

# MATERIAL SAFETY DATA SHEET

## SBS MODIFIED BITUMEN ELASTIC CEMENT

*Disponible en français*

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
		 <p><b>ADHESIVE</b> Class 3 UN1133 P.G.: III</p>

### SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product name:</b>	SBS Modified Bitumen Elastic Cement	
<b>Use:</b>	Multi-purpose application.	
<b>Code of MSDS:</b>	CA U DRU SS FS 019	
<b>Formula Number:</b>	188.1	
<b>Revision date:</b>	October 6, 2008	
<b>Revised by:</b>	Marie-Claude Fontaine, Health and Safety Supervisor (800) 567-1492 <a href="mailto:mcfontaine@soprema.ca">mcfontaine@soprema.ca</a>	
<b><u>Manufacturer:</u></b>	Soprema Canada 1675 Haggerty Street Drummondville (Quebec) J2C 5P7 CANADA Tel.: (819) 478-8163	
<b><u>Distributors:</u></b>	Soprema Inc. 44955 Yale Road West Chilliwack (BC) V2R 4H3 CANADA Tel.: (604) 793-7100	Soprema USA 310 Quadral Drive Wadsworth (Ohio) 44281 UNITED STATES Tel.: (800) 356-3521
<b><u>In case of emergency:</u></b>	<p>SOPREMA (8:00am to 5:00pm – Eastern time): (800) 567-1492</p> <p>CANUTEC (Canada) (24h.): (613) 996-6666</p> <p>CHEMTREC (USA) (24h.): (800) 424-9300</p> <p>Poison Control Centre: Consult local telephone directory</p>	

### EMERGENCY OVERVIEW!!!

Black paste with strong solvent odour. CAUTION! This product and its vapours are flammable. The vapours are heavier than air and may spread long distances. Distant ignition (such as a pilot light, and any object that sparks, such as an electric motor) and flash back are possible. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

May cause skin, eye and respiratory tract irritation. Harmful or fatal if swallowed. Ingestion of the product can cause severe lung injury when aspirated. Inhalation of high concentrations of this product may cause central nervous system (CNS) depression (headache, nausea, dizziness, drowsiness, incoordination and unconsciousness).

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

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Asphalt	8052-42-4	30-60	0.5 mg/m <sup>3</sup>	Not established
Xylene	1330-20-7	10-30	100 ppm	150 ppm

**SECTION III. POTENTIAL HEALTH EFFECTS***Effects of Short-Term (Acute) Exposure***INHALATION:**

Inhalation of vapours of xylene can occur while using the product. The exposition to vapours of xylene over exposure limits may cause irritation of the respiratory system and central nervous system depression (headaches, dizziness, nausea, tiredness, confusion and coma).

**Xylene:** The main effect of inhaling xylene vapour is depression of the central nervous system (CNS), with symptoms such as headache, dizziness, nausea and vomiting. (1)

**Asphalt:** Exposure is not expected by this route of entry under normal product use.

**SKIN CONTACT:**

Frequent or prolonged contacts can remove the natural fat from the skin and may cause redness, skin irritation and dermatitis.

**Xylene:** Xylene (mixed isomers) liquid is a moderate skin irritant based on animal information. (1)

**Asphalt:** Asphalt may cause irritation to the skin. (2)

**EYE CONTACT:**

The vapours may cause eye irritation with tearing and discomfort, redness and pain. Eye contact with the product may cause moderate irritation.

**Xylene:** Xylene (mixed isomers) liquid is a very mild irritant, based on animal information. (1)

**Asphalt:** Asphalt may cause eye irritation. (2)

**INGESTION:**

It is unlikely that toxic amounts of this product would be ingested with normal handling and use. If significant amount of the product were ingested, symptoms as described for inhalation might occur. This product may cause irritation, mouth and throat burns and abdominal pains. The product can be aspirated (inhaled) into the lungs during ingestion or vomiting. Aspiration of even a small amount of liquid could result in a life threatening accumulation of fluid in the lungs. Severe lung damage (oedema), respiratory failure, cardiac arrest and death may result. (1)

