROFOAM™ CAVITYMATE™ Plus Insulation is hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential. STYROFOAM™ CAVITYMATE™ Plus Insulation is reusable in many applications.

Fire Protection
STYROFOAM™ CAVITYMATE™ Plus Insulation is combustible; protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector.

Code Compliances
STYROFOAM™ CAVITYMATE™ Plus Insulation complies with the following codes:
- International Residential Code (IRC) and International Building Code (IBC); see ICC-ES ESR 2142, BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369

Contact your Dow sales representative or local authorities for state and local building code requirements and related acceptances.

5. INSTALLATION
Boards of STYROFOAM™ CAVITYMATE™ Plus insulation are easy to handle, cut and install. Contact a local Dow representative or access the literature library at www.dowbuildingsolutions.com for more specific instructions.

TABLE 1: U.S. Sizes, R-Values and Edge Treatments for STYROFOAM™ CAVITYMATE™ Plus Extruded Polystyrene Foam Insulation

Nominal Board Thickness, in. (cm)	R-value[a]	Board Size, in. (cm)	Edge Treatment
1.0	5.0	16 x 96	Square Edge
1.5	7.5	16 x 96	Built Edge
2.0	10.0	16 x 96	Built Edge
3.0	15.0	16 x 96	Built Edge

[n] Not all product sizes are available in all regions.
[a] R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-values are expressed in ft2• h•°F/Btu. R-value determined by ASTM C518.

6. AVAILABILITY
STYROFOAM™ CAVITYMATE™ Plus insulation is manufactured in several locations across North America and is distributed through an extensive network. For more information, call 1-800-232-2436.

7. WARRANTY
In the United States, a 50-year thermal limited warranty is available on STYROFOAM™ Insulation products 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. Warranties are available as described at http:// building.dow.com/na/en/tools/warranty.htm

8. MAINTENANCE
Not applicable.

9. TECHNICAL SERVICES
Dow can provide technical information to help address questions when using STYROFOAM™ CAVITYMATE™ Plus Insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

10. FILING SYSTEMS
www.dowbuildingsolutions.com
www.sweets.com

TABLE 2: Physical Properties of STYROFOAM™ CAVITYMATE™ Plus Insulation

Property	Value
Thermal Resistance[1] per inch, ASTM C518 @ 75°F mean temp., ft²•h•°F/Btu, R-value, min.	5.0
Compressive Strength[2], ASTM D1621, psi, min.	25
Water Absorption, ASTM C272, % by volume, max. ASTM D2842, % by volume, max.	0.3 <0.7
Water Vapor Permeance[3], ASTM E96, perm, max.	1.5
Maximum Use Temperature, °F	165
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F	3.5×10^{-5}
Flexural Strength, ASTM C203, psi, min.	50

[1] Values are consistent with the criteria of ASTM C578 and the requirements of the FTC R-value rule (16 CFR Part 460). R means resistance to heat flow. The higher the R-value, the greater the insulating power.
[2] Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first. Since STYROFOAM™ extruded polystyrene insulations are visco-elastic materials, adequate design safety factors should be used to prevent long-term creep and fatigue deformation.
[3] Based on 1" thickness.

In the U.S.
The Dow Chemical Company
Dow Building Solutions
200 Larkin Center
Midland, MI 48674

In Canada
Dow Chemical Canada ULC
Dow Building Solutions
450 – 1st St. SW
Suite 2100
Calgary, AB T2P 5H1

For Technical Information:
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)

For Sales Information:
1-800-232-2436 (English)
1-800-565-1255 (French)

dowbuildingsolutions.com

Printed in the U.S.A.

Form No. 179-04364-0715 CDP

M'GONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Amprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	August 26, 2020

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	Henry Bakor
(name & address)	15 Wallsend Ave Scarborough, Ontario
Contact Name:	
Telephone Number:	800-387-9598

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Blueskin SA

Henry®

TECHNICAL DATA SHEET

Blueskin® SA

Self-Adhered Water Resistive Air Barrier

Physical Property	Typical Value	Test Method
Colour	Blue	-
Thickness, nominal	1.0 mm (40 mils)	-
Application Temperature, minimum	5°C (41°F)	-
Service Temperature	-40°C to 70°C (-40°F to 158°F)	-
Water Vapour Permeance	1.71 ng/Pa.m²s (0.03 Perms)	ASTM E96, Method A
Water Vapour Permeance	4.57 ng/Pa.m²s (0.08 Perms)	ASTM E96, Method B
Elongation, minimum	200%	ASTM D412, modified
Tensile Strength, minimum	500 psi	ASTM D412, modified
Puncture Resistance, minimum	178 N (40 lbf)	ASTM E154
Watertightness	Pass	CAN/CGSB-37.58-M86
Nail Sealability	Pass	ASTM D1970
Low Temperature Flexibility @ -30°C (-22°F)	Pass	CGSB 37-GP-56M
Lap Peel Strength @ 4°C (39°F)	> 4378.4 N/m (25.0 lbf/in)	ASTM D903, 180° bend
Water Absorption	0.1%	ASTM D570
Air Leakage @ 75 Pa	0.0011 L/s.m.^{2} (0.0002 cfm/ft^2)	ASTM E2178
Air Leakage After 3000 Pa Test	No Change	ASTM E330-90
Assembly Air Leakage @ 75 Pa	0.0195 L/s.m.^{2} (0.0039 cfm/ft^2) - Pass	ASTM E2357, CAN/ULC-S741-08
Air Leakage Rate	Classification A1	CAN/ULC-S742-11
Crack Bridging	Pass	ASTM C1305

Description

Blueskin® SA is a self-adhered water resistive air barrier consisting of an SBS rubberized asphalt compound, which is integrally laminated to a blue engineered thermoplastic film surface. It is specifically designed to be self-adhered to a prepared substrate providing an air, vapour and water resistive barrier in full wall applications or as penetration/flashing membrane with other air barrier systems.

Features

- Flexible at low temperatures
- Impermeable to air, moisture vapour and water
- Compatible with Henry® Air-Bloc® fluid applied air barriers
- Self-gasketing when penetrated and under compression with self-tapping screws

Usage

Blueskin® SA is designed for use as a self-adhered air, vapour and water resistive barrier. It can also be used as a transition sheet in conjunction with Henry® Air-Bloc® fluid applied air barriers where greater movement is anticipated due to its high strength. **Blueskin® SA** is also used for tying into metal on curtain walls, windows and doorframes.

