

# Transmittal

Date: March 19, 2015

Page 1 of 1



<b>To:</b>	Norlon Builders Limited 151 York Street London, ON N6A 1A8	<b>Project:</b>	2171-14 Western University New Academic Building
<b>Attn:</b>	Jeremy Valeriote	<b>CC:</b>	Paul Tyshenko
<b>Reference:</b>	07 52 00 – Roofing Data		

COPIES	DRAWING NO.	DESCRIPTION
1	Copy	07 52 00 – Roofing Data

<input type="checkbox"/>	For your Review / Comments / Recommendations	<input checked="" type="checkbox"/>	Shop Drawings	<input type="checkbox"/>	Please Return Drawings / Diskettes After Use
<input type="checkbox"/>	For Use in Connection with your Work on the Above Project	<input type="checkbox"/>	As Requested	<input type="checkbox"/>	Returning your Drawings / Diskettes
<input checked="" type="checkbox"/>	For Email Distribution	<input type="checkbox"/>	For Tender	<input type="checkbox"/>	_____

Note:

Reviewed

Prepared by Richard Joseph for:

IF TRANSMISSION IS ILLEGIBLE,  
PLEASE CALL (519) 672-1440

architects Tillmann Ruth Robinson inc.

Per:  .....  
Louie Polito, Project Manager



UPDATED: 02.13.2015

# ACFOAM®-III INSULATION

## PRODUCT DATA SHEET

**DESCRIPTION:** Closed-cell polyisocyanurate (polyiso) foam core integrally bonded to inorganic coated glass facers. AC Foam®-III is offered in a variety of thicknesses, providing long-term thermal resistance (LTR) values from 5.7 to 26.8. Available in 4ft x 8ft (1220mm x 2440mm) and 4ft x 4ft (1220mm x 1220mm) panels. Manufactured in accordance with **ASTM C1289, Type II, Class 2, Grade 2 (20 psi) or Grade 3 (25 psi) and CAN/ULC-S704 Type 2, Class 3 or Type 3, Class 3.**

**ADVANTAGES:** When using AC Foam®-III in adhered systems, field testing has confirmed significantly more efficient use of solvent-based adhesives than with organic faced insulation. Adhesive application rates vary by manufacturer. Check adhesive manufacturer's recommendation for application rates. Manufactured using CFC-, HCFC- and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and virtually no (negligible) global warming potential (GWP). Recognized by the GREENGUARD Environmental Institute as resistant or highly resistant to mold growth based on independent testing using GREENGUARD Test Method GGTM.P040 (ASTM D6329) for microbial resistance. AC Foam®-III contains between 11.2% and 6.2% recycled materials by weight (*Atlas Technical Bulletin: TB-2*).

**APPLICATION:** Manufactured and tested for use in new and re-roofing applications. AC Foam®-III is used in built-up (BUR), modified bitumen, metal, ballasted single-ply, mechanically attached single-ply and adhered single-ply roofing systems. These roofing systems depend on proper installation for successful performance. Refer to FM Approvals® RoofNav and UL Online Certifications Directory for additional application details.

**INSTALLATION:** AC Foam®-III shall be kept dry before, during and after installation. This product will burn if exposed to an ignition source of sufficient heat and intensity. Do not apply flame directly to AC Foam®-III insulation. Refer to product packaging and PIMA Technical Bulletin #109 for storage and handling recommendations. **An offset or staggered multi-layer application of AC Foam® is strongly recommended when the total insulation thickness exceeds 2.7"** (*Atlas Technical Bulletin: TB-5*). Typical field fastening requirements can be obtained from membrane system manufacturer or FM Global Property Loss Prevention Data Sheets 1-29.

Prior to installation, Atlas Roofing Corporation recommends that you consult your local building codes, contract documents, professional engineer, FM Global, Miami-Dade County and membrane manufacturer for additional installation guidelines as well as design enhancements.

### PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	RESULTS
DIMENSIONAL STABILITY	ASTM D2126	< 2%
COMPRESSIVE STRENGTH	ASTM D1621	20 psi (140 kPa) or 25 psi (172 kPa)
WATER ABSORPTION	ASTM C209 & D2842	< 1.5%, < 3.5%
WATER VAPOR TRANSMISSION	ASTM E96	< 4.0 perm (228.8ng/(Pa*s*m²))
PRODUCT DENSITY	ASTM D1622	Nominal 2.0 pcf (32.04 kg/m³)
FLAME SPREAD	ASTM E84 (10 min.)	140-60
SMOKE DEVELOPMENT	ASTM E84 (10 min.)	150-170
TENSILE STRENGTH	ASTM D1623	> 730 psf (35 kPa)
SERVICE TEMPERATURE	-	-100° to +250°F

<sup>1</sup>Numerical ratings are not intended to reflect performance under actual fire conditions. Flame spread index of ≤ 75 and smoke development ≤ 450 meet code requirements for foam plastic roof insulation. Codes exempt foam plastic insulation when used in FM 4450 or UL 1256. Physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

### THERMAL DATA

LTR VALUE	THICKNESS		²RSI	FLUTE SPANABILITY	
	in	mm		in	mm
5.7	1.0	25.4	1.00	2.625	66.68
8.6	1.5	38.1	1.50	4.375	111.13
11.4	2.0	50.8	2.01	4.375	111.13
14.4	2.5	63.5	2.53	4.375	111.13
17.4	*3.0	76.2	3.06	4.375	111.13
20.5	*3.5	88.9	3.60	4.375	111.13
23.6	*4.0	101.6	4.15	4.375	111.13

LTR (long term thermal resistance) values were determined in accordance with CAN/ULC-S770-09. Test samples were third-party selected and tested by an accredited material testing laboratory. The LTR results were reviewed by FM Global and certified by the PIMA Quality Mark Program. ²RSI is the metric expression of R-value (m² • K/W).

\*To minimize the effects of thermal bridging, Atlas strongly recommends the use of multiple layers when the total desired or specified R-value requires an insulation thickness greater than 2.7" thick.

- **ASTM C1289, Type II, Class 2, Grade 2 (20 psi) or Grade 3 (25 psi)**
- **CAN/ULC-S704, Type 2, Class 3 or Type 3, Class 3**
- **CCMC No. 12423-L**
- **UL Certified for Canada— Insulated Roof Deck Assemblies Construction No. C38 and 52. Meet CAN/ULC-S126, CAN/ULC-S101 and CAN/ULC-S107**
- **UL Standard 1256 Classification Construction No. 120, 123 & 292**
- **UL Standard 790 (ASTM E108) Roofing Systems Classification**
- **UL Standard 263 (ASTM E119) Fire Resistance Classification**
- **UL Standard 1897 Uplift Resistance**
- **FM Standard 4450/4470 Approved**  
Refer to FM Approvals® RoofNav for Specific System Details
- **IBC Chapter 26 & NBC Sections on Foam Insulation**
- **California State Insulation Quality Standards and Title 25 Foam Flammability Criteria (License #TC 1231)**
- **Miami-Dade County Approved**
- **State of Florida Product Approval (FL6796)**

Other than the aforementioned representations and descriptions, Atlas Roofing Corporation (hereafter, "Seller") makes no other representations or warranties as to the insulation sold herein. The Seller disclaims all other warranties, express or implied, including the warranty of merchantability and the warranty of fitness for a particular purpose. Seller does, however, have a limited warranty as to the LTR-Value of the insulation, the terms of which are available upon request from the Seller. Seller shall not be liable for any incidental or consequential damages including but not limited to the cost of installation, removal, repair or replacement of this product. Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of product manufactured by Atlas in a quantity equal to that of the nonconforming product. Atlas distributors, agents, salespersons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.



SHOP DRAWING REVIEW	
<input checked="" type="checkbox"/> Reviewed	Reviewed by: AB
<input type="checkbox"/> Reviewed as Noted	
<input type="checkbox"/> Revise & Resubmit	Date: 03/03/2015

This review is for the sole purpose of ascertaining general conformance with the contract documents. It does not release the contractor from responsibility for the correctness of dimensions and co-ordination with other trades, or compliance with the plans & Specifications

**NOTION BUILDERS, LONDON LIMITED**  
**GENERAL CONTRACTORS**

# Georgia-Pacific Gypsum Sustainable Materials Data Sheet

(See MSDS for additional information)

## Product and Company Identification

<b>Product Name:</b>	DensDeck® Prime Roof Board. Performance based qualities of this product based upon material composition are obtained by referencing ASTM C 1177.	
<b>Product Use:</b>	Fiberglass mats, moisture-resistant gypsum roof board with a primed positive side surface.	
<b>Manufactured by:</b>	Georgia-Pacific Gypsum LLC 133 Peachtree Stree Atlanta, GA 30303 1-800-225-6119 (Technical Information) (404) 652-5119 (MSDS Request)	Georgia-Pacific Canada LP Allanburg Road Thorold, Ontario L2V 3ZB, Canada 1-800-225-6119 (Technical Information) (404) 652-5119 (MSDS Request)

## Link to Online LEED Calculators

<b>United States:</b>	<a href="http://gp.com/build/LeedCalc.aspx">gp.com/build/LeedCalc.aspx</a>
<b>Canada:</b>	<a href="http://gp.com/build/LeedCalcCanada.aspx">gp.com/build/LeedCalcCanada.aspx</a>

SHOP DRAWING REVIEW	
REVIEWED	<input checked="" type="checkbox"/>
REVIEWED AS MODIFIED	<input type="checkbox"/>
REVISE AND RESUBMIT	<input type="checkbox"/>
BY:	<b>RAJ</b> MAR 19/2015
REVIEWED FOR CONFORMITY TO GENERAL DESIGN CONCEPT AND FOR GENERAL ARRANGEMENT REFER TO AND BE GOVERNED BY DIVISION 1- GENERAL REQUIREMENTS OF THE SPECIFICATIONS	

## Materials and Resources-MR Credit 4-Recycled Content

- LEED for New Construction and Major Renovation
- LEED Core & Shell Development
- LEED for Schools: New Construction and Major Renovation

Manufacturing Location <sup>1</sup>	Total Recycled Content <sup>2</sup>	Pre Consumer Recycled Content <sup>2</sup>	Post Consumer Recycled Content <sup>2</sup>
Acme, TX	0%	0%	0%
Antioch, CA	0%	0%	0%
Caledonia, ON	0%	0%	0%
Camden, NJ	0%	0%	0%
Ft. Dodge, IA	0%	0%	0%
Lovell, WY	0%	0%	0%
Savannah, GA	0%	0%	0%
Tacoma, WA	Call <sup>3</sup>	Call <sup>3</sup>	Call <sup>3</sup>
Wheatfield, IN	91.1% <sup>4</sup>	90.9% <sup>4</sup>	.02% <sup>4</sup>

<sup>1</sup> Manufacturing locations subject to change. Please visit [www.gpgypsum.com](http://www.gpgypsum.com) and click on Sustainability.  
<sup>2</sup> Minimum value as of October 1, 2009 for product recycled content +/- 1.0%.  
<sup>3</sup> For current Tacoma, WA plant recycled content information, call the Technical Information Line at 1-800-225-6119.  
<sup>4</sup> Based on ICC Evaluation Service Verification of Attributes Report for Dens® brand products issued August 1, 2009. [www.saveprogram.icc-es.org](http://www.saveprogram.icc-es.org)

## Materials and Resources—MR Credit 5—Regional Materials

LEED for New Construction and Major Renovation

LEED Core & Shell Development

LEED for Schools: New Construction and Major Renovation

Please determine the distance in statute miles to your project site from the closest DensDeck® Prime extraction and manufacturing location.

