

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Generic product name: Insulation material consisting of stone wool based mineral fibres (man-made vitreous (silicate) fibres).

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Inert vitreous silicate mineral wool with a small amount of Bakelite (a synthetic thermosetting resin binder) and up to 0.3% mineral oil or up to 0.5% silicone oil or emulsion.

3. HAZARDS

Mineral fibres: Ravatherm mineral fibres have been classified by CE Regulations as Irritant and may cause transient mechanical skin irritation. High dust levels may irritate the throat and eyes.

4. FIRST AID MEASURES

Skin contact: If irritation occurs, wash off under cold running water prior to washing with mild soap. Do not rub or scratch.

Throat: If irritation occurs, clean throat by rinsing with cold, potable water.

Eye contact: If irritation occurs, flush eyes with potable cold water. Do not rub the eyes. Consult a physician if irritation persists.

Binder gases

If eye or respiratory irritation occurs, leave source of contamination and get fresh air. Consult a physician if irritation persists.

5. FIRE FIGHTING MEASURES

The products are non-combustible and do not pose a fire hazard. Pinking may occur at high temperatures. Some facings and packaging materials may burn.

Suitable extinguishing media: Water, foam, carbon dioxide or dry powder.

Extinguishing media that must not be used for safety reasons: None

Combustion products: Carbon dioxide, carbon monoxide and trace gases.

Special protective equipment for fire fighters: Observe normal fire fighting procedures.

6. ACCIDENTAL RELEASE MEASURES

No special measures required.

7. HANDLING AND STORAGE

Handling:

Unpack material at application site to avoid unnecessary handling of product. Keep work areas clean. Dispose of scrap material and debris in suitable containers. Spray with water before sweeping or use vacuum equipment.

Storage:

Keep material in original packaging until it is to be used. Store material to protect against damage including the weather.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Fibres: Workplace exposure limit (WEL) 5mg/m³, 8 hour time weighted average gravimetric measure. If the WEL is likely to be exceeded (for example when using high speed cutting tools or when working in confined spaces) disposable face masks complying with BS EN149 FFP1 or FFP2 should be used and are suitable for most applications.

Initial heating up: When insulation wool is heated to approximately 200°C for the first time(s), release of binder components and binder decomposition products occurs. The fumes can be detected by their acrid odour and high concentrations of these gases may irritate the eyes and respiratory system. In general, decomposition products from pyrolysis or burning of organic material can cause respiratory sensitisation. There are no recorded incidents of respiratory sensitisation from gases released from Ravatherm products. However, general dilution ventilation and/or local exhaust ventilation should be provided as necessary to control exposure to fumes when high temperature appliances are first put into service.

Hand protection: Not normally required but suitable gloves can be worn.

Eye protection: With heavy dust development or when working with product above head height, the use of safety goggles is advised.

Skin protection: No special requirements: loose fitting, long-sleeved, long-legged, work clothes advised. Change clothes and wash on completing work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid, green-brown

Colour: n.a.

pH (at 1000g/H₂O, 25°C): neutral or slightly alkaline (pH7-9)

Boiling point: n.a.

Melting point: above 1000°C. The limiting temperature applicable for use is dependent upon specific product type and intended application and must be taken from the appropriate Ravatherm product data sheet.

Auto-flammability: non combustible ISO 1182

Explosive properties: n.a.

Oxidising properties: n.a. Vapour pressure: n.a.

Fibre density: n.a. Solubility: generally chemically inert and insoluble in water

Partition coefficient: n.a.

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10. STABILITY AND REACTIVITY

Stability: Stable

Reactivity: Not reactive

Thermal decomposition products: When insulation wool is heated to approximately 200°C for the first time(s) binder components and decomposition gases are emitted from the binder. The decomposition starts at approximately 200°C and the duration of release depends on thickness of insulation, binder content and temperature(s) applied.

11. TOXICOLOGICAL INFORMATION

Carcinogenic, mutagenic and reproductive toxic effects: NONE. Human epidemiological studies show no link between exposure to mineral wool fibres and lung disease or any other chronic effects. Owing to their high bio-solubility, the fibre types of Ravatherm insulation materials are assessed as free from suspicion of possible carcinogenic effects in accordance with EU Directive 97/69/EC. This Directive is incorporated into EU health and safety legislation through The Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regulations - known as CHIP.

Other observations: In the case of coarser fibres, there can be physical effects on skin, upper respiratory system (mucous membranes) and eyes that can cause temporary, self-fading effects (eg itching). No chemical effects ensue.

12. ECOLOGICAL INFORMATION

Stable product with no known adverse environmental effects.

13. DISPOSAL CONSIDERATIONS No special precautions.

Hazardous waste regulations: Ravaber insulation is classified as non-hazardous waste. Ravatherm insulation waste is covered by the non-hazardous entry

Landfill regulations: Ravatherm insulation waste is categorized as "waste accepted at landfills for non-hazardous waste".

14. TRANSPORT INFORMATION

No special precautions.

15. REGULATORY INFORMATION

EC Classification: The product contains Mineral Fibres [Man-made vitreous (silicate) fibres]. Danger Symbol - Xi, Irritant. Risk Phrases - Irritating to skin (R:38). Safety Phrases - Wear suitable protective clothing and gloves (S36/37). Ravatherm mineral wool is not classified as a possible carcinogen, ref. Note Q of EU Directive 97/69/EC and HSE "CHIP" regulations.

Exposure Limits: Recommended workplace exposure limit (WEL) 5 mg/m³, 8 hour time weighted average gravimetric measure

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16. FURTHER INFORMATION

Health and Safety Executive Guidance Note EH40 – Occupational Exposure Limits

- Health and Safety Commission “The Chemicals (Hazard Information and Packaging for Supply) Regulations” - „CHIP”
- Hazardous Waste Regulations
- List of Wastes/ European Waste Catalogue (EWC) • Environment Agency Technical Guidance WM2, “Interpretation of the definition and classification of hazardous waste” • Landfill Regulations • Eurisol Health Statement

This information reflects typical values and is not a product specification. No warranty expressed or implied is hereby made. This materials safety data sheet does not constitute an assessment of workplace risk.