Application

Surface Prep: All surfaces to receive **Blueskin® SA** must be clean of oil, dust and excess mortar. Acceptable substrates are exterior-grade gypsum sheathing, plywood, OSB, precast or cast-in-place concrete, concrete block, primed steel, aluminum mill finish, anodized aluminum and galvanized metal. Strike masonry joints flush. Concrete surfaces must be smooth and without large voids, spalled areas or sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before **Blueskin® SA** is applied. Where curing compounds are used, they must be clear resin based, without oil, wax or pigments.

All surfaces to receive Blueskin® SA require an application of Blueskin® Adhesive, Blueskin® LVC Adhesive or Aquatac™ Primer allowed to dry to a tacky film before Blueskin® SA is applied. Coated surfaces not covered by membrane during the working day must be recoated. Availability may vary by region.

Apply: Position Blueskin® SA for alignment and remove release film and press firmly in place. Roll membrane, including seams, with a countertop roller to ensure full contact once in place. Membrane must be rolled after application to ensure adhesion to substrate and laps. Blueskin® SA must be lapped a minimum of 50 mm (2") on both sides and end laps. When using with brick ties, position, press in place and cut for ties or projections. Seal around any openings and at leading edge at the end of the workday with 925 BES Sealant, Air-Bloc® 21 or Air-Bloc® 21FR. Detail work must be carefully carried out to ensure continuous air tightness of the membrane. It is recommended that mechanical attachment be made to all window and doorframes, or a properly designed sealant joint be provided.

Membrane applied to the underside of the substrate (i.e. ceilings) and extending more than 152 mm (6") onto inverted surfaces requires mechanical fastening through treated wood or galvanized metal strapping, or have insulation mechanically fastened. Fastening must take place immediately after installation of the membrane. Space strapping on 457 mm (18") centres, running perpendicular to the side laps.

Insulation Application: The use of mechanical fasteners through Blueskin® SA along changes in plane, such as inside corners, may be required by some insulation manufacturers. Consult insulation manufacturer prior to installation of insulation.

- **Insulation Clips:** Insulation clips should be mechanically fastened through the membrane into the substrate with a self-tapping screw. Apply number of insulation clips as recommended by the insulation manufacturer.
- **Insulation Adhesive:** Air-Bloc® 21 or Air-Bloc® 21FR should be applied to insulation boards in a serpentine pattern to restrict movement of air behind the insulation. Alternatively, a full coat notched trowel application may be applied to the back of the board. Press insulation firmly in place.

Limitations: Blueskin® SA is designed for exposure up to 90 days if necessary to accommodate construction scheduling, but is not designed for permanent exposure to ultraviolet light and should be covered as soon as practical after application. It is not to be used in direct contact with flexible PVC/vinyl membranes or gaskets. Consult the PVC/vinyl window manufacturer for compatibility.

Packaging

1.22 m x 22.86 m (48" x 75')
914 mm x 22.86 m (36" x 75')
457 mm x 22.86 m (18" x 75')
300 mm x 22.86 m (12" x 75')
225 mm x 22.86 m (9" x 75')
150 mm x 22.86 m (6" x 75')
100 mm x 22.86 m (4" x 75')

Storage

Store rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area not subject to heat over 49°C (120°F). Double stacked pallets are not recommended. If double stacking is necessary, use a plywood sheet to distribute the load.

Henry®

SAFETY DATA SHEET

Issue Date 26-Jan-2016 Revision Date 26-Jan-2016 Version 1

1 IDENTIFICATION

Product Identifier

Product Name BLUESKIN SA

Other means of identification

Product Code BH200SA

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Waterproofing Sealers

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

HENRY COMPANY
999 N. Sepulveda Blvd., Suite 800
El Segundo, CA 90245-2716
Web Site: www.henry.com www.ca.henry.com

Emergency telephone number

Company Phone Number 800-486-1278

Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
CANUTEC: 613-966-6666

2 HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

Not classified

Hazard statements

None

Appearance Solid sheet **Physical state** Solid **Odor** Slight

Precautionary Statements - Prevention

Not applicable

Precautionary Statements - Response

Not applicable

Hazards not otherwise classified (HNOC)

Not applicable

Other Information
Not applicable.

Unknown acute toxicity
35.64268897% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture
This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

Chemical Name	CAS No	Weight-%
Asphalt *	8052-42-4	60 - 100
Polymer Blend *	Proprietary	3 - 7
Distillates, petroleum, hydrotreated heavy naphthenic *	64742-52-5	1 - 5
Rubber Compounds *	Proprietary	1 - 5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.
Eye contact	Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms	None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required.

Environmental precautions

Environmental precautions	Collect spillage. Dispose of contents/container to an approved waste disposal plant.

Methods and material for containment and cleaning up

Methods for containment	No information available.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Asphalt 8052-42-4	TWA: 0.5 mg/m³ benzene soluble aerosol fume, inhalable fraction	-	Ceiling: 5 mg/m³ fume 15 min

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls	Showers Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	Solid sheet	Odor	Slight
Color	Multiple Colors	Odor threshold	No information available

Property	Values	Remarks • Method
pH	Not applicable	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	Not applicable
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	0	
Vapor density	No information available	
Relative density	>1	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	>260 °C / >500 °F	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	Not applicable
Dynamic viscosity	No information available	Not applicable
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid
Storage near to reactive materials, elevated temperature.