Manufacturing Location <sup>1</sup>	Extraction Location <sup>2</sup>	CGBC for Canada <sup>*</sup>
Acme, TX	Acme, TX	
Antioch, CA	San Marcos Island, Mexico	
Caledonia, ON	Port Hawkesbury, Nova Scotia	MR5 - Water Route
Camden, NJ	Port Hawkesbury, Nova Scotia	
Ft. Dodge, IA	Ft. Dodge, IA	
Lovell, WY	Lovell, WY	MR5 - Rail to Reload
Savannah, GA	Port Hawkesbury, Nova Scotia	
Tacoma, WA	San Marcos Island, Mexico/Centralia, WA	Call for details
Wheatfield, IN	Wheatfield, IN	

<sup>1</sup> Manufacturing locations subject to change. Please visit [www.gpgypsum.com](http://www.gpgypsum.com) and click on Sustainability.

<sup>2</sup> Extraction location(s) for gypsum shipped to manufacturing location during month of January 2010.

Manufacturing location may utilize other sources of gypsum, and sources are subject to change at any time.

\* Canadian Green Building Council provides additional MR5 consideration for rail and water transportation.

## Sustainable Sites—SS Credit 7.2—Heat Island Effect: Roof

**LEED for New Construction and Major Renovation**

**LEED Core & Shell Development**

**LEED for Schools: New Construction and Major Renovation**

### Potential Technologies and Strategies

The intent is to reduce heat islands by designing commercial roofs to minimize the impact on microclimate and human and wildlife habitat.

Reflective and vegetated roof technologies meet the intent of the credit. DensDeck Prime may be used as a component in these highperformance roof assemblies. By the nature of its fiberglass mat construction, it avoids the contamination of absorptive materials such as traditional gypsum board or fiber board that may be incorporated into these commercial roof assemblies.

\*All LEED rating point references are suggested applications of Dens® Brand products to the LEED rating system. LEED applicants should use their own objective determinations of product attributes for LEED certification purposes. Not all LEED Credits are applicable in Canada and Mexico; refer to the World Green Building Council ([www.worldgbc.org](http://www.worldgbc.org)).



U.S.A. – Georgia-Pacific Gypsum LLC  
Canada – Georgia-Pacific Canada LP

#### SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: **1-800-876-4746**  
South: **1-800-327-2344**  
West: **1-800-824-7503**  
Notheast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**  
Quebec Toll Free: **1-800-361-0486**

#### TECHNICAL INFORMATION

U.S.A. and Canada: **1-800-225-6119**

[www.gpgypsum.com](http://www.gpgypsum.com)

©2011 Georgia-Pacific Gypsum LLC. All rights reserved. Printed in the U.S.A. 7/11.

**TRADEMARKS** Unless otherwise noted, all trademarks are owned by or licensed to Georgia-Pacific Gypsum LLC. The GREENGUARD INDOOR AIR QUALITY CERTIFICATION MARK and the GREENGUARD Children Schools Mark are registered certification marks used under license through the GREENGUARD Environmental Institute. Collaborative for High Performance Schools and CHPS are trademarks owned by Collaborative for High Performance Schools, Inc. LEED, USGBC and related logo are trademarks owned by the U.S. Green Building Council and are used by permission.

**WARRANTIES, REMEDIES AND TERMS OF SALE** For current warranty information for this product, please go to [www.gpgypsum.com](http://www.gpgypsum.com) and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at [www.gpgypsum.com](http://www.gpgypsum.com).

**UPDATES AND CURRENT INFORMATION** The information in this document may change without notice. Visit our website at [www.gpgypsum.com](http://www.gpgypsum.com) for updates and current information.

**CAUTION** For product fire, safety and use information, go to [www.gp.com/safetyinfo](http://www.gp.com/safetyinfo) or call 1-800-225-6119.

**HANDLING AND USE–CAUTION** This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

**FIRE SAFETY CAUTION** Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product



### Manufacturer

Georgia-Pacific Gypsum LLC      Georgia-Pacific Canada LP  
133 Peachtree Street            7070 Mississauga Road, Unit 120  
Atlanta, GA 30303                Mississauga, ON L5M 7V9  
Technical Service Hotline: 1-800-225-6119

### Description

**DensDeck® Prime Roof Board** is an exceptional fire barrier, thermal barrier and recovery board used in various commercial roofing systems. The product features a pre-primed surface to make the bond even stronger. The DensDeck design employs fiberglass mats front and back that are embedded into a gypsum core, providing excellent fire resistance and wind uplift properties. The unique construction of DensDeck Prime Roof Board provides superior flute spanning and will help stiffen and stabilize the roof deck. Additionally, DensDeck Prime Roof Board has been shown to withstand delamination, deterioration and jobsite damage more effectively than roofing membrane substrates such as paper-faced gypsum board, fiberboard and perlite insulation. DensDeck Prime Roof Board is resistant to the growth of mold when tested as manufactured, per ASTM D 3273.

### Primary Uses

Roof system manufacturers and designers have found DensDeck Prime Roof Board to be compatible with many types of roofing systems, including: modified asphalt, single-ply, metal systems, recover board, as well as an overlayment for polyisocyanurate and polystyrene insulation. DensDeck Prime Roof Board can also be used as a form board for poured gypsum concrete deck in roof applications as well as a substrate for spray foam roofing systems. 1/2" (12.7 mm) and 5/8" (15.9 mm) DensDeck Prime Roof Board may also be used in vertical applications as a backer board or liner for the roof side of parapet walls.

DensDeck Prime Roof Board may allow the bonding of cold mastic modified bitumen and torching directly to the surface. *Consult with the system manufacturer for recommendations on this application.*

DensDeck Prime Roof Board is the preferred substrate for vapor retarders.

### Standards and Code Approvals

DensDeck Prime Roof Boards are manufactured to meet ASTM C 1177 and have the following approvals:

- Florida Product Approval Code FL 1250
- Miami-Dade County, Florida NOA 08-0908.10

### Recommendations and Limitations

DensDeck Prime Roof Boards are manufactured to act with a properly designed roof system following good roofing practices. The actual use of DensDeck Prime Roof Board as a roofing component in any system or assembly is the responsibility of the roofing system's design authority. Consult with the appropriate system manufacturer and/or design authority for system and assembly specifications and instructions on applying other products to DensDeck Prime Roof Board. Georgia-Pacific does not warrant and is not responsible for any systems or assemblies utilizing DensDeck Prime Roof Board or any component in such systems or assemblies other than DensDeck Prime Roof Board.

The need for a separator sheet between the DensDeck Prime Roof Board and the roofing membrane must be determined by the roof membrane manufacturer or roofing system designer.

Confirm any priming requirements with the membrane manufacturer. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components.

DensDeck Prime Roof Boards should not be subjected to abnormal or excessive loads or foot traffic, such as, but not limited to, use on plaza decks or under steel-wheeled

equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

When using DensDeck Prime Roof Boards for hot-mopped applications, Georgia-Pacific recommends maximum asphalt application temperatures for Type III asphalt of 425°F (218°C) to 450°F (232°C). Application temperatures above these recommended temperatures may adversely affect roof system performance. For application temperatures in excess of 450°F (232°C) and for mopping of type IV asphalt, ribbon or spot mopping or the installation of a perforated base sheet are recommended methods of bonding asphalt in lieu of full mopping. Consult and follow the roofing system manufacturer's specifications for full mopping applications and temperature requirements.

When using DensDeck Prime Roof Board as a substrate for torch applications, ensure that the product is dry and that the proper torching technique is used. Limit the heat to the DensDeck Prime Roof Board. Maintain a majority of the torch flame directly on the roll.

Conditions beyond the control of Georgia-Pacific, such as weather conditions, dew, leaks, application temperatures and techniques may cause adverse effects with roofing systems.

### Moisture Management

**DensDeck Prime Roof Boards, like other components used in roofing systems, must be protected from exposure to moisture before, during and after installation.**

Remove the plastic packaging from all DensDeck Prime Roof Board immediately upon receipt of delivery. Failure to remove the plastic packaging may result in entrapment of condensation or moisture. DensDeck Prime Roof Board stored outside must be stored level and off the ground and protected by a breathable waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck Prime Roof Board. DensDeck Prime Roof Board must be covered the same day as installed.

Avoid application of DensDeck Prime Roof Boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months. When roofing systems are installed on new poured concrete or light weight concrete decks or when re-roofing over a wet existing concrete deck, a venting base sheet or vapor retarder should be installed above the concrete to retard the migration of water from the concrete into the roof assembly. Always consult the roofing system manufacturer or design authority for specific instructions for applying other products to DensDeck Prime Roof Boards.

Moisture vapor movement by convection must be eliminated, and the flow of water by gravity through imperfections in the roof system must be controlled. After a leak has occurred, no condensation on the upper surface of the system should be tolerated, and the water introduced by the leak must be dissipated to the building interior in a minimum amount of time.

Although DensDeck Prime Roof Boards are engineered with fiberglass facings and high density gypsum cores, the presence of free moisture can have a detrimental effect on the performance of the product and the installation of roofing membranes. For example, hot asphalt applications can blister; torched modified bitumen may not properly bond; and adhesives for single ply membranes may not dry properly. Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DensDeck Prime Roof Boards containing excessive free moisture content may need to be evaluated for structural stability to assure wind uplift performance.

### Fire Resistance Classifications

DensDeck Prime Roof Boards are excellent fire barriers over combustible and noncombustible roof decks, including steel decks.

### Submittal Approvals

Job Name \_\_\_\_\_

*continued* →

Contractor \_\_\_\_\_

Date \_\_\_\_\_



**UL 790 Classification.** DensDeck Prime Roof Boards have been classified by Underwriters Laboratories (UL) for use as a fire barrier over combustible and noncombustible decks in accordance with the ANSI/UL 790 test standard. The UL classification includes a comprehensive Class A, B or C rating. For additional information concerning the UL 790 classification, consult the UL Certification Directory.

**UL 1256 Classification.** DensDeck<sup>®</sup> Prime Roof Boards have also been classified by UL in roof deck constructions for internal (under deck) fire exposure in accordance with the ANSI/UL 1256 Steiner Tunnel test. For additional information concerning the UL 1256 classification, consult the UL Certification Directory.

**FM Class 1 Approvals.** DensDeck Prime Roof Boards are included in numerous roofing assemblies with a Factory Mutual (FM) Class 1 fire rating. 1/4" (6.4 mm) DensDeck Prime Roof Boards have passed testing under the FM Calorimeter Standard 4450 and have been approved by FM as such for insulated steel deck roofs when installed according to the conditions identified by FM. For more information concerning FM Approvals and FM Class 1 assemblies with DensDeck Prime Roof Boards, consult FM or RoofNav<sup>®</sup>.

**Type X.** 5/8" (15.9 mm) DensDeck<sup>®</sup> Prime Fireguard<sup>®</sup> Roof Boards are manufactured to meet the "Type X" requirements of ASTM C 1177 for increased fire resistance beyond regular gypsum board.

**UL Fire Resistance Ratings.** 5/8" (15.9 mm) DensDeck Prime Fireguard Roof Boards are designated as **Type DD** by UL and included in assembly designs investigated by UL for hourly fire resistance ratings. 5/8" (15.9 mm) DensDeck Prime Fireguard Roof Boards may also replace any unclassified 5/8" (15.9 mm) gypsum board in an assembly in the UL Fire Resistance Directory under the prefix "P".

**Flame Spread and Smoke Developed.** When tested in accordance with ASTM E 84, DensDeck Prime Roof Boards had Flame Spread 0, Smoke Developed 0.

