SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Self-Adhesive Waterproofing Membrane
Use: Elastomeric bitumen self-adhesive membrane.

Code of MSDS: CA U DRU SS FS 043
Revision date: May 13, 2008
Revised by: Michel Galtier, Health and Safety Supervisor
(800) 567-1492
mgaltier@soprema.ca

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

Distributor: Resisto Division, Soprema Canada
1675 Haggerty Street
Drummondville (Quebec) J2C 5P7
CANADA
Tel.: (819) 478-8408 – 1-887-478-8408

In case of emergency:

SOPREMA (8:00am to 5:00pm – Eastern time): (800) 567-1492
CANUTEC (Canada) (24h.): (613) 996-6666
CHEMTREC (USA) (24h.): (800) 424-9300
Poison Control Centre: Consult local telephone directory

EMERGENCY OVERVIEW!!!

Dark membrane with granule or sand surface or not. 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 a congestion.
## SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS #</th>
<th>% WEIGHT</th>
<th>EXPOSURE LIMIT (ACGIH)</th>
<th>TLV-TWA</th>
<th>TLV-STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BITUMINOUS BLEND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen</td>
<td>8052-42-4</td>
<td>30-70</td>
<td></td>
<td>0.5 mg/m³</td>
<td>Not established</td>
</tr>
<tr>
<td>Self-adhesive membranes contain:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highly hydrotreated naphthenic oil¹</td>
<td>64742-52-5</td>
<td>10-30</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Calcium Carbonate¹</td>
<td>471-34-1</td>
<td>0-40</td>
<td></td>
<td>10 mg/m³</td>
<td>Not established</td>
</tr>
<tr>
<td>Styrene butadiene copolymer¹</td>
<td>9003-55-8</td>
<td>0-15</td>
<td></td>
<td>10 mg/m³</td>
<td>Not established</td>
</tr>
<tr>
<td>REINFORCEMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some products may contain fibre glass, polyester or a mix of glass grid and polyester.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyester mat¹</td>
<td>N/A</td>
<td>1-7</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Fibre glass mat¹</td>
<td>N/A</td>
<td>1-7</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Contains:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fibre glass filament¹</td>
<td>65997-17-3</td>
<td>0.5-7</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>UNDERFACE AND SURFACE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some membranes are protected by sand, talc, mineral granule, silicone paper, polyethylene or polypropylene film, aluminium, copper or stainless steel foil.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicone paper</td>
<td>N/A</td>
<td>6-20</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Polypropylene film</td>
<td>N/A</td>
<td>2-10</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Polyethylene film</td>
<td>9002-88-4</td>
<td>2-10</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Aluminium, copper or stainless steel foil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td>N/A</td>
<td>4-15</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Contains:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica²</td>
<td>14808-60-7</td>
<td>7-13</td>
<td></td>
<td>0.1 mg/m³</td>
<td>Not established</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>7-13</td>
<td></td>
<td>2 mg/m³ Respirable particulate</td>
<td>Not established</td>
</tr>
<tr>
<td>Coloured granules</td>
<td>N/A</td>
<td>15-40</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Contains:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica²</td>
<td>14808-60-7</td>
<td>&lt; 12</td>
<td></td>
<td>0.1 mg/m³</td>
<td>Not established</td>
</tr>
</tbody>
</table>

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. The asphalt fumes can cause an irritation of the skin.

**EYE CONTACT:**
The product is not likely to cause effects to the eyes. The asphalt fumes can cause irritations, redness and conjunctivitis to the eyes.