Incompatible materials
Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	None known.
Eye contact	None known.
Skin contact	None known.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Asphalt 8052-42-4	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Asphalt 8052-42-4	-	Group 2B	-	X
Polymer Blend	-	Group 3	-	-
Distillates, petroleum, hydrotreated heavy naphthenic 64742-52-5	A2	Group 1	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
Group 1 - Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	5,012.00
ATEmix (dermal)	2,005.00
ATEmix (inhalation-dust/mist)	42.18

12. ECOLOGICAL INFORMATION

Ecotoxicity
None known

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation

Chemical Name	Partition coefficient
Asphalt 8052-42-4	6

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Asphalt 8052-42-4	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 0	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Issue Date 26-Jan-2016
Revision Date 26-Jan-2016
Revision Note
No information available

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title: Carleton Place Arena Addition
Project Number:
Date: August 26, 2020

SUBCONTRACTOR **(name & address):** McGonigal Construction Ltd.
245 Fifth Avenue, Arnprior, Ontario K7S 3M3

Contact Name: Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number: (613) 623-3613

SUPPLIER **(name & address):** Merkley Supply
100 Bayview Road
Ottawa, Ontario

Contract Name: Paul Mutter
Telephone Number: 613-728-2693

MANUFACTURER **(name & address):** Henry Bakor
15 Wallsend Ave
Scarborough, Ontario

Contact Name:
Telephone Number: 800-387-9598

Specification Name: Masonry

Specification Section: 4200

Paragraph Number:

Product Submission: Blueskin TWF Flexible Flashing

TECHNICAL DATA SHEET

Henry COMPANY BAKOR

Blueskin® TWF

Self-Adhesive Thru-Wall Flashing Membrane

Physical Properties

-Color	Yellow	-Low Temperature Flex. at -30°C. (CGSB 37-GP-56M)	Pass
-Thickness	1.0 mm (40 mils)		
-Film Thickness	0.1mm	-Water Vapor Permeance (ASTM E96 Method B)	1.6 ng/Pa.s.m² (0.03 Perms)
-Application Temperature	Min. Minus 4°C		
-Service Temperature	Minus 40°C to 80°C	-Tear resistance Initiation (ASTM D1004)	200N (13 lbs.) MD
-Elongation (ASTM D412 Die C)	200% minimum		
-Tensile Strength (Membrane) ASTM D412 Die C	3400 kPa (493 psi) minimum	-Propagation (ASTM D1938)	75N (9 lbs.) MD
-Tensile Strength (Film) ASTM D882	39500 kPa (5723 psi) minimum	-Lap Peel Strength at -4°C. (ASTM D1876)	8.75N/cm (5 lbf/in)width
-PunctureResistance - Membrane (ASTM E154)	180N minimum (40 lbf)	-Adhesion to Concrete (ASTM D903)	8.75N/cm (5.0 lb/in.) width
-Flow (ASTM D5147)	Pass @ 110°C	-Moisture absorption (ASTM D570-81)	0.1%max.
-Watertightness (CGSB 37.58 - M86)	Pass		

Packaging

-Thickness	1.0 mm (40 mils)	-Gross Coverage	
-Roll Length	22.9m (75 ft).		
-Roll Widths	900mm (36")	900 mm (36")	20.9 m² (225 ft²)
	600mm (24")	600 mm (24")	13.9 m² (150 ft²)
	450mm (18")	450 mm (18")	10.4 m² (112.5 ft²)
	300mm (12")	300 mm (12")	6.9 m² (75 ft²)
-Top Surface	Yellow, Cross-Laminated HDPE		
-Bottom Surface	Siliconized Release Paper		

Description

Blueskin® TWF is a self-adhered membrane consisting of an SBS rubberized asphalt compound which is integrally laminated to a yellow cross-laminated polyethylene film. **Blueskin® TWF** is specifically designed for use as a thru-wall flashing and dampproof course. Available in 300mm (12"), 450mm (18"), 600mm (24") and 900mm (36") widths.

Features

- Impermeable to air, moisture vapor and water
- Flexible at low temperatures
- Excellent adhesion to prepared substrates
- Excellent compatibility with most **Bakor** adhesives and liquid air barrier membranes
- Exceptional puncture and abrasion resistance
- Self-sealing when penetrated with self -tapping screws

Uses

Used as a thru-wall flashing membrane and may be used in conjunction with **Bakor Air Barrier Systems.**

Henry Company Canada, 15 Wallsend Drive, Scarborough, ON M1E 3X6
Tel: 800-486-1278 **Email:** techservices@henry.com

www.bakor.com

REV: 07/19/10

Limitations

Non-resistant to oils and solvents not designed for permanent exposure. Yellow surface film may release on extended exposure to U.V. Good practice calls for covering as soon as possible. Do not extend **Blueskin® TWF** beyond face of exterior wall or veneer. Avoid sealant contact with the underside (compound side) of **Blueskin® TWF.** Apply under dry conditions when air and surface temperatures are above -4°C. Not to be used in direct contact with flexible PVC/vinyl membranes or gaskets. Some sealants may discolor if in contact with the asphalt compound or may soften the asphalt compound. Contact sealant manufacturer for more information.

Storage

Store rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area not subject to heat over 40°C or under -10°C. Double stacked pallets are not recommended. If double stacking is necessary, use a plywood sheet to distribute the load.

Surface Preparation

Acceptable substrates are precast concrete, cast-in place concrete, concrete block, primed steel, aluminum mill finish, anodized aluminum, galvanized metal, gypsum board and wood. All surfaces to receive **Blueskin® TWF** must be clean of oil, dust and excess mortar. Strike masonry joints flush. Concrete surfaces must be smooth and without large voids, spalled areas or sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before **Blueskin® TWF** is applied.

Apply **Blueskin® Primer, Aquatac™ Primer or Hi-Tac Primer** by brush or roller at the rate of approximately 7.2 m^2/L (300 $ft^2/gal.$), depending on porosity and texture of surface and allow to dry for a minimum of 30 minutes before **Blueskin® TWF** is applied. Allow additional time for primer to set if wet to the touch or can be easily rubbed off. Ensure that all primed surfaces receive **Blueskin® TWF** in the same day or re-priming may be required.

Application

Material should be conditioned at room temperature for ease of application.

Cut the desired length of **Blueskin® TWF** and remove siliconized release paper. Position into place and apply positive pressure using a roller. Use care to avoid blisters and folds. Overlap all joints by 50mm (2"). Keep **Blueskin® TWF** back 12mm (½") to 25mm (1") from outside face of wall or veneer. At all laps, seams, penetrations, and along top edges of **Blueskin® TWF**, apply a continuous bead of rubberized mastic such as **Air-Bloc** or **POLYBITUME® 570-05**. Form end dams as required and use rubberized mastic at laps.

Top or leading edge of **Blueskin® TWF** must be sealed with a rubberized mastic such as **Air-Bloc, POLYBITUME® 570-05 or HE925 BES Sealant** to prevent rain water from migrating behind the membrane.

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Henry®

SAFETY DATA SHEET

Issue Date 27-Jan-2016 Revision Date 27-Jan-2016 Version 1.