**Wind Uplift**

DensDeck Prime Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, please visit [www.roofnav.com](http://www.roofnav.com).

**Physical Properties**

Properties	1/4" (6.4 mm)	1/2" (12.7mm)	5/8" (15.9 mm)
Thickness, nominal	1/4" (6.4 mm) + 1/16" (1.6 mm)	1/2" (12.7 mm) ± 1/32" (.8 mm)	5/8" (15.9 mm) ± 1/32" (.8 mm)
Width, standard	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)
Length, standard	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)	4' (1219 mm) and 8' (2438 mm) ± 1/4" (6.4 mm)
Weight, nominal, lbs./sq. ft. (Kg/m <sup>2</sup> )	1.2 (5.9)	2.0 (9.8)	2.6 (12.7)
Surfacing	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating
Flexural Strength <sup>1</sup> , parallel, lbf. min. (N)	40 (178)	80 (356)	100 (444)
Flute Spanability <sup>2</sup>	2-5/8" (66.7 mm)	5" (127 mm)	8" (203 mm)
Permeance <sup>3</sup> , Perms (ng/Pa•S•m <sup>2</sup> )	>50 (>2850)	>35 (>1995)	>32 (>1824)
R Value <sup>4</sup> , ft <sup>2</sup> •°F•hr/BTU (m <sup>2</sup> •K/W)	.28	.56	.67
Linear Variation with Change in Temp., in/in °F (mm/mm/C°)	8.5 x 10 <sup>-6</sup> (15.3 x 10 <sup>-6</sup> )	8.5 x 10 <sup>-6</sup> (15.3 x 10 <sup>-6</sup> )	8.5 x 10 <sup>-6</sup> (15.3 x 10 <sup>-6</sup> )
Linear Variation with Change in Moisture	6.25 x 10 <sup>-6</sup>	6.25 x 10 <sup>-6</sup>	6.25 x 10 <sup>-6</sup>
Water Absorption <sup>5</sup> , % max	10.0	10.0	10.0
Compressive Strength <sup>6</sup> , psi nominal	900	900	900
Surface Water Absorption, grams, nominal	≤2.0	≤2.0	≤2.0
Flame Spread, Smoke Developed (ASTM E 84)	0/0	0/0	0/0
Bending Radius	5' (1524 mm)	8' (2438 mm)	12' (3658 mm)

1. Tested in accordance with ASTM C 473 method B.

2. Tested in accordance with ASTM E 661.

3. Tested in accordance with ASTM E 96 (dry cup method).

4. Tested in accordance with ASTM C 518 (heat flow meter).

5. Tested in accordance with ASTM C 1177.

6. Tested in accordance with ASTM C 473.



U.S.A. – Georgia-Pacific Gypsum LLC  
 Canada – Georgia-Pacific Canada LP

**SALES INFORMATION AND ORDER PLACEMENT**

U.S.A. Midwest: **1-800-876-4746** West: **1-800-824-7503**  
 South: **1-800-327-2344** Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**  
 Quebec Toll Free: **1-800-361-0486**

**TECHNICAL INFORMATION**

U.S.A. and Canada: **1-800-225-6119**  
[www.gpgypsum.com](http://www.gpgypsum.com)

**TRADEMARKS** DENSDECK, FIREGUARD and the GEORGIA-PACIFIC logo are trademarks owned by or licensed to Georgia-Pacific Gypsum LLC. ROOFNAV is a registered mark of FM Global.

**WARRANTIES, REMEDIES AND TERMS OF SALE** For current warranty information for this product, please go to [www.gpgypsum.com](http://www.gpgypsum.com) and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at [www.gpgypsum.com](http://www.gpgypsum.com).

**UPDATES AND CURRENT INFORMATION** The information in this document may change without notice. Visit our website at [www.gpgypsum.com](http://www.gpgypsum.com) for updates and current information.

**CAUTION For product fire, safety and use information, go to [www.gp.com/safetyinfo](http://www.gp.com/safetyinfo) or call 1-800-225-6119.**

**HANDLING AND USE—CAUTION** This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the

product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

**FIRE SAFETY CAUTION** Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.



# ELASTOPHENE 180 SANDED

# ELASTOPHENE 180 PS

TECHNICAL DATA SHEET  
030128CAN4E  
(supersedes 001218CAN1E)

## DESCRIPTION

**Elastophene 180** membranes are composed of a non-woven polyester reinforcement and SBS modified bitumen. **ELASTOPHENE 180 SANDED** and **ELASTOPHENE 180 PS** are bonded with hot asphalt.

FOR COMPLETE INFORMATION ON APPLICATION AND SYSTEMS, PLEASE CONSULT OUR SPECIFICATION MANUAL.

## PROPERTIES

Properties	Standards	ELASTOPHENE 180 SANDED	ELASTOPHENE 180 PS
Thickness	-	2.2 mm	
Dimension	-	15 x 1 m	
Gross / Net coverage per roll	-	15 / 13,9 (161 / 150 pi²)	
Roll weight	-	38 kg	
Top face	-	Sanded	Thermof. plastic film
Underface	-	Sanded	
Storage	-	Upright on pallet	
Strain energy, MD/XD	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	9.0 / 7.0 kN/m	
Breaking Strength, MD/XD	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	17 / 12.5 kN/m	
Ultimate elongation, MD/XD	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	60 / 65 %	
Cold bending	-initial -90 days at 70°C	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	-30 °C -30 °C
Plastic flow	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	115 °C	
Dimensional stability, MD/XD	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	-0.4 / 0.3 %	
Static puncture	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	400 N	
Tear resistance	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	60 N	
Lap adhesion:	- Initial - 14 Days at 70°C	CAN/CGSB-37.56-M, 9 <sup>th</sup> draft	13.8 °C 14.2 °C
Water vapour permeance (All values are nominal)	ASTM E96 (Procedure B)	< 0.23 ng/Pa.s.m² (< 0.004 perm)	

# ELASTOPHENE



**ELASTOPHENE SANDED**  
**ELASTOPHENE PS**  
**ELASTOPHENE GR**

**ELASTOPHENE FLAM**  
**ELASTOPHENE FLAM 2.2**  
**ELASTOPHENE SP 2.2**  
**ELASTOPHENE FLAM GR**

1.877.MAMMOUTH  
[www.soprema.ca](http://www.soprema.ca)

TECHNICAL DATA SHEET  
**030610CAN8E**  
(supersedes 001107CAN1E)

## DESCRIPTION

**ELASTOPHENE** membranes are composed of a glass mat reinforcement and SBS modified bitumen. **ELASTOPHENE** cap sheets are also available with fire retardant additives (FR) for better fire resistance.

FOR COMPLETE INFORMATION ON APPLICATION AND SYSTEMS, PLEASE CONSULT OUR SPECIFICATION MANUAL.

## PROPERTIES

(As per CAN/CGSB-37.56-M, 9th draft).

Properties	ELASTOPHENE						
	SANDED	PS	GR	FLAM	FLAM 2,2	SP 2,2	FLAM GR
Thickness	2.2 mm		3.5 mm	3.0 mm	2.2 mm		3.6 mm
Dimension	15 x 1 m		10 x 1 m		15 x 1 m		10 x 1 m
Weight	41 kg	40 kg	41 kg	38 kg	43 kg	41 kg	45 kg
Top face	Sand	Film	Granules	Film		Sand	Granules
Underface	Sand			Film			
Reinforcement	Glass mat						
Storage	Upright on pallet						
Application method	Bonded with hot bitumen			Torch-applied			
Strain energy, (MD/XD)	1.3 / 1.3 kN/m						
Breaking strength, MD/XD	11 / 8.5 kN/m						
Ultimate elongation, MD/XD	4 / 4 %						
Tear resistance	30 N						
Static puncture	160 N						
Dimensional stability, MD/XD	0 / 0 %						
Plastic flow	115 °C		105 °C	100 °C	115 °C		105 °C
Cold bending*	-30 °C						
Lap adhesion (kN/m)							
- initial				23.5 °C			
- 5 days at 50 °C				24.0 °C			
- 14 days at 70 °C				24.0 °C			

\* Initial and after 90 days at 70 °C.

(All values are nominal)



# MATERIAL SAFETY DATA SHEET

## MSDS # 1216 - ROOFING ASPHALT AND EASY-MELT 200

**IMPORTANT:** Read this MSDS before handling or disposing of this product. This product safety information is provided to help our customers assess compliance with health, safety and/or environmental regulations. We have taken reasonable effort to ensure that the test methods and sources for this data are correct and reliable, however, we give no warranty, expressed or implied, regarding its correctness. Since conditions or methods of handling and using this product are beyond our control, we do not assume responsibility and expressly disclaim liability for damages resulting from or connected with the handling, storage, use or disposal of the product.

### SECTION 1 PRODUCT AND MANUFACTURER'S INFORMATION

*Manufacturer's Name:* IKO Industries Ltd.  
*Address:* 71 Orenda Road  
Brampton, Ontario  
L6W 1V8  
*Emergency Phone:* (905) 457-2880 - EXT. 4402  
*Product Name:* Roofing Asphalt and Easy-Melt 200  
*Chemical Name:* Asphalt (Petroleum)  
*Trade Name:* B.U.R. Asphalt, Type I, Type II, Type III; coating, saturant, 10 PEN, 95/25  
*Chemical Family:* Petroleum Hydrocarbons

### SECTION 2 PREPARATION INFORMATION

*Prepared By:* Andy Lodge  
*Phone Number:* (905) 457-2880 - EXT. 4402  
*Date of Preparation:* January 18, 2012

### SECTION 3 HAZARDOUS INGREDIENTS

<u>Component</u>	<u>TLV-TWA (8H)</u>	<u>%(vol)</u>	<u>CAS #</u>
Bitumens	0.5 mg/m <sup>3</sup> (benzene soluble fraction of the inhalable particulate)*	≥ 97	64742-93-4
Sulphur	14 mg/m <sup>3</sup>	≤ 3	7704-34-9

Note: During storage or transit of hot asphalt, small amounts of toxic hydrogen sulphide (CAS #7783-06-4) may be generated.

\* ACGIH has recommended that the TLV-TWA for asphalt fumes be reduced to 0.5 mg/m<sup>3</sup> from 5.0 mg/m<sup>3</sup>. There is no documentation that supports this reduction as the method of measuring has changed as well as the value. The NIOSH REL remains at 5.0 mg/m<sup>3</sup>. There is no PEL for asphalt fumes listed by OSHA.

### SECTION 4 PHYSICAL DATA

*Boiling Point:* >470°C (> 878°F)  
*Specific Gravity:* 1.1 g/cc at 15°C (approximate)  
*Vapour Pressure:* NIL @ 38°C (V.O.C. = negligible)  
*Evaporation Rate:* Not applicable  
*Solubility in Water:* Insoluble  
*Appearance:* Black plastic semi-solid when cold, viscous fluid when hot  
*Odour:* Characteristic asphalt odour

### SECTION 5 FIRE AND EXPLOSION DATA

*Auto-Ignition Temperature:* 370 - 480°C (698° - 867°F) (approx.)  
*Flash Point:* 274°C (525°F) minimum by C.O.C.  
*Flammable Limits:* Not known  
*Extinguishing Media:* Dry chemical, carbon dioxide; water may be used to cool fire, but can cause frothing.  
*Special Procedures:* Respirators required for fire fighting. Cool tanks exposed to fire with water. Excessive use of water may spread the fire.  
*Unusual Fire Hazards:* Slightly combustible. When heated above its flash point or if held in storage at high temperatures, this material can release flammable vapours which can burn in the open or be explosive in confined spaces if exposed to ignition.