**Xylene:** Based on animal information, xylene is only slightly toxic by ingestion. (1)

**Asphalt:** No information available.

*Effects of Long-Term (Chronic) Exposure***SKIN CONTACT:**

**Xylene:** Repeated contact can produce dermatitis (dryness and cracking) due to degreasing action. (1)

**Asphalt:** Repeated or prolonged contact may cause irritation. (2)

**SKIN SENSITIZATION:**

**Xylene:** No conclusions can be drawn regarding the potential for xylene to produce allergic skin reactions. (1)

**INHALATION:**

**Xylene:** See effects described below.

**Asphalt:** Exposure is not expected by this route of entry under normal product use.

**NERVOUS SYSTEM EFFECTS:**

**Xylene:** Long-term xylene exposure may cause harmful effects on the nervous system, but there is not enough information available to draw firm conclusions. (1)

**Asphalt:** No information available.

**BLOOD EFFECTS:**

**Xylene:** Historical reports sometimes associate xylene exposure with certain blood effects, including leukemia, which are now known to be caused by benzene. Uncontaminated xylene is not known to cause these effects. Reduced blood platelet counts were observed in 12 of 27 men exposed to mixed xylene (unspecified composition) at a level up to 200 ppm. When exposure stopped, platelet counts returned to normal. There is insufficient information to draw any conclusions from this study. (1)

**Asphalt:** No information available.

### SECTION III. POTENTIAL HEALTH EFFECTS

#### LIVER AND KIDNEY EFFECTS:

**Xylene:** A number of case reports and occupational studies have suggested that liver and kidney damage may result from long-term occupational exposure to xylene. However, it is not possible to attribute these effects directly to xylene exposure because generally there was exposure to other chemicals at the same time, particularly other solvents, and there was no information provided on the exposure levels or duration of exposure. In a recent study, 175 employees were exposed to a mean xylene concentration of 21 ppm for an average of 7 years. Liver and kidney effects were not reported. Xylenes accounted for greater than 70% of the total exposure. (1)

**Asphalt:** No information available.

#### CARCINOGENICITY:

**Xylene:** The International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). The American Conference of Governmental Industrial Hygienists (ACGIH) has designated this chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens. (1)

**Asphalt:** The International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans. (2)

#### TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:

**Xylene:** Mixed xylenes are considered fetotoxic in humans. (1)

**Asphalt:** No information available.

#### REPRODUCTIVE TOXICITY:

**Xylene:** The limited animal information available suggests that xylenes do not cause reproductive effects. (1)

**Asphalt:** No information available.

#### MUTAGENICITY:

**Xylene:** No conclusions can be drawn because of limitations such as small study populations and exposure to other chemicals at the same time. (1)

**Asphalt:** No information available.

#### TOXICOLOGICALLY SYNERGISTIC MATERIALS:

**Xylene:** Exposure to related solvents, such as benzene, toluene and ethanol (alcohol) slows the rate of clearance of xylenes from the body, thus enhancing its toxic effects. Exposure to xylene in combination with other solvents has had an additive effect with respect to harming the hearing of rats. (1)

**Asphalt:** No information available.

#### POTENTIAL FOR ACCUMULATION:

**Xylene:** The three xylene isomers are readily absorbed by inhalation and ingestion and are widely distributed throughout the body. A small amount may be absorbed through the skin. Xylenes are largely broken down by the liver and most of the absorbed material is rapidly excreted in the urine as breakdown products. Smaller amounts are eliminated unchanged in the exhaled air. There is low potential for accumulation. (1)

**Asphalt:** No information available.

### SECTION IV. FIRST AID MEASURES

#### SKIN CONTACT:

Remove contaminated clothing. Wash thoroughly with soap and water. If irritation persists, get medical attention.

#### EYE CONTACT:

Flush thoroughly with water for at least 15 minutes. If irritation persists, get medical attention.

#### INHALATION:

In case of gas or vapour inhalation, move victim to fresh air. If breathing is difficult, give oxygen. If breathing stops, give respiratory assistance. Obtain medical assistance.