1. IDENTIFICATION

Product Identifier
Product Name BLUESKIN TWF

Other means of identification
Product Code BH200TW
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Waterproofing Sealers
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
HENRY COMPANY
999 N. Sepulveda Blvd., Suite 800
El Segundo, CA 90245-2716
Web Site: www.henry.com www.ca.henry.com

Emergency telephone number
Company Phone Number 800-486-1278
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
CANUTEC: 613-966-6666

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

Not classified

Hazard statements
None

Appearance Solid sheet **Physical state** Solid **Odor** Slight

Precautionary Statements - Prevention
Not applicable

Precautionary Statements - Response
Not applicable

Hazards not otherwise classified (HNOC)

Not applicable

Other Information
Not applicable.

Unknown acute toxicity
35.64268897% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture
This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

Chemical Name	CAS No	Weight-%
Asphalt *	8052-42-4	60 - 100
Polymer Blend *	Proprietary	5 - 10
Distillates, petroleum, hydrotreated heavy naphthenic *	64742-52-5	5 - 10
Rubber Compounds *	Proprietary	1 - 5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye contact Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.

Ingestion Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required.

Environmental precautions

Environmental precautions Collect spillage. Dispose of contents/container to an approved waste disposal plant.

Methods and material for containment and cleaning up

Methods for containment No information available.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Asphalt 8052-42-4	TWA: 0.5 mg/m³ benzene soluble aerosol fume, inhalable fraction	-	Ceiling: 5 mg/m³ fume 15 min

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Slight
Appearance	Solid sheet	Odor threshold	No information available
Color	Multiple Colors		

Property	Values	Remarks • Method
pH	Not applicable	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	Not applicable
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	0	
Vapor density	No information available	
Relative density	>1	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	>260 °C / >500 °F	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	Not applicable
Dynamic viscosity	No information available	Not applicable
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10 STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid
Storage near to reactive materials, elevated temperature.

Incompatible materials
Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	None known.
Eye contact	None known.
Skin contact	None known.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Asphalt 8052-42-4	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Asphalt 8052-42-4	-	Group 2B	-	X
Polymer Blend	-	Group 3	-	-
Distillates, petroleum, hydrotreated heavy naphthenic 64742-52-5	A2	Group 1	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
Group 1 - Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	5,012.00
ATEmix (dermal)	2,005.00
ATEmix (inhalation-dust/mist)	42.18

12. ECOLOGICAL INFORMATION

Ecotoxicity
None known

100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation

Chemical Name	Partition coefficient
Asphalt 8052-42-4	8

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Asphalt 8052-42-4	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 0	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Issue Date 27-Jan-2016
Revision Date 27-Jan-2016
Revision Note
No information available

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	August 26, 2020

SUBCONTRACTOR **: (name & address)**	McGonigal Construction Ltd. 245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

SUPPLIER **: (name & address)**	Merkley Supply 100 Bayview Road Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

MANUFACTURER **: (name & address)**	Henry Bakor 15 Wallsend Ave Scarborough, Ontario
Contact Name:	
Telephone Number:	800-387-9598

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Blueskin Adhesive (Primer)

Henry COMPANY BAKOR

TECHNICAL DATA SHEET

Blueskin® Adhesive

Adhesive for Self-Adhered Membranes

Physical Properties

-Colour	Blue	-Service Temp	Minus 40°C to 70°C
-Solids by Weight	35%	-Application Temp	Minus 12°C to 40°C
-Weight	0.8 kg/l (6 lbs./gal. U.S.) (approx.)	-Flammability	
		Wet	Flammable
		Dry	Burns
-Coverage	2 to 6 m^2/l (up to 250 ft^2/gal. U.S.) depending on porosity and texture of surface.		
-Drying Time			
Initial Set	30 minutes		
Set Through	2 hours		

Description

Blueskin® Adhesive is a rubber based adhesive for self-adhered membranes.

Features

- Quick setting
- Aggressive tack provides increased adhesion of membrane
- Suitable for application at normal and low temperatures
- Easily applied

Uses

Used as an adhesive to increase bond strength of self-adhered membranes such as **Blueskin® SA, Blueskin® WP 200, Blueskin® ROOF RF 200, Blueskin PE200HT, Vapor Bloc SA** or **DuraTac** when applied to masonry, concrete, wood, gypsum board, DensGlass Gold® and metal surfaces.

Blueskin® Adhesive is the product of choice on above grade applications of self-adhered membranes where a quick setting, aggressive tack, solvent based adhesive is required.

Designed for applications above -12°C.

Limitations

Solvent in product attacks polystyrene insulation. Avoid use where solvent odours may taint food or other susceptible products..

Packaging

Blueskin® Adhesive is packaged in 17L and 3.5L pails.

Henry Company Canada, 15 Wallsend Drive, Scarborough, ON M1E 3X6
Tel: 800-486-1278 **Email:** techservices@henry.com

www.bakor.com

REV: 8/23/12

Blueskin® Adhesive for Self-Adhered Membranes

Preparation

Surfaces must be dry and free from dust, dirt, grease, oil or other foreign matter.

Application

Apply by brush, roller or spray. Rollers should have a heavy nap of natural material such as lamb's wool. Allow Adhesive to dry for 30 minutes before applying membrane.

Coated surfaces not covered by membrane during the working day must be re-coated.

Clean Up

Use mineral spirits.

Caution

Contains extremely flammable solvents. Take suitable fire precautions. Do not allow smoking or welding in working area. Keep away from open flame or spark. Use under well ventilated conditions. Avoid prolonged breathing of vapours and repeated contact with skin. Excessive inhalation of vapours can cause dizziness. (Use respirator approved for organic vapours). Keep containers covered when not in use. Harmful if swallowed.

<>

Henry®

SAFETY DATA SHEET

Issue Date 20-Dec-2015 Revision Date 28-Dec-2016 Version 1

1. IDENTIFICATION

Product Identifier
Product Name BAKOR BLUESKIN ADHESIVE

Other means of identification
Product Code BK101
UN/ID no UN1133
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Adhesives and/or sealants
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address
HENRY COMPANY
999 N. Sepulveda Blvd., Suite 800
El Segundo, CA 90245-2716
Web Site: www.henry.com www.ca.henry.com

Emergency telephone number
Company Phone Number 800-486-1278
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
CANUTEC: 613-996-6666

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard statements
Causes skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Highly flammable liquid and vapor

Appearance viscous Physical state liquid Odor Strong Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity
17.10458% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Hexane *	110-54-3	30 - 60

Acetone *	67-64-1	10 - 30
Synthetic Polymer Blend *	Proprietary	10 - 30
Polymer Blend *	Proprietary	1 - 5
Solvent naphtha, petroleum, medium aliphatic *	64742-88-7	1 - 5
Mineral oil *	8012-95-1	1 - 5
Bentonite *	1302-78-9	1 - 5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye contact Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.

