

## Material Safety Data Sheet Reinforced Bitumen Membranes

### FOREWORD

In compliance with current legislation on substances and mixtures, especially Regulation REACH (EC) N° 1907/2006 and Regulation CLP (EC) N° 1272/2008, the product subject of this documentation is defined an "article".

Unlike suppliers of substances and mixtures, suppliers of articles are not required to provide its customers standardized information<sup>1)</sup>.

The products covered by this document are not subject of issuance of Safety Data Sheet (SDS). However, it seems appropriate, in order to allow a correct use, to provide the following information.

<sup>1)</sup> with the exception of articles that contain SVHC (Substances of Very High Concern) in a concentration above 0.1% weight by weight (w/w), for which information must be provided in accordance with Article 33 of the REACH Regulation.

### SECTION 1: PRODUCT AND PRODUCER IDENTIFICATION

1.1	<b>PRODUCT IDENTIFIER:</b> Waterproofing membrane
1.2	<b>RELEVANT USE:</b> Waterproofing applications (i.e. buildings, roof gardens, bridges, reservoirs, dams, canals, tunnels, transportation infrastructures)
1.3	<b>PRODUCER IDENTIFICATION:</b> Name: IMPER ITALIA SRL Address: Via Atria,8 - 10079 Mappano (TO), Italy E-mail: <a href="mailto:safety@imper.it">safety@imper.it</a>

### SECTION 2: HAZARD IDENTIFICATION

2.1	<b>CLASSIFICATION:</b> The product is not classified as hazardous in accordance with the national regulation (D.Lgs. n. 65/03 and subsequent modifications). When applied, rolls are extended on the surface to be protected; the application may be obtained with hot or cold bonding, with care to correct superimposing of side and top junction space for welding.
2.2	<b>HEALTH RISK:</b> Acute nose and throat irritation are possible during the heat treatment and application of the product, especially in indoor or poorly ventilated environments, due to the inhalation of potentially hazardous substances such as gas and condensed fumes.
2.3	<b>SAFETY RISK:</b> The molten product may adhere to the skin and may cause burns. The presence of inflammable materials (HC vapours, etc.) may cause fire events.
2.4	<b>ENVIRONMENTAL RISKS:</b> Membranes may cause long-term adverse effects because their components are not biodegradable.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1	<b>COMPOSITION:</b> The product consists in a mixture of penetration grade bitumen, polyolefin, and/or elastomer polymer, small aggregates and functional additives when required for product application.
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<b>3.2</b>	<b>INFORMATION ON INGREDIENTS:</b> Bitumen: registration REACH 01-2119498290-34-xxxx and 01-2119480172-44-xxxx, 01-2119498291-32-xxxx; polymers: non-dangerous substances according to REACH definitions. The product does not contain any hazardous components in accordance with the national regulation (D.Lgs. n. 65/03 and subsequent modifications, including REACH 1907/2006 and following).
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## SECTION 4: FIRST AID MEASURES

<b>4.1</b>	<b>INHALATION:</b> In case of long-term inhalation of fumes, particularly in indoor or poorly ventilated environments, move person to fresh air and call for medical assistance.
<b>4.2</b>	<b>SKIN CONTACT:</b> In case of skin contact with molten product, immediately flush skin with plenty of fresh water. Do not pull solidified product away from the skin by using solvents. Remove contaminated clothing immediately and seek immediate medical advice.
<b>4.3</b>	<b>EYE CONTACT:</b> If melt substance has got into eyes, wash out with water for at least 15 minutes and seek immediate medical attention. Do not pull product away from the eye. In case of irritation by fumes wash out with cold water.
<b>4.4</b>	<b>INGESTION:</b> Seek immediate medical attention.

## SECTION 5: FIREFIGHTING MEASURES

<b>5.1</b>	<b>EXTINGUISHING MEDIA:</b> CO <sub>2</sub> , nebulized water, foam, dry chemical. Do not use direct stream of water to extinguish.
<b>5.2</b>	<b>PERSONAL PROTECTION:</b> In the event of fire, use supplied air respirators with universal filter U.P. In the case of indoor or poorly ventilated environments the personnel involved must be equipped with the breathing apparatus

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Not applicable.

## SECTION 7: HANDLING AND STORAGE

<b>7.1</b>	<b>CONDITIONS FOR SAFE STORAGE:</b> Protect material from heat and direct sunlight (temperature 0°- 40°C) and keep away from electrical equipment. Keep rolls in a vertical position and do not stack them. For safe storage follow the specific storage recommendations for this product. It is not necessary to take precautionary measures to prevent the formation of static electricity. Open flames are prohibited. Keep extinguish media available (Point 5).
<b>7.2</b>	<b>PRECAUTIONS FOR SAFE HANDLING:</b> Provide appropriate ventilation when the product is applied in indoor or poorly ventilated environments.
<b>7.3</b>	<b>PRECAUTIONS FOR USE:</b> Membrane applications should follow the “Technical instructions” provided by the manufacturer, according to the principles of good technique and Safety (Clause 8 and ANNEX 1).