#### SWALLOWING:

Do not induce vomiting. Immediately contact local poison control centre. Should vomiting occur, be sure to keep the victim's head below hips to avoid aspiration of vomit into the lungs. Maintain the victim at rest and obtain immediate medical attention.

### SECTION V. FIRE-FIGHTING MEASURES

**FLAMMABILITY:** Flammable Liquid Class IC (NFPA)

**EXPLOSION DATA:** Sensitivity to mechanical impact: No  
Sensitivity to static charge: Can accumulate static charge by flow

**FLASH POINT:** 26°C (ASTM D-93)

**AUTO-IGNITION TEMPERATURE:** 527°C (xylene)

**FLAMMABILITY LIMITS IN AIR:** (% in volume) 1 - 7 (xylene)

## SECTION V. FIRE-FIGHTING MEASURES

### FIRE AND EXPLOSION HAZARDS:

This product and its vapours are easily ignited by heat, sparks or flames. Vapours may form explosive mixtures with air. Vapours are heavier than air and may travel a considerable distance to a source of ignition and flash back to a leak or open container. The product may ignite on contact with strong oxidizing agents. Do not cut, puncture or weld empty containers.

### COMBUSTION PRODUCTS:

Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion. Toxic and/or irritating gases or fumes can emanate from empty containers when submitted to high temperatures: CO, CO<sub>2</sub>, Aldehydes, ketone, acrolein, halogenated compound.

### 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 high 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.

### MEANS OF EXTINCTION:

Anti-alcohol or universal foam, dry chemical powder, CO<sub>2</sub>, sand. Use of water spray when fighting fire may be inefficient because of the low flash point of the product.

## SECTION VI. ACCIDENTAL RELEASE MEASURES

### RELEASE OR SPILL:

Ventilate area. Wear appropriate protective equipment during cleanup. Eliminate all sources of ignition. Shut off source of leak if you can do it without risk. Contain the spill. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Sweep or shovel into containers with lids, use clean non-sparking tools to collect absorbed material. Cover and remove to appropriate well-ventilated area until disposal. Do not touch or walk through spilled material. Wash spill area with soap and water. Prevent entry into waterways, sewers, basements or confined areas. Dispose of this product according to local environmental regulations.

## SECTION VII. HANDLING AND STORAGE

### HANDLING:

This product is flammable and toxic. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing mist, vapour or dust. Wash thoroughly after handling. Before handling, it is very important that ventilation controls are operating and protective equipment requirements are being followed. People working with this product would be properly trained regarding its hazards and its safe use. Eliminate all ignition sources (e.g. sparks, open flames, hot surfaces). Keep away from heat. Ground transfer containers to avoid static accumulation. Tightly reseal all partially used containers. Do not cut, puncture or weld empty containers.

### STORAGE:

Store in a cool well-ventilated area out of direct sunlight and away from heat and ignition sources. Keep storage areas clear of combustible materials. No smoking near storage area. Store away from incompatible materials. Store the product according to occupational health and safety regulations and fire and building codes. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment near storage area. Inspect all containers to make sure they are properly labelled.

## SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>HANDS:</b>	Wear gloves made from polyvinyl alcohol (PVA) or viton.
<b>RESPIRATORY:</b>	If the TLV is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.
<b>EYES:</b>	Wear chemical safety goggles in accordance with standards.
<b>OTHERS:</b>	Eye bath and safety shower.
<b>CONTROL OF VAPOURS:</b>	Local exhaust is needed to control vapour and dust level to below recommended limits.

## SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	Paste
<b>ODOUR AND APPEARANCE:</b>	Black paste with strong solvent odour
<b>ODOUR THRESHOLD:</b>	Not available
<b>VAPOUR DENSITY (air = 1):</b>	Heavier than air
<b>EVAPORATION RATE (Butyl acetate = 1):</b>	0.7 (xylene)
<b>BOILING POINT (760 mm Hg):</b>	Not available
<b>FREEZING POINT:</b>	Not available
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	1.12 kg/L
<b>SOLUBILITY IN WATER (20°C):</b>	Insoluble
<b>VOLATILE ORGANIC COMPOUND CONTENT (V.O.C.):</b>	190 g/L
<b>VISCOSITY:</b>	350 1/10 mm (Cone penetrability)

**SECTION X. STABILITY AND REACTIVITY**

<b>STABILITY:</b>	This material is stable.
<b>CONDITIONS OF REACTIVITY:</b>	Avoid excessive heat.
<b>INCOMPATIBILITY:</b>	Basis and strong oxidizing agents. Inorganic acids (Strong Lewis).
<b>HAZARDOUS DECOMPOSITION PRODUCT:</b>	None identified.
<b>HAZARDOUS POLYMERISATION:</b>	None

**SECTION XI. TOXICOLOGICAL INFORMATION****TOXICOLOGICAL DATA:**

<b>Xylene: (1)</b>	LC50 (rat):	6350 ppm (4-hour exposure) (unspecified isomers and ethylbenzene)
	LD50 (oral, rat):	5400 mg/kg
	LD50 (dermal, rabbit):	12180 mg/kg; greater than 1700 mg/kg (mixed xylenes – undefined composition)
<b>Asphalt:</b>	Not available.	

*Effects of Short-Term (Acute) Exposure***INHALATION:**

**Xylene:** The major effect of xylene inhalation is on the central nervous system (CNS). (1)

**Asphalt:** No information available.

**EYE IRRITATION:**

**Xylene:** Xylene (mixed isomers) is a very mild eye irritant. (1)

**Asphalt:** No information available.

**SKIN IRRITATION:**

**Xylene:** Xylene (mixed isomers) is a moderate skin irritant. (1)

**Asphalt:** No information available.

*Effects of Long-Term (Chronic) Exposure***TARGET ORGANS:**

**Xylene:** In general, animal studies have provided little evidence of damage to the liver, kidney or lungs, nor any other significant long-term health effects following long-term inhalation. (1)

**Asphalt:** No information available.

**INGESTION:**

**Xylene:** No important findings were observed following oral administration. (1)

**CARCINOGENICITY:**

**Xylene:** The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for carcinogenicity of xylene in animals. (1)

**Asphalt:** No information available.

**REPRODUCTIVE EFFECTS:**

**Xylene:** No harmful reproductive effects were noted in males or females. (1)

**Asphalt:** No information available.

**TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:**

**Xylene:** Mixed xylenes are considered fetotoxic, based on observations of reduced foetal weight, delayed ossification and persistent behavioural effects in the absence of maternal toxicity. (1)

**Asphalt:** No information available.

**MUTAGENICITY:**

**Xylene:** Negative results have been consistently obtained in a variety of studies using live animals and cultured cells. (1)

**Asphalt:** 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. May be harmful to aquatic life.

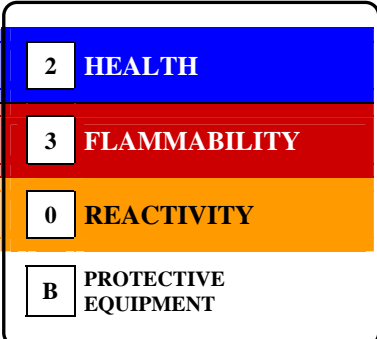
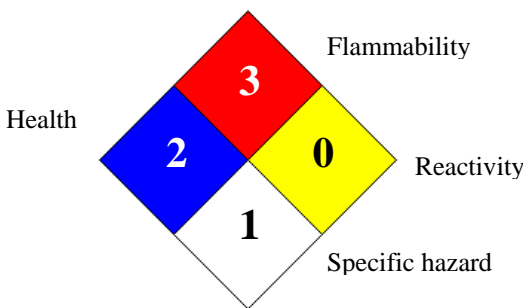
**SECTION XIII. DISPOSAL CONSIDERATIONS****WASTE DISPOSAL:**

This product is listed as hazardous waste. Consult local, state, provincial or territory authorities to know disposal methods. Also listed as hazardous waste by the RCRA (USA); waste disposal as to follow EPA regulations. Do not dispose of waste with normal garbage or sewers systems.