Ingestion Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Coughing and/ or wheezing. May cause skin irritation. Drowsiness. Dizziness.

Indication of any immediate medical attention and special treatment needed

Note to physicians Keep victim warm and quiet. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
Other information	Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Environmental precautions

Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Methods for cleaning up	Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
Incompatible materials	Strong acids. Strong oxidizing agents. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hexane 110-54-3	TWA: 50 ppm S*	TWA: 500 ppm TWA: 1800 mg/m³	IDLH: 1100 ppm TWA: 50 ppm TWA: 180 mg/m³
Acetone 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m³	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
Solvent naphtha, petroleum, medium aliphatic 64742-88-7	-	TWA: 500 ppm TWA: 2000 mg/m³	-
Mineral oil 8012-95-1	TWA: 5 mg/m³ Inhalable fraction excluding metal working fluids, highly & severely refined TWA: 5 mg/m³ Inhalable fraction excluding metal working fluids	TWA: 5 mg/m³	IDLH: 2500 mg/m³ TWA: 5 mg/m³ STEL: 10 mg/m³

Bentonite 1302-78-9	TWA: 1 mg/m³ respirable fraction		

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	**Odor**	Strong Solvent
Appearance	viscous	**Odor threshold**	No information available
Color	blue		

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 56 °C / 133 °F	
Flash point	-28 °C / -18 °F	Tag Closed Cup
Evaporation rate	> 1	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	13	
Lower flammability limit:	1	
Vapor pressure	31 kPa	@ 25 °C
Vapor density	2.8	
Relative density	0.84	
Water solubility	slightly soluble	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	233 °C / 451 °F	
Decomposition temperature	No information available	
Kinematic viscosity	> 100 mm2/s	@ 40 °C
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Heat, flames and sparks. Incompatible materials.
Incompatible materials
Strong acids. Strong oxidizing agents. Strong bases.
Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause drowsiness or dizziness.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	Based on available data, the classification criteria are not met.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hexane 110-54-3	= 25 g/kg (Rat)	= 3000 mg/kg (Rabbit)	= 48000 ppm (Rat) 4 h
Acetone 67-64-1	= 5800 mg/kg (Rat)	-	= 50100 mg/m³ (Rat) 8 h
Solvent naphtha, petroleum, medium aliphatic 64742-88-7	> 5000 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	> 5.28 mg/L (Rat) 4 h
Mineral oil 8012-95-1	> 24 g/kg (Rat)	-	= 2062 ppm (Rat) 4 h
Bentonite 1302-78-9	> 5000 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms	May cause redness and tearing of the eyes. Vapors may cause drowsiness and dizziness. Coughing and/ or wheezing. May cause skin irritation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Polymer Blend	-	Group 3	-	-
Mineral oil 8012-95-1	A2	Group 1 Group 3	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen
Group 1 - Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity	Contains a known or suspected reproductive toxin.
STOT - single exposure	Target Organs. Respiratory system. Central nervous system.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Chronic toxicity	Avoid repeated exposure.
Target Organ Effects	Central nervous system, Eyes, Peripheral Nervous System (PNS), Respiratory system, Skin.
Neurological effects	Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.
Aspiration hazard	Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	13,438.00 mg/kg
ATEmix (dermal)	4,994.00 mg/kg
ATEmix (inhalation-dust/mist)	376.70 mg/l
ATEmix (inhalation-vapor)	84,964.00 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects

17.10819 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation

Chemical Name	Partition coefficient
Acetone 67-64-1	-0.24

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated packaging	Do not reuse container.
US EPA Waste Number	D001

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Hexane 110-54-3	Toxic Ignitable
Acetone 67-64-1	Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
Special Provisions	149, B52, IB2, T4, TP1, TP8
Description	UN1133, Adhesives, 3, II
Emergency Response Guide Number	128

TDG

UN/ID no	UN1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
Description	UN1133, Adhesives, 3, II

IATA

UN/ID no	UN1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
ERG Code	3L
Special Provisions	A3
Description	UN1133, Adhesives, 3, II

IMDG

UN/ID no	UN1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
EmS-No	F-E, S-D
Description	UN1133, Adhesives, 3, II, (-28°C c.c.)

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical

or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	SARA 313 - Threshold Values %
Hexane - 110-54-3	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hexane 110-54-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Acetone 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Quartz - 14808-60-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hexane 110-54-3	X	X	X
Acetone 67-64-1	X	X	X
Solvent naphtha, petroleum, medium aliphatic 64742-88-7	X	-	-
Mineral oil 8012-95-1	X	X	X
Benzene, 1,2,4-trimethyl- 95-63-6	X	X	X
Quartz 14808-60-7	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 3	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2*	Flammability 3	Physical hazards 0	Personal protection X

Chronic Hazard Star Legend * = Chronic Health Hazard

Issue Date 20-Dec-2015
Revision Date 28-Dec-2016
Revision Note
No information available
Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief

at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	August 26, 2020

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road
	Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	Hohmann & Bernard
(name & address)	30 Rasons Court
	Hauppauge, NY
Contact Name:	
Telephone Number:	800-645-0616