# MATERIAL SAFETY DATA SHEET

## MSDS # 1216 - ROOFING ASPHALT AND EASY-MELT 200

### SECTION 6 TOXICOLOGICAL PROPERTIES

*Toxicity Data:* IARC states that there is inadequate evidence that bitumens alone are carcinogenic to humans. Two studies sponsored by the National Institute for Occupational Safety and Health (NIOSH) in the 1980s using a laboratory fume generation protocol found an increase in skin tumor formation in test mice. There were chemical and toxicological differences between the laboratory fume used by NIOSH and fumes encountered in the field. A 2009 study sponsored by the Asphalt Roofing Environmental Council (AREC) using a fume condensate validated to be representative of fumes encountered in the field found a weak tumor response late in the study after observance of significant skin irritation. A follow-up initiation-promotion study came to the same conclusion. AREC is currently evaluating a number of response actions. A study published in 2002 of asphalt production and asphalt roofing manufacturing workers found no increase in lung cancer risk associated with asphalt fume exposure.

**WARNING: This product may contain oxidized bitumens. The International Agency for Research on Cancer (the "IARC") issued a statement that "occupational exposure to oxidized bitumens and their emissions during roofing operations are probably carcinogenic to humans." This warning may be updated at such time as a final determination is made and IARC has published its monograph on the matter.**

Effects of Overexposure:

*Inhalation:* Fumes from hot asphalt may cause nausea, headache or dizziness  
*Skin and Eyes:* Hot asphalt burns skin and eyes. Prolonged or repeated skin contact may cause dermatitis.  
*Ingestion:* Ingestion is unlikely.

### SECTION 7 REACTIVITY DATA

*Conditions to Avoid:* Excessive heat approaching flash point  
*Stability:* Stable  
*Polymerization:* Will not occur  
*Materials to Avoid:* Strong oxidizers, strong acids, alkalis  
*Hazardous Decomposition Products:* CO<sub>x</sub>, SO<sub>x</sub>, NO<sub>x</sub>, smoke on combustion, hydrogen sulphide (storage of hot product).

### SECTION 8 PREVENTATIVE MEASURES

*Spill Procedure:* In case of spill or leakage, allow to harden and shovel into container.  
*Disposal Procedure:* Follow federal, provincial/state, and local laws and regulations.  
*Ventilation:* Ventilate as needed in confined areas so as to comply with exposure limits. (0.5 mg/m<sup>3</sup> - asphalt fumes, 10 ppm - hydrogen sulphide)  
*Respiratory:* When needed, use only NIOSH certified respiratory protection.  
*Gloves:* Minimize skin contact. Use protective gloves when handling material.  
*Eye Protection:* Use splash proof chemicals goggles.  
*Other:* If contact is unavoidable, wear a face shield, long-sleeved sheet, cuffless pants, loose clothing.

### SECTION 9 FIRST AID PROCEDURES

*Skin:* For hot asphalt contact, cool body part by water immersion or shower. DO NOT attempt removal of asphalt, but split longitudinally if splash is circumferential to avoid tourniquet effect. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of the eyes.  
*Eyes:* Copious warm water flush (minimum 15 min.). Get a physicians assessment if eyes are inflamed. Cleanse soiling with a vegetable oil (such as olive oil).  
*Inhalation:* Evacuate to fresh air. Apply Cardio Pulmonary Resuscitation if required. Physician assessment mandatory.  
*Ingestion:* N/A

Notes to Physician: No attempt should be made to remove firmly adhering bitumen from the skin. Once bitumen is cool, it does no further harm and provides a sterile covering over burnt area. Bitumen plaque will detach itself as healing progresses. If solvent treatment is used, it should be followed by washing with soap and water, then application of refatting agent or skin cleansing cream. Only medically approved solvents may be used to remove bitumen from burns, as other solvents may cause further skin damage.

# **MATERIAL SAFETY DATA SHEET**

## **MSDS # 1216 - ROOFING ASPHALT AND EASY-MELT 200**

### SECTION 10 OTHER

Store and transport this material at a temperature as far below its flash point as possible. Use in well ventilated areas; avoid breathing vapours. For outdoor use, remain upwind of hot asphalt when possible. Avoid skin and eye contact. During storage or transit of hot asphalt, hydrogen sulphide may accumulate in enclosed spaces. Open tank car hatches with caution. Avoid inhalation. Maintain same precautions when gauging and sampling.

# FICHE SIGNALÉTIQUE

## FTSS # 1216 - ASPHALTE À TOITURE ET EASY-MELT 200

**IMPORTANT :** Veuillez lire la présente fiche signalétique avant de manipuler ou de se débarrasser de ce produit. L'information sur la sécurité du présent produit est fournie dans le but d'aider le client à évaluer sa conformité aux lois et règlements sur la santé, la sécurité et l'environnement. Nous avons pris les moyens raisonnables pour nous assurer que les tests effectués et les sources des données utilisées sont exacts et fiables; toutefois, nous ne garantissons aucunement leur exactitude, de façon expresse ou implicite. Puisque les conditions ou les modes d'utilisation et de manipulation du présent produit sont hors de notre contrôle, nous n'assumons aucune obligation et nous nous désistons expressément de toute responsabilité pour dommage, perte ou frais résultant ou ayant rapport à la manipulation, l'entreposage, l'utilisation ou la mise au rebut de ce produit.

### SECTION 1 IDENTIFICATION DU PRODUIT ET DU FABRICANT

*Nom du fabricant :* IKO Industries Ltée  
*Adresse :* 71 Orenda Road  
Brampton (Ontario)  
L6W 1V8  
*Téléphone en cas d'urgence :* (905) 457-2880, poste 4402  
*Nom du produit :* Asphalté à toiture et Easy-Melt 200  
*Nom du produit chimique :* Bitume (de pétrole)  
*Nom commercial :* Bitume à toiture type I, II, III; enduit, saturant, 10 PEN, 95/25  
*Famille chimique :* Hydrocarbures

### SECTION 2 DONNÉES SUR L'ÉTABLISSEMENT DE LA FICHE

*Réalisée par :* Andy Lodge  
*Téléphone :* (905) 457-2880, poste 4402  
*Date :* Le 18 janvier 2012

FRENCH NOT  
REQUIRED

### SECTION 3 INGRÉDIENTS DANGEREUX

<i>Composantes</i>	<i>TVL-TWA (8H)</i>	<i>% (vol)</i>	<i>n° CAS</i>
Bitumes :	0,5 mg/m <sup>3</sup> (fraction soluble de benzène de la substance particulaire inhalable)*	≥ 97	64742-93-4
Soufre:	14 mg/m <sup>3</sup>	≤ 3	7704-34-9

Note : Pendant l'entreposage ou le transit de bitume chaud, de petites quantités de sulfure d'hydrogène (n° CAS 7783-06-4) peuvent être générées.

\*L'ACGIH a recommandé que la TVL-TWA concernant les vapeurs de bitume soit réduite de 5,0 mg/m<sup>3</sup> à 0,5 mg/m<sup>3</sup>. Aucune documentation ne supporte cette réduction, étant donné que cette méthode de mesure a changé, ainsi que la valeur. Le NIOSH REL reste à 5,0 mg/m<sup>3</sup>. Il n'y a pas de PEL pour les vapeurs de bitume sur la liste de l'OSHA.

### SECTION 4 CARACTÉRISTIQUES PHYSIQUES

*Point d'ébullition :* >470 °C (>878 °F)  
*Densité relative :* 1,1 g/cc à 15°C (approximatif)  
*Tension de vapeur :* NIL à 38°C (c.o.v. = négligeable)  
*Taux d'évaporation :* Ne s'applique pas  
*Solubilité dans l'eau :* Insoluble  
*État physique :* À l'état froid : matière noire plastifiée (semi-solide)  
À l'état chaud : liquide visqueux  
*Odeur :* Odeur caractéristique d'asphalte

### SECTION 5 INFLAMMABILITÉ ET EXPLOSIVITÉ

*Température d'auto allumage :* 370 à 480 °C (698 à 867 °F) (approximatif)  
*Point d'éclair :* 274 °C (525 °F) minimum par C.O.C.  
*Limites d'inflammabilité :* Inconnues  
*Agents extincteurs :* Extincteur chimique sec, dioxyde de carbone. L'eau peut être utilisée pour refroidir les flammes mais peut causer de l'écume.  
*Méthodes d'extinction :* Utiliser un équipement protecteur complet avec appareil respiratoire autonome. L'eau peut être utilisée pour refroidir les réservoirs mais un excédent d'eau peut propager les flammes.  
*Risques exceptionnels d'incendie :* Légèrement combustible. Lorsque chauffé au-delà du point d'éclair ou si entreposé à haute température, ce matériau peut dégager des vapeurs inflammables susceptibles de brûler à l'air libre ou d'exploser, advenant leur ignition dans un espace restreint.

# FICHE SIGNALÉTIQUE

## FTSS # 1216 - ASPHALTE À TOITURE ET EASY-MELT 200

### SECTION 6 PROPRIÉTÉS TOXICOLOGIQUES

**Données toxicologiques :** Le CIRC a déclaré que la preuve de l'effet que les bitumes seuls soient cancérigènes pour les humains est insuffisante. Deux études subventionnées par le National Institute for Occupational Safety and Health (NIOSH) dans les années 1980, utilisant un protocole de génération de vapeurs en laboratoire, ont révélé une augmentation de la formation de tumeurs cutanées chez des souris de laboratoire. Des différences chimiques et toxicologiques entre les vapeurs en laboratoire utilisées par le NIOSH et les fumées que l'on retrouverait sur le chantier ont été décelées. Une étude subventionnée en 2009 par l'Asphalt Roofing Environmental Council (AREC), utilisant un condensat de vapeur validée et un représentatif des vapeurs que l'on retrouve sur le chantier, a démontré une faible réaction tumorale tardivement dans l'étude, après l'observation d'une irritation cutanée importante. Un suivi de l'étude sur la promotion d'initiation en est arrivé à la même conclusion. Une évaluation de quelques mesures d'intervention est en cours par L'AREC. Une étude publiée en 2002 et portant sur la production de bitume et les travailleurs dans la fabrication des matériaux de couverture bitumineux n'a révélé aucune augmentation des risques de cancer des poumons associés à l'exposition aux vapeurs d'asphalte.

**MISE EN GARDE :** Ce produit peut contenir des bitumes oxydés. Le Centre international de Recherche sur le Cancer (le « CIRC ») a déclaré que « [TRADUCTION] l'exposition professionnelle aux bitumes oxydés et à leurs fumées pendant les travaux de toiture est probablement cancérigène pour l'homme ». La présente mise en garde pourra être mise à jour lorsqu'une décision finale aura été rendue et que le CIRC aura publié sa monographie sur le sujet.

Effets de l'exposition :

*Inhalation :* Les vapeurs provenant du bitume chaud peuvent causer nausées, céphalées ou étourdissements.

*Peau et yeux :* Le bitume chaud cause des brûlures à la peau et aux yeux. Le contact prolongé ou répété avec la peau peut causer une dermatite.

*Ingestion :* L'ingestion n'est pas probable.

FRENCH NOT  
REQUIRED

### SECTION 7 DONNÉES SUR LA RÉACTIVITÉ

*Conditions à éviter :* Chaleur excessive se rapprochant du point d'éclair

*Stabilité :* Stable

*Polymérisation :* Ne se produira pas

*Substances à éviter :* Oxydants forts, acides forts, alkalis

*Produits de décomposition*

*dangereux :* CO<sub>x</sub>, SO<sub>x</sub>, NO<sub>x</sub>, fumée lors de la combustion, sulfure d'hydrogène (entreposage du produit à l'état chaud)

### SECTION 8 MESURES DE PRÉVENTION

*Produit répandu :* En cas de déversement ou de fuite, laisser durcir et pelleter dans un conteneur.