**SECTION XIV. TRANSPORT INFORMATION**

<b>NAME OF PRODUCT:</b> SBS Modified Bitumen Elastic Cement	<b>IDENTIFICATION NUMBER:</b> UN 1133
<b>CLASSIFICATION (TDG - DOT):</b> Class 3	<b>SHIPPING NAME:</b> Adhesive
<b>CONTAINERS FOLLOW THE STANDARDS OF:</b> Canada: CAN / CGSB-43.150-97 USA: CFR 49 parts 100 to 199	<b>PACKING GROUP:</b> III

**SECTION XV. REGULATORY INFORMATION**

<b>WHMIS:</b> Class B2: Flammable liquid (flash point below 37.8°C). Class D2A: Very toxic material causing other effects (xylene has teratogenicity and embryotoxicity effects). Class D2B: Toxic material causing other effects (asphalt and xylene have irritant effects).	
<b>DSL:</b> All constituents of this product are included on the Domestic Substances List (DSL – Canada).	
<b>TSCA:</b> All constituents of this product are included on the Toxic Substances Control Act Inventory (TSCA – United States).	
<b>USA – California Proposition 65:</b> None	
<b>HMIS (USA):</b>	<b>NFPA (USA):</b>
	

**SECTION XVI. OTHER INFORMATION**

<b>Glossary:</b>	
<b>ACGIH:</b>	American Conference of Governmental Industrial Hygienists
<b>ANSI:</b>	American National Standards Institute
<b>ASTM:</b>	American Society for Testing and Materials
<b>CAS:</b>	Chemical Abstract Services
<b>CFR:</b>	Code of Federal Regulations (United States)
<b>CSA:</b>	Canadian Standardisation Association
<b>DOT:</b>	Department of Transportation (United States)
<b>DSL:</b>	Domestic Substances List (Canada)
<b>EPA:</b>	Environmental Protection Agency (United States)
<b>HMIS:</b>	Hazardous Material Information System
<b>IARC:</b>	International Agency for Research on Cancer
<b>LC50:</b>	(Lethal concentration <sub>50</sub> ) Concentration of a substance in air that causes dead of 50% mortality of a defined animal population
<b>LD50:</b>	(Lethal dose <sub>50</sub> ) Single dose of a substance that, when administrated by a define route in an animal assay, is expected to cause the death of 50% of a defined animal population.
<b>NFPA:</b>	National Fire Protection Association (United States)
<b>NIOSH:</b>	National Institute for Occupational Safety and Health
<b>NTP:</b>	National Toxicology Program
<b>OSHA:</b>	Occupational Safety & Health Administration (United States)
<b>PEL:</b>	Permissible Exposure Limit
<b>RCRA:</b>	Resource Conservation and Recovery Act (United States)
<b>RTECS:</b>	Registry of Toxic Effects of Chemical Substances
<b>TDG:</b>	Transportation of Dangerous Goods
<b>TLV:</b>	Threshold Limit Value
<b>TWA:</b>	Time-weighted average
<b>TSCA:</b>	Toxic Substances Control Act (United States)
<b>WHMIS:</b>	Workplace Hazardous Materials Information System (Canada)
<b>References:</b>	
(1)	CHEMINFO (2008) Canadian Centre of Organisational Health and Safety, Hamilton (Ontario) Canada
(2)	Material Safety Data Sheet of the supplier.
<b>This MSDS has been prepared by:</b>	<b>Marie-Claude Fontaine</b>
<b>For more information:</b>	<b>SOPREMA Canada 1-800-567-1492</b>
The Material Safety Data Sheets of SOPREMA Canada are available on Internet at the following site: <a href="http://www.soprema.ca">http://www.soprema.ca</a>	

**SECTION XVI. OTHER INFORMATION**

**Justification of the update:**

- Modification of the Exposure Limit. (Section II)
- Addition of the symbols. (Section XV)

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 or 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.**