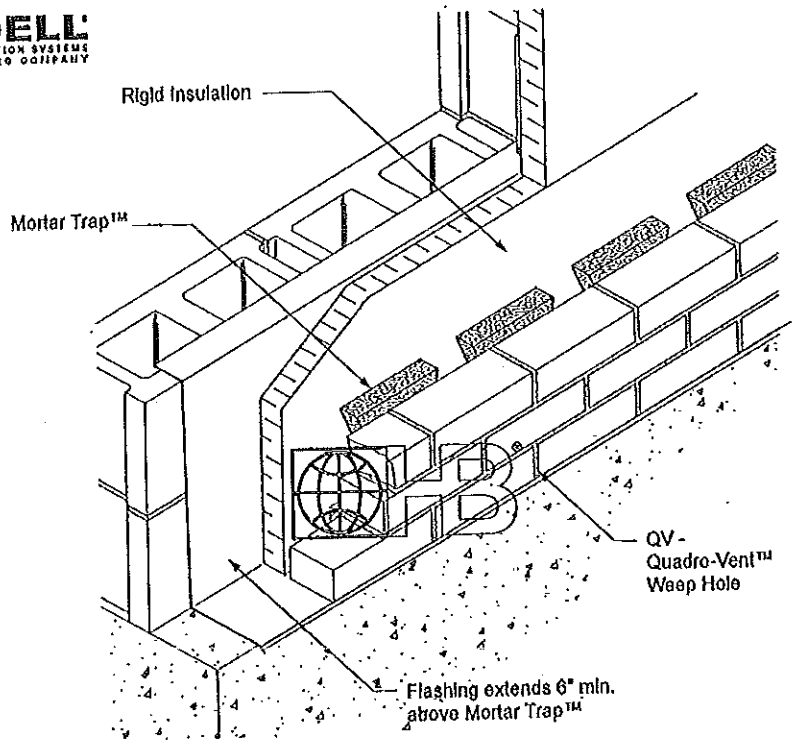
Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	Mortar Trap

HOHMANN & BARNARD, INC.
A MiTek - BERKSHIRE HATHAWAY COMPANY

Mortar Collection Systems

Mortar Trap™

SANDELL
MOISTURE PROTECTION SYSTEMS
A HOHMANN & BARNARD COMPANY



DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY

Mortar Trap™
Mortar Trap™ is manufactured from high-density polyethylene (HDPE) strands woven into a 90% open mesh. Its unique shape breaks up mortar droppings and prohibits mortar from creating a moisture retaining barrier, allowing water to flow freely to the weep holes.

Features:

- 90% open mesh construction allows unobstructed passage of air & water through the material itself so walls breathe, drain & dry quicker.
- Will not react with common building products (PVC, polystyrene, copper, rubberized-asphalt, lead, stainless steel or galvanized metal).
- Will not: absorb or trap moisture, support mold or fungus, and is inedible to insects.
- Will not degrade as a result of temperature variations and is designed to last for the life of the building.
- Keeps weep holes open - catches and permanently suspends mortar-droppings so blockage can't occur.
- Fast, easy installation by masons - does not require fasteners or adhesives, no special skills or tools.
- Slightly compressible to allow for cavity variations in the field.

Thickness: (Mortar Trap™ is 10" high x 4' long)

- ☐ 0.4"
- ☐ 1"
- ☐ 1 ½"
- ☐ 2"

NOTE: When Mortar Trap™ is used with the Quadro-Vent™ Weep Hole additional insect screening is not required.

HOHMANN & BARNARD, Inc.
30 Rasons Court | Hauppauge, NY 11788
CORPORATE HEADQUARTERS
T: 800.645.0616 F: 631.234.0683
www.h-b.com

Branch/Subsidiary Locations:
ALABAMA - ILLINOIS - MARYLAND
NEW YORK - PENNSYLVANIA - TEXAS
CANADA

HOHMANN & BARNARD, INC.
a MiTeX company

SAFETY DATA SHEET

1. Identification

Product Identifier: Mortar Trap™
General Category: Walls
Manufacturer:
Hohmann & Barnard, Inc.
30 Rasons Court
Hauppauge, NY 11788
(631) 234-0600
www.h-b.com

Telephone Numbers
During normal business hours call: (800) 645-0616
24-hour emergency call Chemtrec: (800) 255-3924

2. Hazards Identification

EMERGENCY OVERVIEW:
This product is not expeted to produce unusual hazards during normal use. Direct contact may irritate skin, or eyes. Due to the products physical nature, no significant harzards are associated with this product.

POTENTIAL HEALTH EFFECTS(See Section 11 for more information)
ACUTE:

Inhalation	Inhalation unlikely, but can burn due to fire creating a dense toxic smoke. Severe over exposure may result in nausea, headache, chills, and fever. Consult a physician.
Eyes	Direct Contact may cause irritation of eyes. If burning, itching, or pain develop, consult a physician.
Skin	Direct contact may cause no more than sligh irritation. Unless caught on fire, causing possible severe thermal burns.
Ingestion	There are no known health effects due to ingestion. Due to the physical nature of the product, ingeston is very unlikely.

CHRONIC:

Inhalation	None Known.
Eyes	None Known.
Skin	Direct, Repeated rubbing may cause irritation to the skin.
Ingestion	None Known.

TARGET ORGANS: Eyes, skin and respirtory system.
PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.
CLASSIFICATION OF INGREDIENT(S): All substances listed are associated with the nature of raw materials used to create this product. Which are not independent components of the products formulation. All substances, if present, are at levels below regulatory limits. See section 11: Toxicology for details.
POTENTIAL ENVIROMENTAL EFFECTS: This product has no effect on the ecology. Unless ignited.

3. Composition/Information on Ingredients

MATERIAL	WT%	CAS #
Polycaprolactam (Nylon-6)	100	25038-54-4

4. First-Aid Measures

PROCEDURES

Inhalation	Leave area of exposure, and relocate to fresh air. Remain away from area until coughing and other symptoms subside. If conditions warrant, contact a physician.
Eyes	If exposed to eyes, do not rub or itch. To prevent further mechanical irritation, flush thoroughly with water for 20-30 minutes, or till irritation subsides.
Skin	Wash with warm water and soap. If irritation persists, consult a physician.
Ingestion	Product is not intended to be ingested or eaten. If eaten seek medical attention.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing skin diseases, rashes, and dermatitis.

5. Fire-fighting measures

Extinquishing Media — Water spray & foam. Water is the best extinquishing medium. Carbon dioxide & dry chemicals are not recommened because of their lack of cooling, and re-ignition.

Fire Fighting Procedures	Fire fighters and others exposed, wear self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products	Intense heat, dense black smoke, carbon monoxide, carbon dioxide, & hydrocarbon fragments.

Flash Point :	400°C	Auto Ignition:	Not Applicable
Method Used:	Not Established	Flammability Classification :	Not Established
Upper Flammable Limit:	Not Established	Rate Of Burning:	Not Established
Lower Flammable Limit:	Not Established		

6. Accidental release measures

CONTAINMENT:	No precautions. Wear appropriate personal protective equipment when handling. See section 8.
CLEAN-UP:	Use normal clean up procedures. Sweep or gather material to minimize slipping hazards.
DISPOSAL:	Follow local, state, provincial and federal regulations on disposing of the product. Recycling is encourged. Dispose in landfill or by incineration.