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In case of indoor or poorly ventilated applications, use the Personal Protective Equipment (Clause 8). Avoid open flames.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	<p><b>EXPOSURE CONTROLS:</b> Open flame operations involved in installing bitumen-polymer waterproofing membranes may generate the dispersion of potentially hazardous substances. Provide appropriate ventilation when the product is applied indoor or at poorly ventilated environments (Point 2) in order to keep the exposure levels below the required limits (T.L.V.- ACGIH).</p>
8.2	<p><b>PERSONAL PROTECTIVE EQUIPMENT:</b> During product applications, the following personal protective equipment is recommended: Skin protection: appropriate protective gloves; long sleeve shirt (cotton or flame retardant), trousers, safety shoes. Eye protection: safety glasses Foot protection: safety shoes</p> <p>In case of indoor or poorly ventilated indoor applications provide appropriate ventilation (Point 8.1). In case of inadequate ventilation system, use a respiratory protection equipment. The use of particulate filter respirators against solid &amp; liquid particles is recommended (P3 protection).</p>
8.3	<p><b>HYGIENIST MEASURES:</b> Wash hands before every break and after the work shift. Keep work clothes separate from the other clothing.</p>

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM	Membrane rolls
ODOUR	slight bitumen odour
pH	not applicable
BOILING POINT/RANGE	> +470°C ca. (bitumen)
MELTING POINT/RANGE	> +100°C
FLASH POINT	> +230°C ca. (bitumen)
INFLAMMABILITY (solid, gas)	Calorific value 9.000 kcal/kg ca.
AUTOIGNITION TEMPERATURE	> +485°C ca. (bitumen)
EXPLOSIVE PROPERTIES	NO
OXIDIZING PROPERTIES	NO
VAPOUR PRESSURE	not applicable
DENSITY	1±1,5 kg/dm <sup>3</sup>
SOLUBILITY IN WATER	NO
LIPID SOLUBILITY	YES (organic solvents; oils)

### SECTION 10: STABILITY AND REACTIVITY

10.1	<p><b>STABILITY:</b> The product is stable and is not considered to be reactive under normal temperature and pressure.</p>
10.2	<p><b>REACTIVITY:</b> The product is chemically inert.</p>

10.3	<p><b>INCOMPATIBLE MATERIALS:</b>          Avoid contacts with oxidizing agents, especially under high temperatures, because the product may have exothermal reactions.</p>
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## SECTION 11: TOXICOLOGICAL INFORMATION

11.1	<p><b>THE PRODUCT:</b>          The product consists in a mixture of distilled bitumen and polyolefin and/or elastomer polymers and reinforcement.          The product does not contain coal tar and asbestos. The product is not classified as hazardous.</p>
11.2	<p><b>INFORMATION ON TOXICOLOGICAL EFFECTS:</b>          The product may be applied in adhesive cold or heat welded. Open flame operations involved in installing bitumen-polymer waterproofing membranes may generate the dispersion of potentially hazardous substances.          The exposure levels to these substances are widely below the normative limits for fumes in metropolitan areas (Source: Bertazzi PA, FOA' V., Fustinoni S., see section 16)</p> <p>Acute health hazards:</p> <ul style="list-style-type: none"> <li>- eye irritation</li> <li>- skin irritation</li> <li>- nose and throat irritation</li> </ul> <p>Repeated long-term exposure needs regular medical examination, in accordance with national regulation (D.L. 25/2002 and DLgs 81/2008 and subsequent modifications)          The product should be applied in accordance with the rules of hygiene, safety and good industrial practice, according to the technical instructions provided by the manufacturer.</p>

## SECTION 12: ECOLOGICAL INFORMATION

The product must be stored and used in accordance with the rules of hygiene, safety and good industrial practice, according to the technical guidance provided by the manufacturer (Point 7)  
 Dispose of this product according to national regulations, in order to avoid environmental pollution (Point 13).

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of this product according to national regulations, in order to avoid environmental pollution (Point 13).

The product is classified as non-hazardous special waste in accordance with national regulations (D.Lgs 152/2006 and subsequent modifications).

The waste must be managed according to local legislation. Manufacturers suggest following waste code:

EER 17 03 02: bituminous mixes different from those at EER 170301 or  
 EER 17 06 04: insulation materials different from EER 17 06 01 and 17 06 03  
 CER Code 17 09 04: "mixed waste from construction or demolition activities other than those mentioned in items 17 09 01, 17 09 02 and 17 09 03"

The coding of the waste is in any case always the responsibility of the manufacturer of the same, as well as the correct identification of the waste treatment plant to which the waste is to be sent (or authorized to receive).