**INHALATION:**
The product is not likely to cause effects on the respiratory system. The asphalt fumes can 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. 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:**
No data on chronic effects of the exposure to asphalt fumes on the lungs.
SECTION III. POTENTIAL HEALTH EFFECTS

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:
The International Agency for Research on Cancer (IARC) has concluded that this product is 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. Although strong epidemiological evidence exists of an association between lung cancer and working as a roofer, it is uncertain whether exposure to asphalt is related to this association. 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)

Crystalling Silica:
Breathable crystalline silica from sand is not expected to be released, sand is adhered to product. Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) classified crystalline silica in quartz form coming from professional exposure carcinogenic for human (Group 1). (3)

Fibreglass Filament:
Fibreglass is not expected to be released. In October 2001, IARC classified fibreglass as Group 3 “not classifiable as to its carcinogenicity to humans”. The 2001 decision was based on current human and animal research that shows no association between inhalation exposure to dust from fibreglass wool and the development of respiratory disease. This is a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of fibreglass. NTP and ACGIH have not yet reviewed the IARC reclassification of the most current fibreglass health research. At this time, both agencies continue to classify glass wool based on the earlier animal injection studies.

No information available about the other products.

TERATOGENICITY, EMBRIOOTOXICITY, FETOTOXICITY:
No information available.

REPRODUCTIVE TOXICITY:
No information available.

MUTAGENICITY:
No information available.

TOXICALLY 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 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.

INGESTION:
The ingestion of this product is not very likely to occur. In the event of ingestion, rinse the mouth with water to eliminate dust of the product and drink a lot of water to decrease the irritation.

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:
Self-adhesive roofing membranes do not require the use of torches therefore reducing risks of fire and explosion on job sites. Under normal conditions of use, this product is not expected to create any unusual fire or explosion hazards.
SECTION V. FIRE-FIGHTING MEASURES

COMBUSTION PRODUCTS:
Burning of this material will produce thick black smoke.

FIRE FIGHTING INSTRUCTIONS:
Irritating and/or toxic gases and fumes including hydrogen sulphide and sulphur dioxide may be generated by thermal decomposition or combustion. Approach fire from upwind. Evacuate the area and fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. 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, CO₂ powder, sand, dry chemical.

SECTION VI. ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL:
Not applicable.

SECTION VII. HANDLING AND STORAGE

HANDLING:
Avoid breathing the dust and the asphalt fumes. Use under adequate ventilation conditions.

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 to 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.

FEET:
Work shoes in accordance with standards.

BODY:
Wear adequate protective clothes.

OTHERS:
Eye bath and safety shower.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:
Solid

ODOUR AND APPEARANCE:
Black membrane with asphalt odour.

ODOUR THRESHOLD:
Not applicable

VAPOUR PRESSURE (20°C):
Not applicable

VAPOUR DENSITY (air = 1):
Not applicable

PERCENT VOLATILE (% by volume):
Non applicable

EVAPORATION RATE (Butyl acetate = 1):
Not applicable

BOILING POINT (760mm Hg):
Not applicable

FREEZING POINT:
Not applicable

SPECIFIC GRAVITY (H₂O = 1):
Variable

SOLUBILITY IN WATER (20°C):
Nil

COEFFICIENT WATER / OIL DISTRIBUTION:
Not applicable

VISCOSITY:
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:
No information available.

Effects of short-term (acute) exposure
No data are available about the acute toxicity for this product. Under normal use, this product is not expected to create any health hazard.

INHALATION:
No information available.
SECTION XI. TOXICOLOGICAL INFORMATION

**EYE IRRITATION:**
No information available.

**SKIN IRRITATION:**
No information available.

*Effects of long-term (chronic) exposure*

Under normal use, this product is not expected to create any health hazard.

Prolonged inhalation of dust may cause irritation of the nose, throat and respiratory passages. Some membranes are covered with sand which contains crystalline silica. Excessive inhalation of crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, specific chest illness and reduced pulmonary function.