7. Handling and storage

HANDLING:	Follow recommednations on label and in the processing guide for the product. Prevent contact with skin and eyes. Use good industrial hygiene pratices. Seconday operations such as grinding, sanding and sawing may product a dust explosion hazard. Use bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.
STORAGE:	Store in a dry place away from moisture, excessive heat and sources of ignition. Avoid storage near foods to prevent food contamination.

8. Exposure controls/personal protection

ENGINEERING CONTROLS: A continuous supply of fresh air to the workplace with the removal of processing fumes through exhaust systems is recommened. Processing fume condensate may be a fire hazard and toxic. Remove periodically from exhaust hoods, ductwork and other surfaces using appropriate personal protection. Refer to **Hazards Identifications** for information. For powders and residual dusts, refer to Handling and Storage section.

VENTILATION REQUIRMENTS: Must be locally determined to limit exposure to materials at their point of use Design techiques and guidelines may be found in publications such as Industrial ventilation.

PERSONAL PROTECTIONS:

Eye/Face:	Wear saftey glasses with side shield or chemical goggles. In addition, use full-face shield when cleaning processing fume condensates from hood, ducts, and other surfaces.
Skin:	Avoid prolonged or repeated contact with material. When melting product, wear long pants, long sleeves, insulated gloves, and face protection when applicable. Use protective clothing, including chemical resistant gloves, to prevent any contact with processing fume condensates.
Respiratory:	When processing fumes are not controlled, use approved protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding, sanding, and sawing is not controlled, use respiratory approved equipment for protection against dust.

9. Physical and chemical properties

Appearance:	Sheets	Vapor Density (Air=1):	Not Applicable
Odor:	Slight Odor	Specific Gravity (H2O=1):	1.10 - 1.50
Odor Threshold:	Not Determined	Solubility in water (g/100g):	Insoluble
Phyical State:	Solid	Partition Coefficient:	Not Applicable
pH @ 25°C:	Not Applicable	Auto-Ignition Temp:	Not Determined
Melting Point:	205°C	Decomposition Temp:	Not Determined
Freezing Point:	Not Determined	Viscosity:	Not Applicable
Boiling Point:	Not Applicable	Particle Size:	Not Applicable
Flash Point:	375°C	Bulk Density:	Not Determined
Evaporation Rate (BuAc=1):	Not Applicable	Molecular Weight:	Mixture
Upper Flammable Limit (UFL):	Not Determined	VOC Content:	Not Determined
Lower Flammable Limit (LFL):	Not Determined	Percent Volatile:	Zero
Vapor Pressure (mm Hg):	Not Applicable		

10. Stability and reactivity

STABILITY:	Stable under recommended conditions of storage and handling.
REACTIVITY:	Not reactive under recommended conditions of storage, handling, processing and usage.
CONDITIONS TO AVOID:	Do not exceed melt tempature recommendations in products literature.
HAZARDOUS POLYMERIZATION:	None Known.
HAZARDOUS DECOMPOSITION:	Processing fumes evolved at recommended processing conditions may include trace levels of ethylbenzene, arcolein, acetaldehyde, acetophenone, cumene, and other lower molecular weight hydrocarbon fragments.

11. Toxilogical Information

ACUTE EFFECTS: Direct contact may cause eye and/or skin irritation. No signs of toxicity due to inhalation.

CHRONIC EFFECTS/CARCINOGENICITY: Direct, repeated rubbing with contact of the skin may cause slight irratation.

CARBON BLACK: These product contain less then 0.03% carbon black. Any exposure to carbon black is expected to remain below OSHA regulations and ACGIH recommended limits during normal handling and use of this product. The national Institure of Occupational Saftey and Health criteria document on carbon black recommends that only carbon black with .1% will be considered suspect of carcinogens.

12. Ecological Information

ENVIROMENTAL TOXICITY: Not expected to present any significant ecological problems.
ECOTOXICITY VALUE: Not Determined

13. Disposal Considerations

WASTE DISPOSAL METHOD: Recycling is encouraged. Disposal in landfill or by incineration in accordance with federal, state, and local requirments. Collected processing fume condensates and incinerator ash should be tested to determine waste classification. Do not dump into any sewers, on the ground, or into any body of water.

14. Transport Information

U.S DOT INFORMATION: Not a hazardous material per DOT shipping requirments. Not regulated.

Shipping Name:	Hohmann & Barnard Mortar Trap™
Hazard Class:	Not classified
UN/NA #:	Not listed
Packing Group:	None
Label(s) required:	Not applicable
RID/ADR:	None
ADNR:	None

15. Regulatory Information

Listed below are chemical substances subject to supplier notification requirments. The precentages, when present, represent average values.

TSCA Status:	This Product complies with the Chemical Substances Inventory requierments of the US EPA Toxic Substances Control Act (TSCA)
WHMIS Classifcation	D2

If any components in this product are known to the State of California to cause cancer and are reproductive hazards they are listed below.

16. Other Information

This material may contain commerically available pigments, dyes, or colorants. These colorants are typically added at concentrations of <5%, but may be added in concentrations as high as 10% USER RESPONSIBILITY: Each user should read and understand this information and incorporate it into individual site saftey programs in accordance with applicable hazard communication standars and regulations.

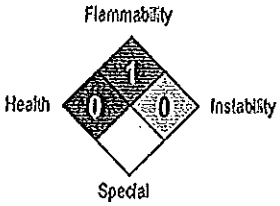
Issue Date: May 31, 2015
Revision Date: May 31, 2015

Hazardous Material Information System (HMIS)

Health	0
Flammability	1
Physical Hazard	0
Personal Protection	B

B- Safety Glasses and Gloves

National Fire Protection Association (NFPA)



HMIS & NFPA Hazard Rating Legend

* = CHRONIC HEALTH HAZARD
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This information is taken from sources or based upon data believed to be reliable; however, Hohmann & Barnard, Inc. disclaims any warranty, express or implied, as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may be required under particular conditions.

The information contained herein is based on current knowledge and experience; no responsibility is accepted and that the information is sufficient or correct in all cases. Users should consider this data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customer, and the protection of the environment.

McGONIGAL CONSTRUCTION LTD.