*Mise au Rebut :* Respecter les lois et règlements fédéraux, provinciaux et municipaux.

*Ventilation :* Ventiler les espaces restreints de manière à satisfaire aux limites d'exposition (0,5 mg/m<sup>3</sup> - émanations de bitume, 10 ppm - sulfure d'hydrogène)

*Protection respiratoire :* Au besoin, utiliser exclusivement l'équipement de protection respiratoire certifié par la NIOSH.

*Gants protecteurs :* Minimiser les contacts avec la peau. Porter des gants protecteurs lors de la manipulation du produit.

*Protection de la vue :* Utiliser les lunettes de protection contre les éclaboussures de produits chimiques.

*Vêtements protecteurs :* Si le contact avec le produit est inévitable, porter un écran facial, des vêtements amples, dont une chemise à manches longues et des pantalons sans revers.

### SECTION 9 PREMIERS SOINS

*Peau :* Si la peau entre en contact avec le bitume chaud, refroidir cette partie du corps par immersion dans l'eau ou dans une douche. NE PAS tenter d'enlever le bitume; fendre plutôt longitudinalement si l'éclaboussure de bitume est circonferentielle pour éviter l'effet de garrot. Si la peau est souillée sans brûlure sous-jacente, nettoyer à l'aide d'huile minérale puis faire suivre avec de l'eau savonneuse. Utiliser de l'huile d'olive à proximité des yeux.

*Yeux :* Laver les yeux à grande eau tiède (pendant au moins 15 minutes). Si les yeux sont enflammés, consulter un médecin. Nettoyer la salissure à l'aide d'huile végétale (comme de l'huile d'olive).

*Inhalation :* Amener la victime à l'air frais. Si nécessaire, effectuer une réanimation cardiorespiratoire. Consulter un médecin.

*Ingestion :* Ne s'applique pas

Note à l'intention du médecin : Ne pas tenter d'enlever le bitume qui adhère fermement à la peau. Le bitume refroidi ne fait plus mal et procure un enrobage stérile sur la brûlure. La plaque de bitume se détachera d'elle-même au fur et à mesure de la guérison. Si un traitement au solvant est utilisé, laver aussitôt après à l'eau et au savon, puis appliquer un agent graissant ou un exfoliant pour la peau. Seuls des solvants approuvés à des fins médicales doivent être utilisés pour retirer le bitume sur la peau brûlée, étant donné que les autres solvants risquent de causer encore plus de dommages à la peau.



## FICHE SIGNALÉTIQUE

### FTSS # 1216 - ASPHALTE À TOITURE ET EASY-MELT 200

#### SECTION 10 DIVERS

Entreposer et manipuler ce produit à une température plus basse que son point d'éclair. Ne l'utiliser que dans des zones bien ventilées. Éviter de respirer les vapeurs. Lors de l'usage à l'extérieur, se mettre en amont du bitume chaud autant que possible. Éviter tout contact avec la peau et les yeux.

FRENCH NOT  
REQUIRED

**IKO****TECHNICAL DATA SHEET****STOCK NO. 0760089****December, 2008****EASY-MELT 200 ASPHALT**

IKO's Easy-Melt 200 Asphalt combines the top-of-the-line characteristics of standard Type III Asphalt with greater efficiency and environmental awareness. Half the weight of asphalt kegs, this oxidized bitumen is wrapped in 50 lb (22.7 kg), rectangular, polyethylene bags, and is easily stored. Eliminating unnecessary waste, the packaging goes straight into the kettle, melting with the asphalt and leaving no residue. It is intended for use with glass felts, modified rolls, insulation, coverboards and flashing systems with slopes of 0 – 3:12<sup>\*\*\*</sup>. This proven waterproofing material is also suitable for use in selected damp proofing applications. This superior grade asphalt conforms to all requirements of CSA standard A123.4, Type III and ASTM D312, Type III, and UL 55A requirements.

CHARACTERISTIC	UNITS	NOMINAL VALUE	TEST METHOD	STANDARD LIMITS**
<b>QUANTITY PER PALLET:</b>	-	60	-	N/A
<b>PALLET SIZE:</b>	cm (in)	102 x 133 (40 x 53)	-	-
<b>SOFTENING POINT:</b>	°C (°F)	PASS	ASTM D36	MIN: 90 (194) MAX: 96 (205)
<b>PENETRATION @ 0°C (32°F):</b>	dmm	PASS	ASTM D5	MIN: 8
<b>PENETRATION @ 25°C (77°F):</b>	dmm	PASS	ASTM D5	MIN: 15 MAX: 25
<b>FLASH POINT:</b>	°C (°F)	PASS	ASTM D92	MIN: 260 (500)
<b>SOLUBILITY IN TCE:</b>	%	PASS	ASTM D2042	MIN: 99.0
<b>EVT* @ 75 cps:</b>	°C (°F)	243 (469)	ASTM D4402	± 13 (25)
<b>EVT* @ 125 cps:</b>	°C (°F)	228 (442)	ASTM D4402	± 13 (25)

\* Equiviscous temperature

\*\* Combined spec requirements of CSA A123.4 and ASTM D312.

\*\*\* May be suitable for other steep applications. Contact IKO Technical Support at 1-800-268-0878 extension 3403.

*The information on this Technical Data sheet is based upon data considered to be true and accurate, based on laboratory tests and production measurements, and is offered solely for the user's consideration, investigation and verification. Nothing contained herein is representative of a warranty or guarantee for which the manufacturer can be held legally responsible. The manufacturer does not assume any responsibility for any misrepresentation or assumptions the reader may formulate.*



# FICHE DE DONNÉES TECHNIQUES

N° DE STOCK : 0760089

Décembre, 2008

## ASPHALTE EASY-MELT 200

FRENCH NOT  
REQUIRED

L'Asphalte Easy-Melt de IKO réunit les caractéristiques de l'asphalte de Type III de la meilleure qualité, donne un rendement supérieur et tient compte de l'environnement. De moitié plus léger qu'un baril d'asphalte, ce bitume oxydé est emballé en sacs de polyéthylène de 50 lb (22,7 kg) faciles à entreposer. Ni résidu ni perte de temps, l'emballage et l'asphalte fondent entièrement dans la chaudière. Cet asphalte est conçu la pose des feutres de verre, des rouleaux d'asphalte modifié, d'isolant, des revêtements et des solins sur les pentes de 0-3 :12\*\*\*. Ce matériau d'étanchéité qui a fait ses preuves peut aussi servir à certains projets de contrôle d'humidité. Cet asphalte de qualité supérieure se conforme à toutes les exigences CSA A123.4, Type III et UL55A.

CARACTÉRISTIQUES	UNITÉS DE MESURE	VALEUR NOMINALE	MÉTHODES D'ESSAI**	LIMITES NORMALISÉES
QUANTITÉ PAR PALETTE :	-	60	-	S.O.
DIMENSION DE PALLETTE :	cm (po)	102 x 133 (40 x 53)	-	-
POINT DE RAMOLLISSEMENT :	°C (°F)	RÉUSSI	ASTM D36	MIN : 90 (194) MAX : 96 (205)
PÉNÉTRATION @ 0°C (32°F) :	dmm	RÉUSSI	ASTM D5	MIN : 8
PÉNÉTRATION @ 25°C (77°F) :	dmm	RÉUSSI	ASTM D5	MIN : 15 MAX : 25
POINT D'ÉCLAIR :	°C (°F)	RÉUSSI	ASTM D92	MIN : 260 (500)
SOLUBILITÉ EN TCE :	%	RÉUSSI	ASTM D2042	MIN : 99,0
TEV* @ 75 cps :	°C (°F)	243 (469)	ASTM D4402	+/- 13 (25)
TEV* @ 125 cps :	°C (°F)	228 (442)	ASTM D4402	+/- 13 (25)

\* Température équivalente

\*\* Réunit les spécifications des exigences CSA A123.4 et ASTM D312

\*\*\* Peut servir sur d'autres plans à pente raide. Contactez le service de soutien technique de IKO au numéro 1-800-268-0878 poste 3403.

Les données contenues dans la présente Fiche de données techniques, qui résultent d'essais en laboratoire et de mesures en cours de production, sont réputées être exactes et fiables et sont fournies aux utilisateurs aux seules fins d'examen, d'étude et de vérification. Rien dans la présente ne constitue une garantie que le fabricant pourrait être légalement tenu d'honorer. Le fabricant décline toute responsabilité à l'égard de toute supposition ou erreur d'interprétation de la part du lecteur.

**MATERIAL SAFETY DATA SHEET**  
**SBS MODIFIED BITUMEN WATERPROOFING MEMBRANE**

*Offerte en français*

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
Not regulated		Not regulated

**SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Trade names:** Aerisol, Antirock, Baral, Colphene, Colply, Colvent, Dryseal, Elasto, Elastobase, Elastophene, Environap, EPS Flam Stick, G-Vent, Lastobond, Lastoflex, M-Express, M-SBase, Modified Sopra G, Perimet'R, Sopraeshavent, Sopraflix, Sopraflash, Sopra G, Sopra G2, Sopraglass, Sopragrip F, Sopraguard, Sopra IV, Soprajoint, Sopralap, Sopralast, Sopralene, Sopraply, SoprasafT, Sopraseal, Soprasolin, Soprastar, Soprastick, Sopratape, Sopravap'R, Sopra VI, Soprawalk, Sopremium, Starter Stick GR, Stickson, Unilay.

**Use:** Membranes are used for all types of roofing needs, air barrier and waterproofing protection.

<b>Manufacturers and distributors:</b>	<b>Soprema Canada</b> 1675 Haggerty Street Drummondville (Quebec) J2C 5P7 CANADA Tel.: 819 478-8163	<b>Soprema Inc.</b> 44955 Yale Road West Chilliwack (B.-C.) V2R 4H3 CANADA Tel.: 604 793-7100	<b>Soprema USA</b> 310 Quadral Drive Wadsworth (Ohio) 44281 UNITED STATES Tel.: 1 800 356-3521	<b>Soprema Gulfport</b> 12251 Seaway Road Gulfport (Mississippi) 39503 UNITED STATES Tel.: 228 701-1900
--	---	---	--	---

**In case of emergency:**

SOPREMA (8:00am to 5:00pm): 1 800 567-1492    CANUTEC (Canada) (24h.): 613 996-6666    CHEMTREC (USA) (24h.): 1 800 424-9300

**EMERGENCY OVERVIEW**

Bitumen membrane. Asphalt odour. Under normal use, this product is not expected to create any health or environmental hazard. Inhalation of dust or of asphalt fumes can cause a respiratory irritation and/or congestion.

WARNING! This product may contain substances known by the State of California that could cause cancer (asphalt, crystalline silica, fibreglass, antimony trioxide).