The membranes do not contain tar, asbestos and oxidized bitumen.

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### SECTION 14: TRANSPORT INFORMATION

No special transportation or shipping requirements.

### SECTION 15: REGULATORY INFORMATION

15.1	<b>LABEL:</b> no labelling required H - Phrases: not applicable (or hazard statements) P - Phrases: not applicable (or precautionary statements)
15.2	<b>EUROPEAN REGULATION:</b> Directive 67/548/CEE, Directive 1999/45/CE, Directive 91/155/CEE and subsequent modifications and integrations) Directive 92/32/CEE, Directive 93/67/CEE Regulation 793/93, Regulation 1488/94, Directive 98/24/CE, Directive 2001/60/CE, Directive 2004/73/CEE, Regulation (CE) n. 1907/2006 (REACH), Directive 2008/98/CE, Regulation EU 830/2015, May 20 <sup>th</sup> , 2015. Regulation EU 997/2018.
15.3	<b>ITALIAN REGULATION:</b> D.Lgs. 14 marzo 2003, n. 65; DPR 9 giugno 1975 n. 482, DPR 13 aprile 1994, n. 336, D.Lgs. 2 febbraio 2002 n. 25, D.Lgs. 3 febbraio 1997 n. 52; D.Lgs n° 285/98; D.lgs 152/2006, D.Lgs. n. 81/2008; D.lgs. n. 106/2009 and subsequent modifications.
This safety Information data sheet includes the following 16 headings in accordance with Annex II of COMMISSION REGULATION (EU) No 830/2015, May 20 <sup>th</sup> , 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).	

### SECTION 16: OTHER INFORMATION

#### Main References:

- Istituto Superiore di Sanità - Prot. 30189/TOA6 del 10 ottobre 1997 "Classificazione di pericolosità del bitume e del catrame"
- NIOSH Registry of toxic effects of chemical substances SAX Dangerous Properties of industrial materials.
- Bertazzi P.A., Foà V., Fustinoni S., "Esposizione professionale a idrocarburi policiclici aromatici durante la stesura bituminosa", Università degli Studi di Milano, Dipartimento di Medicina del Lavoro, Milano, 2005.
- ACGIH: Threshold Limit Values (TLV) for chemical substances (2008).
- Atti del Convegno su Salute e sicurezza nelle opere di impermeabilizzazione con membrane bituminose, Albino 18 dicembre 2009)

Last update date (Imper Italia)	September 2020
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Moy Materials Ltd version prepared by	Martin Bidewell
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The data contained in this document is correct on date of issue and complete to the best of our knowledge as it applies to this product. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship. The information given does not represent an assurance and it is the user's responsibility to ensure that the information is suitable and complete for the respective use.

## ANNEX I

### TECHNICAL SPECIFICATION CONCERNING MODIFIED BITUMINOUS MEMBRANES APPLICATION

Membrane's application must be performed according to the technical indications in this document and aimed at carrying out the operation according to the principles of good technique and safety criteria. The application of the membrane must be carried out, considering specific principles referred to the following areas:

#### 1. EXPOSURE CONTROL

- **PROTECTION OF RESPIRATORY EQUIPMENT:** avoid working in closed rooms and / or without adequate ventilation: the application of this product indoors must take place in premises equipped with adequate systems for extraction of the vapors generated during the heating operations with the use of the flame.

In case of spaces with insufficient ventilation, use individual respiratory protection consisting of a mask with an AP type filter (for protection against organic vapors, dusts and fumes, spray painting, protection level P3).

- **HAND PROTECTION:** use special protective gloves.
- **EYE PROTECTION:** safety glasses and face shields.
- **SKIN PROTECTION:** wear suitable protective clothing.
- **FOOT PROTECTION:** safety shoes

Implement the health and safety workers standards provided by current legislation.

#### 2. INSTALLATION TEMPERATURE CONTROL

- **TEMPERATURE CHECKING:** in case of flame or hot air laying for membranes with face/s covered with hot melt film, the correct heating temperature is highlighted by the complete shrinkage of the same; in case of talc or sanded surfaces, the blackening and the appearance of a shiny surface indicates a sufficient heating for the adhesion of the surfaces.  
The correct laying procedure is indicated by the width of a stream of molten mixture along the overlap line. The width of molten mixture must not exceed  $1 \div 2$  cm.
- **COLOR OF THE FLAME:** During the laying, the colour of the flame must remain blue, any reddish colorations are indication of excessive heating that must be avoided. Further rework should be avoided as they are harmful for the mixture and for the reinforcement and produce vapors emissions in vain.
- **USE OF THE THERMOMETER:** In the case of melted bitumen laying the use of thermometer allows to control the temperature of the boiler where the bitumen is melted.
- **CHECKING THE FREE FLAMES:** The use of the free flame, if unattended, can constitute a fire hazard. Keep available adequate firefighting systems.