245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Telephone (613) 623-3613 Fax (613) 623-8705
Email rmcgonigal@mcgonigalconstruction.ca

SHOP DRAWING & SAMPLE SUBMITTAL

Project Title:	Carleton Place Arena Addition
Project Number:	
Date:	August 26, 2020

***SUBCONTRACTOR*:**	McGonigal Construction Ltd.
(name & address)	245 Fifth Avenue, Arnprior, Ontario K7S 3M3
Contact Name:	Chris Chabot (cchabot@mcgonigalconstruction.ca)
Telephone Number:	(613) 623-3613

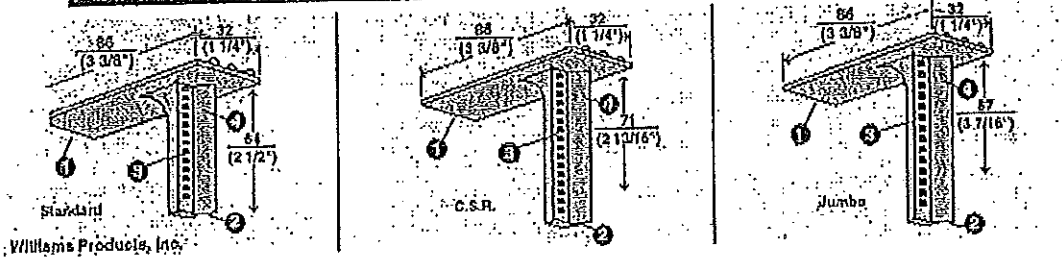
***SUPPLIER*:**	Merkley Supply
(name & address)	100 Bayview Road Ottawa, Ontario
Contract Name:	Paul Mutter
Telephone Number:	613-728-2693

***MANUFACTURER*:**	Goodco
(name & address)	3400-14th Ave Unit 41 Markham, ON
Contact Name:	
Telephone Number:	905-475-3336

Specification Name:	Masonry
Specification Section:	4200
Paragraph Number:	
Product Submission:	PVC Brick Vents

Williams Products, Inc
1750 Mapleiawn
Troy, MI. 48084
Toll Free: 800-521-2524 Phone: 248-643-6400
Fax: 248-643-7117

WILLIAMS-GOODCO BRICK VENT FOR CAVITY WALLS



Description

The Williams-Goodco brick vent is an injection molded vent made from flexible polyvinyl chloride in an offset "T" shape. When inserted in vertical mortar joints between two bricks the slotted leg of the vent allows air to pass in and out allows water to weep out and prevents water from penetrating in.

Spacing of Brick Vents

Tests indicate that for interior/exterior air pressure equalization and for ventilation one Williams-Goodco Brick Vent to every 10 square feet of wall surface is acceptable. One per 100 square feet is a minimal number. For drainage of condensation and moisture the vents act as weepholes and should be placed directly on top of the thru-wall flashing. One vent for every 24 inches of horizontal flashing is acceptable to provide weephole drainage.

The vents are hardly noticeable after installation but a regular symmetrical spacing pattern gives the best appearance.

Functions

When rain contacts an exterior brick surface water can enter openings through any combination of the following actions: momentum of raindrops, capillary action, gravity and air currents. Cracks, joints between wall components, surface pores and inadequately bonded interfaces may provide the openings for water penetration through walls. Much of the water penetration through brick cavity walls is caused not by the driving wind and rain on the exterior face but by the suction created within the air cavity by the lower interior air pressure. This force is controlled by installing brick vents in sufficient frequency and size to allow almost immediate air pressure equalization. Since winds gust, rather than create steady pressure, vents must have enough opening area to allow a continuous exchange of air. Small tubes and wicks have generally proved inadequate because of their limited opening size and because they clog quickly.

Efflorescence
Efflorescence is reduced by minimizing rain wetting within the exterior wall. However, more absorptive brick will hold moisture from exterior rain, or condensation on the back face resulting from air leakage from the building interior, and under certain environmental conditions (particularly in late Fall) this presence of moisture can trigger efflorescence.

Glazed Brick, Paints or Silicones
When these materials are used, cavity walls are necessary to avoid serious problems. In most buildings, moisture laden air will leak from the building interior and unless some free passage is available to the outside, spelling, ice lensing or blistering can occur.

Test Reports
Tests have been conducted to determine the rates of air flow through the Williams-Goodco brick vent and to indicate acceptable spacing for exterior walls. The test procedures and results are published and available on request.

Material Specifications
The Williams-Goodco brick vent is manufactured from a polyvinyl chloride compound specifically designed for continuous exposure to weathering. This compound possesses excellent sunlight resistance, good low temperature properties and contains a polymeric plasticizer to ensure permanence. Physical Properties as determined on molded specimens by ASTM procedures:

Packaging
200 vents per carton.

Color
Light gray.
Special Colors Available.

Sizes
2-1/4", 3-5/8"
will fabricate special sizes

Short Form Specification
Williams-Goodco brick vents as supplied by Williams Products, Inc. shall be installed in the vertical mortar joints in the exterior masonry brick wall...

(a) As detailed on the drawings. (b) Directly above all through-wall flashings at (spacing). (c) Throughout the wall in every (i.e. 4th mortar joint) horizontally and every (i.e. 10th course) vertically.

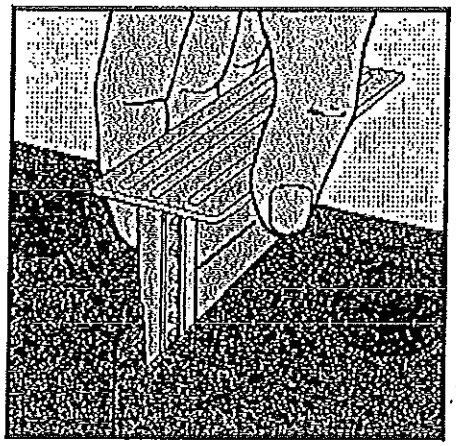
Features

(1) Top-flap - overlaps two adjacent bricks to stop mortar from falling into the air passage.

(2) Flexible Wings - to adjust to variation in mortar joint widths (5/16" - 3/4").

(3) Louvers - to allow air passages while creating a water barrier.

(4) Water ridges - when water buildup on the exterior wall surface is blown into the air passage these ridges create a barrier which directs the rain down and out of the cavity



Provide adequate opening for immediate air pressure equalization.
Act as weeper.
Provide neat, attractive appearance.
Install easily.
Impede passage of insects, din and rodents.
Block entrance to rain.
Resist clogging and the corrosive effects of masonry mortars.