

SECTION 1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name: RAVATHERM XPS X MK

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Water flow reducing layer

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Quantum Insulation Ltd, Holland House, Valley Way, Rockingham Road

Market Harborough Leicestershire LE16 7PS

T: +44 1858 456018, F: +44 (0) 1858410572, sales@quantuminsulation.com

Further information obtainable from: www.radmat.com

1.4 Emergency telephone number:

During office hours tel: +44 (0) 1858410372. At all other times please contact your national poisoning centre.

SECTION 2 Hazards identification**2.1 Labeling according to EU guidelines:**

This product is not classified as dangerous according to EC criteria.

SECTION 3 Composition/information on ingredients

CAS-No / EC-No / Index No.	EC	Amount	Component	Classification: REGULATION (EC) No 1272/2008
9002-88-4	Polymer	>= 99.0 %	Ethene, homopolymer#	Not Classified

Voluntarily disclosed component(s).

SECTION 4 First aid measures**4.1 Description of first aid measures**

After eye contact: No emergency medical treatment necessary.

After inhalation: Move person to fresh air; if effects occur, consult a physician.

After skin contact: No emergency medical treatment necessary.

After ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 Firefighting measures

5.1 Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

5.2 Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

5.3 Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

5.4 Unusual Fire and Explosion Hazards: Dense smoke is emitted when burned without sufficient oxygen.

5.5 Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Nitrogen oxides.

SECTION 6 Accidental release measures**6.1 Steps to be taken if Material is Released or Spilled:**

Recover spilled material if possible. See Section 13, Disposal Considerations, for additional information.

6.2 Personal precautions:

There are no special required instructions.

6.3 Environmental precautions:

There are no special required instructions.

SECTION 7 Handling and storage**7.1 Precautions for safe handling**

General Handling: Do not handle or store near an open flame, heat, or sources of ignition.

7.2 Storage

Store in accordance with good manufacturing practices. Store in a cool, dry place.

SECTION 8 Exposure controls/personal protection**8.1 Exposure limits.**

None established.

8.2 Personal Protection**Eye/face protection:**

Eye protection should not be necessary. For fabrication operations safety glasses (with side shields) are recommended.



Protective goggles

Skin protection:

No precautions other than clean body-covering clothing should be needed.

Hand Protection:

Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Respiratory protection:

For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C) The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Ingestion:

No precautions necessary due to the physical properties of the material.

Engineering controls:

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

SECTION 9 Physical and chemical properties
9.1 Information on basic physical and chemical properties

GENERAL INFORMATION	
Physical state	Fabric
Colour	Blue
Odour	Odourless
Flash point - closed cup	Not applicable
Flammable limits in air lower	Not applicable
Auto-ignition temperature	330 -350 °C <i>Literature</i>
Vapour pressure	Not applicable
Boiling point (760 mmHg)	Not applicable
Vapour density (air = 1)	Not applicable
Specific Gravity (H ₂ O = 1)	Not applicable
Solid Density	0.955 g/cm ³ <i>Literature</i>
Freezing point	Not applicable
Melting point	135 °C <i>Literature</i>
Solubility in water (by weight)	Insoluble in water
pH	Not applicable
Decomposition temperature	No test data available
Partition coefficient: n-octanol/water log <i>pow</i>	No data available for this product
Kinematic viscosity	Not applicable

SECTION 10 Stability and reactivity
10.1 Stability/Instability

Stable.

10.2 Conditions to avoid

Exposure to elevated temperatures can cause product to decompose.

10.3 Incompatible materials

None known.

10.4 Hazardous polymerization

Will not occur.

10.5 Thermal decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials

Decomposition products can include and are not limited to: Aldehydes. Alcohols. Organic acids.

Decomposition products can include trace amounts of: Hydrocarbons.

SECTION 11 Toxicological information**11.1 Acute toxicity**

Ingestion: Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking or blockage of the digestive tract if swallowed.

Dermal: Skin absorption is unlikely due to physical properties.

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. Thermal degradation of the film may produce vapors which may cause respiratory irritation.

Eye damage/irritation: Eye contact is unlikely due to the physical state

Skin corrosion/irritation: Essentially nonirritating to skin.

Respiratory or skin sensitisation: No relevant data found

Repeated Dose Toxicity: Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

SECTION 12 Ecological information**ENVIRONMENTAL FATE****12.2 Movement & Partitioning**

No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil where it may be subject to wind dispersion. In the aquatic environment, materials with a specific gravity > 1 will sink and remain in the sediment, while those with a specific gravity <= 1 are expected to float.

12.2 Persistence and degradability

This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY

Not expected to be acutely toxic to aquatic organisms

SECTION 13 Disposal considerations**13.1 Waste treatment methods**

All efforts to recycle material should be made. This material may be disposed of preferably by incineration under approved conditions or, in some countries, in approved landfills. Customers are advised to check their local legislation governing the disposal of waste materials.

SECTION 14 Transport information

Road and Rail: Not regulated

Ocean: Not regulated

Air: Not regulated

Inland waterways: Not regulated

SECTION 15 Regulatory information**15.1 European Inventory of Existing Commercial Chemical Substances (EINECS)**

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

15.2 EC Classification and User Label Information

This product is not classified as dangerous according to EC criteria.

SECTION 16 Other information**Revision**

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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