**SECTION II: COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS**

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
<b>BITUMINOUS BLEND</b>				
<b>Bitumen</b>	8052-42-4	30-70	0.5 mg/m <sup>3</sup> Asphalt fumes	Not established
Self-adhesive membranes contain: <b>Highly hydrotreated naphthenic oil<sup>1</sup></b>	64742-52-5	0-30	Not established	Not established
<b>Calcium Carbonate<sup>1</sup></b>	471-34-1	0-60	10 mg/m <sup>3</sup>	Not established
<b>Styrene butadiene copolymer<sup>1</sup></b>	9003-55-8	0-15	10 mg/m <sup>3</sup>	Not established
FR products contain: <b>Calcium borate<sup>1</sup></b>	1318-33-8	7-15	10 mg/m <sup>3</sup>	Not established
FR Plus products contain: <b>Antimony Trioxide<sup>1</sup></b>	1309-64-4	1-5	0.5 mg/m <sup>3</sup>	Not established
<b>Decabromodiphenyl Oxide<sup>1</sup></b>	1163-19-5	1-5	10 mg/m <sup>3</sup>	Not established
<b>REINFORCEMENT</b>				
Some products may contain fibre glass, polyester or a mix of glass grid and polyester.				
<b>Polyester mat<sup>1</sup></b>	N/A	1-7	Not established	Not established
<b>Fibre glass mat<sup>1</sup></b>	N/A	1-7	Not established	Not established
Contains: <b>Fibre glass filament<sup>1</sup></b>	65997-17-3	0,5-7	1f/cc	Not established
<b>UNDERFACE AND SURFACE</b>				
Some membranes are protected by sand, talc, mineral granule, silicone paper, polyethylene or polypropylene film, aluminium, copper or stainless steel foil.				
<b>Silicone paper</b>	N/A	6-20	Not established	Not established
<b>Polypropylene film</b>	N/A	2-10	Not established	Not established
<b>Polyethylene film</b>	9002-88-4	2-10	Not established	Not established
<b>Aluminium, copper or stainless steel foil</b>	N/A	4-15	Not established	Not established
<b>Sand</b>	N/A	7-13	0.1 mg/m <sup>3</sup>	Not established
Contains: <b>Crystalline silica<sup>2</sup></b>	14808-60-7	7-13	0.025 mg/m <sup>3</sup>	Not established
<b>Talc</b>	14807-96-6	7-13	Not established	Not established
<b>Coloured granules</b>	N/A	15-40	Not established	Not established
Contains: <b>Crystalline silica<sup>2</sup></b>	14808-60-7	< 12	0.025 mg/m <sup>3</sup>	Not established

1. The exposure to the product above the limits of exposure is not likely to occur considering its form (incorporated in the mixture) and the provided use. The limit of exposure is given for reference only.

2. A proportion of crystalline silica can be present in the sand sprinkled on the top of some membranes. The crystalline silica contained in the sand is not likely to be found in the ambient air in concentration above the limit of exposure since the sand adheres to the surface of the membrane.

## SECTION III: POTENTIAL HEALTH EFFECTS

### *Effects of short term (acute) exposure*

#### **SKIN CONTACT**

The product can cause a mechanical irritation of the skin because of its rough surface. If the membrane is torch-applied, asphalt fumes can cause skin irritation. The asphalt fumes can cause an irritation of the skin. The contact with this product at high temperature can cause thermal burns.

#### **EYE CONTACT**

The product is not likely to cause effects to the eyes. If the membrane is torch-applied, asphalt fumes can be emitted of the product and cause irritations, redness and conjunctivitis to the eyes. The contact with this product at high temperature can cause thermal burns.

#### **INHALATION**

The product is not likely to cause effects on the respiratory system. If the membrane is torch-applied, asphalt fumes can be emitted of the product and cause irritations to the nose, the throat and the respiratory tracts, tiredness, headaches, dizziness, nausea and insomnia.

#### **INGESTION**

Exposure is not likely to occur by this route of entry under normal use of the product.

### *Effects of long term (chronic) exposure*

#### **SKIN CONTACT**

The repeated or prolonged contact can cause irritation. If the membrane is torch-applied, asphalt fumes can be emitted. The long-term exposure to the asphalt fumes can cause changes of the pigmentation of the skin which can be worsened by the exposure to the sun. (1)

#### **INHALATION**

If the membrane is torch-applied, asphalt fumes can be inhaled. No data on chronic effects of the exposure to asphalt fumes on the lungs.

#### **CARCINOGENICITY**

Due to the product form, exposure to hazardous dusts or fumes is not expected to occur. Information on carcinogenicity is given for reference only. This product is not classifiable as a carcinogen.

**Asphalt:** According to the International Agency for Research on Cancer (IARC): not classifiable as to its carcinogenicity to humans. Epidemiological studies of roofers have generally demonstrated an excess of lung cancer in these workers. However, it is unclear to what extent these cancers may be attributable to asphalt exposures during roofing operations, since in the past, roofers have been exposed to coal tar and asbestos, which are known human lung carcinogens. Trace amounts of polynuclear aromatic hydrocarbons (PAHs) may be present in some asphalts and can be released upon excessive heating. Some of these PAHs have been identified as having the potential to induce carcinogenic and reproductive health effects. (2)

**Crystalline Silica:** Breathable crystalline silica from sand is not expected to be released, sand is adhered to product. According to IARC, crystalline silica is carcinogenic for human by inhalation. (3)

**Fibreglass Filament:** Fibreglass is not expected to be released. In 2001, IARC classified fibreglass as Group 3 "not classifiable as to its carcinogenicity to humans". The American Conference of Governmental Industrial Hygienists (ACGIH) and the National Toxicology Program (NTP) classify the product in Group 2B (possibly carcinogenic to humans) based on studies in which animals were injected with large quantities of fibreglass.

**Decabromodiphenyl Oxide:** According to IARC: Group 3 (limited evidence for carcinogenicity in experimental animals and no human data). According to NTP: not listed as a carcinogen. (1)

**Antimony Trioxide:** According to IARC: Group 2B (possibly carcinogenic to humans). (1)

*No information available about the other products.*

#### **TERATOGENICITY, EMBRIOTOXICITY, FETOTOXICITY**

No information available.

#### **REPRODUCTIVE TOXICITY**

No information available.

#### **MUTAGENICITY**

No information available.

#### **TOXICOLOGICALLY SYNERGISTIC MATERIALS**

No information available.

#### **POTENTIAL ACCUMULATION**

No information available.

## SECTION IV: FIRST AID MEASURES

#### **SKIN CONTACT**

If there is presence of dust on the skin, wash gently with water and soap. In the event of contact with the product melted, do not try to remove the product of the affected area and rinse the area affected in cold water. Obtain immediate medical attention. At the end of each working day, clean all the parts of the body which came into contact with asphalt fumes. Clean the clothing contaminated by the asphalt fumes.

#### **EYE CONTACT**

Flush eyes with water for at least 15 minutes while holding eyelids open. Do not attempt to remove material from affected area without medical assistance. Obtain immediate medical attention.

#### **INHALATION**

Remove victim from contaminated place and restore breathing, if required.

#### **INGESTION**

The ingestion of this product is not very likely to occur.

## SECTION V: FIRE-FIGHTING MEASURES

**FLAMMABILITY:** Not applicable

**EXPLOSION DATA:** Not applicable

**FLASH POINT:** Not applicable

**AUTO-IGNITION TEMPERATURE:** Not applicable

**FLAMMABILITY LIMITS IN AIR: (% in volume)** Not applicable

#### **FIRE AND EXPLOSION HAZARDS**

Asphalt fumes are flammable. Torch, used to weld waterproofing membranes, can produce temperatures beyond 1100°C (2000°F). Avoid all contact with materials sensitive to these temperatures, as lead or plastic materials. Never work in an enclosed area where gas can accumulate. Shield air conditioning units and other protrusions on the roof with perlite panels or similar material when using the torch around them. Never use torch (es):

- When substrate(s) have been recently covered by solvent-based products (wait until it is dry).
- Near any combustible materials.
- Close to containers containing flammable liquids or materials (keep open flame at least 3 m [10'] away).
- Directly on combustible substrate or insulation.

Voids, holes or gaps in substrate or located nearby the welding zone can be protected against flame penetration. Particular precautions must be taken to keep combustible or heat sensitive insulation away from the torch flame. If wood fibre panels must be installed, use fireproof panels. Avoid presence of combustible materials near open flame. At all times and especially when leaving job site, make sure that there is no smouldering or concealed fire. In that case, strictly follow the safety measures. Job planning must allow for employee presence on the roof at least one hour after torch application. At the end of every day, use a heat detector gun to discover any unusually hot surface. Always have one ABC fire extinguisher on hand, filled and in perfect working order near each torch.

## COMBUSTION PRODUCTS

Burning of this material will produce thick black smoke. Irritating and/or toxic gases including Hydrogen Sulphide and Sulphur Dioxide, traces of metallic fumes may be generated by thermal decomposition or combustion.

## FIRE FIGHTING INSTRUCTIONS

Evacuate the area. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. Approach fire from upwind and fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Always stay away from the containers at the time of the fire considering the high risk of explosion. Move the rolls of membrane from fire area if it can be done without risk. Cool the rolls of membrane with flooding quantities of water until well after fire is out.

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub>, sand, chemical powder.

## SECTION VI: ACCIDENTAL RELEASE MEASURES

### RELEASE OR SPILL

If hot material is spilled, allow enough time to cool completely and remove to a container for disposal. Wear appropriate breathing apparatus (if applicable) and protective clothing. Notify appropriate environmental agencies. Wash spill area with soap and water. Dispose of this material according to local environmental regulations.

## SECTION VII: HANDLING AND STORAGE

### HANDLING

Soprema's products must be applied by qualified applicators who have received an adequate training, for the prevention and the protection (in particular for the use of the extinguishers) against accidents caused by use of combustible or flammable materials, of liquefied propane gas, open flame, and their material of installation. The present recommendations must be imperatively related to the knowledge of the employees before the application of the products to the building site. Check the construction and the composition of the systems of roof and the walls before welding. Ensure of the cleanliness of the places (debris).

**Precautions of the use of the torch:** Use only proper torching equipment in perfect working order, C.S.A. certified. Never modify torching equipment. Use only proper hoses suited for propane gas of less than 15 m (50'). Verify and tighten all the connections before the use of the equipment. Do not light the torch if a propane odour is present. Never seek a leak with a flame. Use a torch whose gas output is adjustable with stopping device. Follow the specifications, notices and documentations of the manufacturers.

### STORAGE

Flashings must be stored in such a way to prevent any creasing, twisting, scratches and other damages of the roof. The materials must be protected adequately and stored permanently away from flames or welding sparks, protected from bad weather and any harmful substances. Store self-adhesive membranes away from the sun.

## SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

**HANDS:** Wear resistant gloves.

**RESPIRATORY:** If the TLV for dust is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.

**EYES:** Wear safety goggles in accordance with standards.

**BODY:** Wear adequate protective clothes. Do not wear synthetic fabric. Remove clothing contaminated with solvents.

**OTHERS:** Eye bath and safety shower.

## SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	Solid
<b>ODOUR AND APPEARANCE:</b>	Black membrane with asphalt odour
<b>ODOUR THRESHOLD:</b>	Not available
<b>VAPOUR PRESSURE (20°C):</b>	Not applicable
<b>VAPOUR DENSITY (air = 1):</b>	Not applicable
<b>EVAPORATION RATE (Butyl acetate = 1):</b>	Not applicable
<b>BOILING POINT (760 mm Hg):</b>	Not applicable
<b>FREEZING POINT:</b>	Not applicable
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	Variable
<b>SOLUBILITY IN WATER (20°C):</b>	None
<b>VOLATIL ORGANIC COMPOUND CONTENT (V.O.C.):</b>	Not measurable (0 g/L)
<b>VISCOSITY:</b>	Not applicable

## SECTION X: STABILITY AND REACTIVITY

**STABILITY:** This material is stable.

**CONDITIONS OF REACTIVITY:** Avoid excessive heat.

**INCOMPATIBILITY:** Acid and strong basis and organic solvents and greasy substances.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None identified.

