



SAFETY DATA SHEET

REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING

1. PRODUCT AND PRODUCER IDENTIFICATION

1.1 PRODUCT IDENTIFIER: **prefabricated polymer bitumen waterproofing membrane**

1.2 RELEVANT USE: **waterproofing applications**

1.3 PRODUCER IDENTIFICATION :

PLUVITEC S.p.A. Via Quadrelli 67/A 37055 Ronco all'Adige (VR)

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1.4 EMERGENCY TELEPHONE NUMBER: +39 045 6608111

2. HAZARD IDENTIFICATION

2.1 CLASSIFICATION. The product is not classified as hazardous in accordance with the national regulation (D.Lgs. n. 65/03).

2.2 HEALTH RISK. Acute nose and throat irritation may occur during the heat treatment and application of the product, especially in indoor areas, due to the inhalation of potentially hazardous substances such as gas and condensed fumes.

2.3 SAFETY RISK. The molten product may adhere to the skin and may cause burns. The presence of flammable materials (HC vapours, etc.) may cause fire events.

2.4 ENVIRONMENTAL RISKS. Membranes may cause long-term adverse effects because their components are not biodegradable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 COMPOSITION. The product consists in a mixture of penetration grade bitumen, polyolefin and/or elastomer polymers and reinforcement, manufactured in membrane rolls.

3.2 INFORMATION ON INGREDIENTS. The product does not contain any hazardous components in accordance with the national regulation (D.Lgs. n. 65/03).

4. FIRST AID MEASURES

4.1 INHALATION. In case of long-term inhalation of fumes, particularly in indoor areas, move the person towards fresh air area and call for medical assistance.

4.2 SKIN CONTACT. 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.

4.3 EYE CONTACT. If the substance goes into the 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.

4.4 INGESTION. Seek immediate medical attention.

5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING DEVICE: CO₂, nebulized water, foam, dry chemical. Do not use direct stream of water to extinguish.

5.2 PERSONAL PROTECTION. In the event of fire, use supplied air respirators with universal filter U.P.

6. ACCIDENTAL RELEASE MEASURES

Not applicable.



7. HANDLING AND STORAGE

7.1 CONDITIONS FOR SAFE STORAGE. Protect material from heat and direct sunlight (temperature 0 °C - 40 °C) and keep away from electrical equipment. Keep rolls in a vertical position and do not pile 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 device available (Point 5).

7.2 PRECAUTIONS FOR SAFE HANDLING. Provide appropriate ventilation when the product is applied in indoor areas.

7.3 PRECAUTIONS FOR USE. Membrane applications should follow the "Technical instructions" provided by the manufacturer. In case of indoor applications, use the Personal Protective Equipment (Point 8). Avoid open flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 EXPOSURE CONTROLS. Normally the product does not generate hazardous substances. Open flame operations involved in installing bitumen-polymer waterproofing membranes may generate the release by dispersion of potentially hazardous substances, among which the polycyclic aromatic compounds. Provide appropriate ventilation when the product is applied in indoor areas (Point 2) in order to keep the exposure levels below the required limits (T.L.V.- ACGIH).

8.2 PERSONAL PROTECTIVE EQUIPMENT. During product applications, the following personal protective equipment is recommended:

- Skin protection: protective gloves; long sleeve shirt, trousers, safety shoes.
- Eye protection: safety glasses.

In case of 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 & liquid particles is recommended (P3 protection).

8.3 HYGIENIST MEASURES.

- Wash hands before every break and after the work shift.
- Keep work clothes separate from the other clothing.

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)
- INFAMMABILITY (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 ³
- SOLUBILITY IN WATER	NO
- LIPID SOLUBILITY	YES (organic solvents; oils)

10. STABILITY AND REACTIVITY

10.1 STABILITY. The product is stable and is not considered to be reactive under normal temperature and pressure.

10.2 REACTIVITY. The product is chemically inert.

10.3 INCOMPATIBLE MATERIALS. Avoid contacts with oxidizing agents, especially under high temperatures, because the product may have esothermal reactions.



11. TOXICOLOGICAL INFORMATION

11.1 THE PRODUCT. The product consists in a mixture of distilled bitumen, polyolefin and/or elastomer polymers and reinforcement. The product does not contain coal tar or asbestos. The product is not classified as hazardous.

11.2 INFORMATION ON TOXICOLOGICAL EFFECTS. 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, among which polycyclic aromatic compounds. The exposure levels to these substances are widely below the normative limits for IPA fumes in metropolitan areas (Source: Bertazzi PA, FOA' V., Fustinoni S., see section 16).

Acute health hazards:

- eyes irritation
- skin irritation
- nose and throat irritation.

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.

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).

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

No special transportation or shipping requirements.

15. REGULATORY INFORMATION

15.1 LABEL: no labelling required.

R- Phrases: not applicable.

S- Phrases: not applicable.

15.2 EUROPEAN REGULATION: 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.

15.3 ITALIAN REGULATION: D.Lgs. 14 marzo 2003, n. 65; DPR 9 giugno 1975 n. 482, D.Lgs. 5 febbraio 1997 n. 22, 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; DLgs 152/2006, D.Lgs. n. 81/2008; D.lgs. n. 106/2009 and subsequent modifications.

This safety data sheet includes the following 16 headings in accordance with Annex II of COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

16. OTHER INFORMATION

Main sources used to edit this safety data sheet:

- 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 Dangerour Properties of industrial materials.
- Bertazzi P.A., Foà V., Fustinoni S., "Esposizione professionale a idrocarburi policlinici aromatici durante la stesura bituminosa", Università degli Studi di Milano, Dipartimento di Medicina del Lavoro, Milano, 2005.
- ACGIH: Threshold Limit Values (TLV) for chimica substanses (2008).
- Atti del Convegno su Salute e sicurezza nelle opere di impermeabilizzazione con membrane bituminose, Albino 18 dicembre 2009)

The information contained herein is provided in the present state of our knowledge and may be subject to change and/or upgrades. 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 and in accordance with local and European regulations.

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