**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 in mice when applied dermally. The absence of data to indicate that laboratory-generated roofing asphalt fume condensates are representative of field-generated fumes limits the usefulness of these data for determining the genotoxicity and potential carcinogenicity of field-generated roofing asphalt fume condensates. (2)

**Crystalline Silica:**
The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite is carcinogenic to humans (Group 1 – carcinogenic to humans). Several studies have shown an increased incidence of lung tumours in rats exposed to quartz by inhalation for up to 2 years. No increase in lung tumours was observed in female mice exposed to quartz for up to 570 days. However, the ability of this study to detect carcinogenic effects was limited due to the small numbers of animals used. The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence that quartz is carcinogenic to experimental animals. (3)

**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)

**REPRODUCTIVE EFFECTS:**
No information available.

**TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:**
No information available.

**MUTAGENICITY:**

**Crystalline Silica:**
Quartz did not induce micronuclei in mice in vivo. Largely positive and some negative results have been obtained in mammalian cells (including human cells) in in vitro experiments. Crystalline silica (form not specified) was not mutagenic to bacteria, with or without metabolic activation.

**IRRITANT MATERIAL:**
Dust generated by the product may cause light irritation of skin, eyes and respiratory tract.

**SYNERGISTIC MATERIALS:**
Tobacco smoke increases the severity of the effects of silica dust on respiratory impairment. Simultaneous exposure to known carcinogens, for example, benzo (a), pyrene, can increase the carcinogenicity of crystalline silica.

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.

**BIODEGRADABILITY:**
This product is not an environmental hazard. This product is not biodegradable, not bioaccumulative and presents no food chain concentration potential.

SECTION XIII. DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL:**
This product is not a hazardous waste. Consult provincial regulations and federal regulations to know disposal methods. This material is not listed by the EPA as hazardous waste according to the RCRA (USA) regulations. No EPA waste numbers are applicable for this product.

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 in the Domestic Substances List (Canada).

**TSCA:**
All constituents of this product are listed on the Toxic Substances Control Act Inventory (TSCA – United States).
SECTION XVI. OTHER INFORMATION

Glossary:

ACGIH: American Conference of Governmental Industrial Hygienists
ANSI: American National Standards Institute
CAS: Chemical Abstract Services
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
LC50: (Lethal concentration50) Concentration of a substance in air that causes death of 50% of a defined animal population
LD50: (Lethal dose50) Single dose of a substance that, when administrated by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.
EPA: Environmental Protection Agency
HMIS: Hazardous Material Information System
NIOSH: National Institute for Occupational Safety and Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety & Health Administration
PEL: Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reorganization Act
TDG: Transportation of Dangerous Goods
TLV: Threshold Limit Value
TWA: Time-weighted average
TSCA: Toxic Substances Control Act
WHMIS: Workplace Hazardous Materials Information System

References:

(1) Material Safety Data Sheet from the supplier.
(3) CHEMINFO (2008) Canadian Centre of Organisational Health and Safety, Hamilton (Ontario) Canada

This MSDS has been prepared by: Michel Galtier
For more information: SOPREMA Canada 1-800-567-1492

The Material Safety Data Sheets of RESISTO Canada are available on Internet at the following site: http://www.resisto.ca

Justification of the update:
• Resisto has been deleted from the product name.
• Addition of the Exposure Limit (TLV-TWA) for talc. (Section II)


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 described herein, we cannot guarantee that these are the only hazards that exist.

Bar Codes:

Aluminium Waterproofing Membrane: 6 23680 66540 8 6 23680 66550 7 6 23680 66555 2 6 23680 66560 6

Basic Waterproofing Membrane: 6 23680 65241 5 6 23680 65242 2

HR Cap Sheet: 6 23680 09100 9 6 23680 09130 6 6 23680 09140 5 6 23680 09150 4

ICF Foundations Waterproofing Membrane: 6 23680 10133 3

"Lastobond" Eaves protection Sheet, Sanded Finish: 6 23680 00166 4 6 23680 00167 1 6 23680 60160 4

Lastobond Pro HTN: 6 23680 10107 4

Lastobond Pro HTS: 6 23680 10108 1

Red Zone (air/water): 6 23680 17727 7 6 23680 17730 7 6 23680 17731 4 6 23680 17732 1 6 23680 17733 8 6 23680 17734 5

Self-Adhesive Waterproofing Membrane  Revision date: May 13, 2008