**HAZARDOUS POLYMERISATION:** None.

## SECTION XI: TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL DATA

**Antimony Trioxide:** (1)

LD<sub>50</sub> (oral, rat): > 20 000 mg/kg

**Decabromodiphenyl Oxide:** (1)

LC<sub>50</sub> (rat): > 50 mg/kg

LD<sub>50</sub> (oral, rat): > 5 000 mg/kg

LD<sub>50</sub> (dermal, rabbit): > 2 000 mg/kg

*No information available on the other products.*

### Effects of Short-Term (Acute) Exposure

No information available.

### Effects of Long-Term (Chronic) Exposure

### CARCINOGENICITY

**Asphalt:** Data from experimental studies in animals and cultured mammalian cells indicate that laboratory-generated roofing asphalt fume condensates are genotoxic and cause skin tumours. (2)

**Crystalline Silica:** Several studies have shown an increased incidence of lung tumours in rats exposed to quartz by inhalation for up to 2 years. IARC has determined that there is sufficient evidence that quartz is carcinogenic to experimental animals. (3)

**Antimony Trioxide:** USEPA and CalEPA concluded that the studies done on this product are inadequate for use in quantitative cancer risk assessment. (1)

**Highly Hydrotreated Naphthenic Oil:** No study on the human and the animals made it possible to classify naphthenic oils highly hydrotreated as carcinogen (IARC, 1984). (1)

*No information available about the other products.*

### REPRODUCTIVE EFFECTS

No information available.

### TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

No information available.

### MUTAGENICITY

**Crystalline Silica:** None according to the available information.

*No information available about the other products.*

### SYNERGISTIC MATERIALS

Tobacco smoke increases the effects of silica dust on respiratory system. Simultaneous exposure to known carcinogens as benzo (a), pyrene, can increase the carcinogenicity of crystalline silica.

## SECTION XII: ECOLOGICAL INFORMATION

### ENVIRONMENTAL EFFECTS

No data.

### BIODEGRADABILITY

This product is not biodegradable. No possible bioaccumulation and unlikely bioconcentration in the food chain.

## SECTION XIII: DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL

This product is not hazardous waste. Consult local, provincial, territory or state authorities to know disposal methods. This material is not listed by the EPA as hazardous waste according to the Resource Conservation and Recovery Act (RCRA) of the United States. No Environmental Protection Agency (EPA) waste numbers are applicable for this product.

## SECTION XIV: TRANSPORT INFORMATION

This product is not regulated by Department of Transportation (DOT) and Transportation Dangerous Goods (TDG).

## SECTION XV: REGULATORY INFORMATION

- WHMIS:** This product is not regulated by WHMIS.  
**DSL:** All constituents of this product are included in the Domestic Substances List (Canada).  
**TSCA:** All constituents of this product are listed on the Toxic Substances Control Act Inventory (TSCA – United States).

HMIS (USA):		NFPA (USA):	
Health	0	Health	0
Flammability	1	Flammability	1
Physical hazard	0	Instability	0
Protective equipment	B	Specific hazard	0

## SECTION XVI: OTHER INFORMATION

### GLOSSARY

- ANSI:** American National Standards Institute  
**CAS:** Chemical Abstract Services  
**CFR:** Code of Federal Regulations  
**LD<sub>50</sub>/CL<sub>50</sub>:** Less high lethal dose and lethal concentration published  
**HMIS:** Hazardous Material Information System  
**IARC:** International Agency for Research on Cancer  
**NIOSH:** National Institute for Occupational Safety and Health  
**NFPA:** National Fire Protection Association  
**OSHA:** Occupational Safety & Health Administration  
**SARA:** Superfund Amendments and Reorganization Act  
**TLV:** Threshold Limit Value  
**TWA:** Time-weighted average  
**WHMIS:** Workplace Hazardous Materials Information System

### References:

- (1) Material Safety Data Sheet from the supplier
- (2) NIOSH (2001) Hazard Review, Health Effects of Occupational Exposure to Asphalt. U.S. Department of Health and Human Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2001-110.
- (3) CHEMINFO (2008) Canadian Centre of Occupational Health and Safety, Hamilton (Ontario) Canada

**Code of MSDS:** CA U DRU SS FS 044

**For information:** 1 800 567-1492

The Material Safety Data Sheets of SOPREMA are available on Internet at the following site: [www.soprema.ca](http://www.soprema.ca)

### Update justification:

- Naphthenic oil content and calcium carbonate content. (Section II)

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

**To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**



# SOPRABOARD

## DESCRIPTION

**SOPRABOARD** is a support panel composed of two asphalt-saturated glass mat reinforcement covering a mineral-fortified asphaltic core.

**SOPRABOARD** is designed to be used as a support panel on low-slope roofing. It can be installed over plywood or rigid insulation boards. **SOPRABOARD** can also be used as protection board for waterproofing membranes of below grade surfaces. Membranes must be installed over the darker side (surface) of the protection board.

**SOPRABOARD** is compatible with modified bitumen and B.U.R. roofing systems. Modified bitumen roofing systems can be welded directly to the board surface or adhered with hot bitumen or adhesive. **SOPRABOARD**, using an appropriate primer, may also be used with self-adhesive membranes.

## INSTALLATION

### BITUMEN

**SOPRABOARD** panel is installed in a bed of SEBS hot bitumen applied with a mop (minimum application temperature of 220 °C [425 °F]).

### ADHESIVE

**SOPRABOARD** panel is adhered with **DUOTACK** or **COLTACK** adhesives.

### MECHANICALLY FASTENED

**SOPRABOARD** panel is mechanically fastened to steel deck with screws and stress plates for insulation.

For more details about the required number of adhesive or mechanical fasteners, consult the Wind Uplift Resistance Testing reports according to Canadian standard CSA A123.21-10 or publications according to FM 4470 (RoofNav Database) including recommendations for corners and perimeters listed in the PLPDS 1-29 from Factory Mutual.

**FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.**

## LIMITATION

**SOPRABOARD** must be quickly covered after its installation and not left exposed.

## PACKAGING

Specifications	SOPRABOARD		
Thickness	3.2 mm (1/8 in)	4.8 mm (3/16 in)	6.4 mm (1/4 in)
Board size	1.22 x 1.52 m (4 x 5 ft)	1.22 x 2.44 m (4 x 8 ft)	1.22 x 1.52 m (4 x 5 ft)
Weight	4.4 kg/m <sup>2</sup> (0.90 lb/ft <sup>2</sup> )	6.9 kg/m <sup>2</sup> (1.41 lb/ft <sup>2</sup> )	9.3 kg/m <sup>2</sup> (1.90 lb/ft <sup>2</sup> )

(All values are nominal)

## PROPERTIES

Properties	Standards	SOPRABOARD		
		SOPRABOARD 1/8	SOPRABOARD 3/16	SOPRABOARD 1/4
Puncture resistance	ASTM E154	500 N		
Water absorption	ASTM D994	0.25 %		
Compressive Strength	ASTM C472	≥ 1641 kPa (238 psi)		≥ 3565 kPa (517 psi)
Shore hardness	ASTM C1278	Pass		

(Valeurs nominales)

**SOPRABOARD**

Offerte en français

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
Not regulated		Not regulated

**SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Use:** Used as a substrate material in flat or low-slope roofing as well as protection board in civil engineering projects. It can be installed over wood, rigid insulation, as a recover sheet over an existing roof surface which is to be re-roofed or under paving asphalt in bridge deck applications.

**Manufacturer:**

Soprema Canada  
1675 Haggerty Street  
Drummondville (Quebec) J2C 5P7  
CANADA  
Tel.: 819 478-8163

**Distributors:**

Soprema Inc.  
44955 Yale Road West  
Chilliwack (B.-C.) V2R 4H3  
CANADA  
Tel.: 604 793-7100

Soprema USA  
310 Quadral Drive  
Wadsworth (Ohio) 44281  
UNITED STATES  
Tel.: 1 800 356-3521

Soprema Gulfport  
12251 Seaway Road  
Gulfport (Mississippi) 39503  
UNITED STATES  
Tel.: 228 701-1900

**In case of emergency:**

SOPREMA (8:00am to 5:00pm): 1 800 567-1492    CANUTEC (Canada) (24h.): 613 996-6666    CHEMTREC (USA) (24h.): 1 800 424-9300

**EMERGENCY OVERVIEW**

Semi-rigid protection board composed of a mineral fortified asphaltic core formed between two saturated fibreglass felts. Presents an asphalt odour. Under normal use, this product is not expected to create any health or environmental hazard. Inhalation of dust or of asphalt fumes can cause a respiratory irritation.

**SECTION II: COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS**

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Oxidized Asphalt	64742-93-4	60-65	0.5 mg/m <sup>3</sup>	Not established
Fibreglass	65997-17-3	7-13	1 f/cc for fibres longer than 5 µm with a diameter less than 3 µm	Not established

**SECTION III: POTENTIAL HEALTH EFFECTS**

*Effects of Short-Term (Acute) Exposure*

**INHALATION**

No possible health effect if the product is not heated.

**Oxidized Asphalt:** Inhalation is possible only if the product is heated or if asphalt fumes are generated. Asphalt fumes can be irritating for the nose, the throat and the upper respiratory tract causing cough, wheezing breath and/or shortness of breath. The acute effects of the exposure to the asphalt fumes include headache, tiredness and decreased appetite. Hydrogen sulphide (H<sub>2</sub>S) can result from excessive heating, agitation or contact with acids or acid salts. Inhaled H<sub>2</sub>S can cause a central nervous system depression having for result headache, dizziness, nausea, unconsciousness, and death. (1)

**Fibreglass:** Fibreglass dust may cause mouth, nose and throat irritation. (1)

**SKIN CONTACT**

Frequent or prolonged contacts may cause skin irritation.

**Oxidized Asphalt:** No likely health effect if the product is not heated. Exposure to asphalt fumes may cause a severe irritation to skin and may cause dermatitis and lesions similar to acne. The contact with the hot product can cause serious burns. (1)

**Fibreglass:** Fibreglass dust may cause skin irritation. (1)

**EYE CONTACT**

**Oxidized Asphalt:** No likely health effect if the product is not heated. The fumes may cause irritation and redness. The contact with the hot product can cause serious burns. (1)

**Fibreglass:** Particles or dust of the product may cause irritations. (1)

**INGESTION**

It is unlikely that toxic quantities of the product are ingested under normal use and handling of the product.

*Effects of Long-Term (Chronic) Exposure*

**SKIN CONTACT**

**Oxidized Asphalt:** No likely health effect if the product is not heated. Exposure to asphalt fumes may cause a severe irritation to the skin and may cause dermatitis and lesions similar to acne. Long-term contact may cause a change with skin pigmentation which can be worsened by the exposure to the sun. (1)

**INHALATION**

**Oxidized Asphalt:** No likely health effect if the product is not heated. Prolonged exposure to asphalt fumes may cause irritation to respiratory tract. Inhalation of asphalt fumes may cause central nervous system depression having for result headache, dizziness, nausea, unconsciousness, and death. (1)

**Fibreglass:** No chronic effect on health is known to be associated with exposure to fibreglass of continuous filament. (1)

**NERVOUS SYSTEM EFFECTS**

No information available.

**CARCINOGENICITY**

**Oxidized Asphalt:** Asphalt fumes may contain a variety of polycyclic aromatic hydrocarbons (PAH) of which some are associated to the potential to induce skin cancer. Increasing quantities of PAH can be released if this product is heated above 200°C. Prolonged or repeated contact of polycyclic aromatic hydrocarbons with the skin may cause skin cancer where weak personal hygiene can be a factor of contribution. Asphalt fumes contain substances such as Benzo(a)pyrene and Dibenzo(a,h) anthracene which are known to cause cancer to humans. In October 2011, the International Agency for Research on Cancer (IARC) conducted a review of the potential carcinogenicity of bitumen (the European term for asphalt). One of its conclusions was "occupational exposures to oxidized bitumens and their emissions during roofing" are classified in IARC Group 2A, "probably carcinogenic to humans". (1)

**Fibreglass:** The epidemiological results of studies have not shown any increase in respiratory disease or cancer. IARC classified fibreglass in continuous filament "Not classifiable as carcinogen to humans" (Group 3). (1)

#### TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

**Oxidized Asphalt, Fibreglass:** No information available.

#### REPRODUCTIVE TOXICITY

**Oxidized Asphalt, Fibreglass:** No information available.

#### MUTAGENICITY

**Oxidized Asphalt, Fibreglass:** No information available.

#### TOXICOLOGICALLY SYNERGISTIC MATERIALS

**Oxidized Asphalt, Fibreglass:** No information available.

#### POTENTIAL FOR ACCUMULATION

**Oxidized Asphalt, Fibreglass:** No information available.

### SECTION IV: FIRST AID MEASURES

#### SKIN CONTACT

Wash gently with warm water and soap to remove dust. In case of contact with hot product, treat as an ordinary burn. Do not attempt to remove material from affected area without medical assistance. Flush skin immediately with large volumes of cold water. Obtain immediate medical attention.

#### EYE CONTACT

Flush eyes with water for at least 15 minutes while holding eyelids open. Do not attempt to remove material from affected area without medical assistance. Obtain medical attention.

#### INHALATION

Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

#### INGESTION

Rinse mouth with water to remove dust, and drink plenty of water to help reduce irritation.

### SECTION V: FIRE-FIGHTING MEASURES

**FLAMMABILITY:** Asphalt fumes are flammable.  
**EXPLOSION DATA:** Not established  
**FLASH POINT:** Not applicable  
**AUTO-IGNITION TEMPERATURE:** Not available  
**FLAMMABILITY LIMITS IN AIR: (% in volume)** Not available

#### FIRE HAZARDS

Asphalt fumes are flammable. Never work in a closed area to avoid accumulation of gas. Do not use water. Always stay away from containers exposed to excessive heat.

#### COMBUSTION PRODUCTS

Carbon monoxide, carbon dioxide and incomplete combustion products. Burning of this material will produce thick black smoke. Irritating and/or toxic fumes and gases including Hydrogen Sulphide and Sulphur Dioxide may be generated by thermal decomposition or combustion.

#### FIRE FIGHTING INSTRUCTIONS

Evacuate area. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. Approach fire from upwind and fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Always stay away from containers because of the risk of explosion. Stop leak before attempting to put out the fire. If leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out. Move containers from fire area if this can be done without risk. Cool containers with flooding quantities of water until well after fire is out.

#### EXTINGUISHING MEDIA

Foam, carbon dioxide, sand, dry chemical.

### SECTION VI: ACCIDENTAL RELEASE MEASURES

#### RELEASE OR SPILL

Eliminate all sources of ignition. If hot material is spilled, allow enough time to cool completely and remove to a container for disposal. Wear appropriate breathing apparatus (if applicable) and protective clothing. Notify appropriate environmental agency(ies). Wash spill area with soap and water. Prevent entry into waterways, sewers, basements or confined areas.

### SECTION VII: HANDLING AND STORAGE

#### HANDLING

Avoid prolonged exposure to mist, fumes or vapours from hot material. Minimise skin and eye contact. Use under adequate ventilation measures. Wash body parts after handling.

#### STORAGE

Store material away from all sources of heat and ignition in a fresh, well ventilated area. Keep away from children. Avoid the accumulation of dust.

### SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

**HANDS:** Wear resistant gloves.

**RESPIRATORY:** If the TLV to dust is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.

**EYES:** Wear chemical safety goggles in accordance with standards.

**OTHERS:** Eye bath and safety shower.

### SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Solid  
**ODOUR AND APPEARANCE:** Semi-flexible asphaltic core with asphalt odour  
**ODOUR THRESHOLD:** Not applicable  
**VAPOUR DENSITY (air = 1):** Not applicable  
**EVAPORATION RATE (Butyl acetate = 1):** Not applicable  
**BOILING POINT (760 mm Hg):** Not determined  
**FREEZING POINT:** Not applicable  
**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** Variable  
**SOLUBILITY IN WATER (20°C):** Nil  
**VOLATILE ORGANIC COMPOUND CONTENT (V.O.C.):** Not available  
**VISCOSITY:** Not applicable

### SECTION X: STABILITY AND REACTIVITY

**STABILITY:** This material is stable.

**CONDITIONS OF REACTIVITY:** Avoid excessive heat.

**INCOMPATIBILITY:** Avoid accidental contact of hot product with water, which may cause violent eruptions. Avoid strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None identified.

**HAZARDOUS POLYMERISATION:** None

### SECTION XI: TOXICOLOGICAL INFORMATION

#### TOXICOLOGICAL DATA

Not available.

#### *Effects of Short-Term (Acute) Exposure*

#### INHALATION

No information available.

#### EYE IRRITATION

No information available.

#### SKIN IRRITATION

No information available.

**Effects of Long-Term (Chronic) Exposure**

**TARGET ORGANS**

No information available.

**CARCINOGENICITY**

No information available.

**REPRODUCTIVE EFFECTS**

No information available.

**TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY**

No information available.

**MUTAGENICITY**

No information available.

**SECTION XII: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL EFFECTS**

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial and federal regulations may require that environmental and / or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

**SECTION XIII: DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL**

This product is not hazardous waste. Consult local, state, provincial, or territories authorities to know disposal methods. This material is not listed by the EPA as hazardous waste.

**SECTION XIV: TRANSPORT INFORMATION**

**This product is not regulated by DOT and TDG.**

**SECTION XV: REGULATORY INFORMATION**

**WHMIS:** This product is not regulated by WHMIS.

**DSL:** All constituents of this product are included on the Domestic Substances List (DSL – Canada).

**TSCA:** All constituents of this product are included on the Toxic Substances Control Act Inventory (TSCA – United States).

HMIS (USA):		NFPA (USA):	
Health	0	Health	1
Flammability	1	Flammability	1
Physical hazard	0	Instability	0
Protective equipment	B	Specific hazard	-

**SECTION XVI: OTHER INFORMATION**

**GLOSSARY**

- ANSI:** American National Standards Institute
- ASTM:** American Society for Testing and Materials
- CAS:** Chemical Abstract Services
- CSA:** Canadian Standardisation Association
- DOT:** Department of Transportation (United States)
- EPA:** Environmental Protection Agency (United States)
- HMIS:** Hazardous Material Information System
- LD<sub>50</sub>/CL<sub>50</sub>:** Less high lethal dose and lethal concentration published
- NFPA:** National Fire Protection Association
- OSHA:** Occupational Safety & Health Administration (United States)
- RCRA:** Resource Conservation and Recovery Act (United States)
- TDG:** Transport of Dangerous Goods (Canada)
- TLV-TWA:** Threshold Limit Value – Time-Weighted Average
- WHMIS:** Workplace Hazardous Materials Information System (Canada)

**Reference:**

- (1) Material Safety Data Sheet of supplier.

**Code of MSDS:** CA U DRU SS FS 056

**For more information:** 1 800 567-1492

The Material Safety Data Sheets of SOPREMA Canada are available on Internet at the following site: [www.soprema.ca](http://www.soprema.ca)

**Justification of the update:**

- Asphalt has been replaced by Oxidized Asphalt.
- Update of the text of Carcinogenicity. (Section III)

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

**To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**



# SOPRASTAR FLAM HD GR\*

# SOPRASTAR STICK HD GR

# SOPRASTAR HD GR\*

1.877.MAMMOUTH  
www.soprema.ca

TECHNICAL DATA SHEET  
130924SCAN1E  
(supersedes 130315SCAN1E)

## DESCRIPTION

**SOPRASTAR FLAM HD GR\***, **SOPRASTAR STICK HD GR** and **SOPRASTAR HD GR\*** are high performance cap sheet membranes composed of SBS modified bitumen and a composite reinforcement. Those cap sheet membranes are covered with highly reflective white granules.

\* Fire rated cap sheet membranes (**SOPRASTAR FLAM HD FR GR** and **SOPRASTAR HD FR GR**) are also available for increase fire resistance.

## INSTALLATION

**SOPRASTAR FLAM HD GR\*** is a heat-welded with a propane torch.

**SOPRASTAR STICK HD GR** is a self-adhesive membrane and **SOPRASTAR HD GR\*** is adhered using **COLPLY ADHESIVE** or **SOPRASPHALTE M** hot SEBS bitumen. Both are installed over a sanded base sheet membrane.

**FOR COMPLETE INFORMATION ON APPLICATION AND SYSTEMS, PLEASE CONSULT OUR SPECIFICATION MANUAL.**

## LEED® SOLUTION

**SOPRASTAR** membranes have a SRI of **86**, which meet the requirements of the Canadian Green Building Council's (CaGBC) LEED® credit SS7.2 regarding heat island.

## PACKAGING

Properties	SOPRASTAR FLAM HD GR	SOPRASTAR STICK HD GR	SOPRASTAR HD GR
Thickness	3.7 mm (146 mil)		
Reinforcement	Composite		
Dimensions	1 x 10 m		
Roll weight	4.2 kg/m <sup>2</sup> (0.86 lb/ft <sup>2</sup> )	4.4 kg/m <sup>2</sup> (0.90 lb/ft <sup>2</sup> )	4.3 kg/m <sup>2</sup> (0.88 lb/ft <sup>2</sup> )
Selvedge width	100 mm (4 in)		
Top face	Highly reflective white granules		
Underface	Thermofusible plastic film	Release protection film	Sanded
Application method	Heat Welded	Self-adhesive	With adhesive or hot SEBS bitumen
Rolls per skid	25		





# SOPRASTAR FLAM HD GR\*

# SOPRASTAR STICK HD GR

# SOPRASTAR HD GR\*

1.877.MAMMOUTH  
www.soprema.ca

TECHNICAL DATA SHEET  
130924SCAN1E  
(supersedes 130315SCAN1E)

## PROPERTIES

As per CAN/CGSB-37.56-M, 9th draft.

Properties	MD	XMD
Strain energy	11.9 kN/m	9.5 kN/m
Breaking strength	19.5 kN/m	15.1 kN/m
Ultimate elongation	61 %	75 %
Tear resistance	70 N	
Static puncture resistance	470 N	
Dimensional stability	-0.2 %	0.1 %
Plastic flow	$\geq 110\text{ }^{\circ}\text{C}$ (230 °F) for <b>SOPRASTAR FLAM HD GR &amp; SOPRASTAR STICK HD GR</b> $\geq 105\text{ }^{\circ}\text{C}$ (221 °F) for <b>SOPRASTAR HD GR</b>	
Cold bending, at -30 °C (-22 °F)	No cracking	
Lap joint strength	Pass > 4 kN/m	
SRI (ASTM E 1980) <sup>1</sup>	86	

1. (The reflectivity and emissivity were measured as per ASTM C 1549 and C 1371 respectively.)  
Meets and exceeds the requirements of CAN/CGSB-37.56-M, 9th draft).  
(All values are nominal)

## STORAGE & HANDLING

Rolls must be stored upright, with the selvedge side on top. If the products are stored outside, cover them with an opaque protection cover after the packaging provided for delivery has been removed.

