

MATERIAL SAFETY DATA SHEET

Product name: **TERVOL[®] mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 1 of 7

Date of issue: May 2007

Date of issue: October 2007

1

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND SUPPLIER:

Identification of the substance/Preparation: **TERVOL mineral wool insulating material**

Supplier: **Knauf Insulation, d.d. Škofja Loka
Trata 32
4220 Škofja loka**

Phone: +386 (0)4 5114000

Fax: +386 (0)4 5114108

Emergency phone no.: Notification center
Phone: **112**

2. COMPOSITION / INFORMATION ON DANGEROUS INGREDIENTS:

Vitreous silicate fibers produced under process conditions (as stone wool in a concentration of 96-100 % (weight) with or without duromere synthetic resins and with or without the addition of mineral oil.

INDEX-No.: 650-016-00-2 (mineral fibers)

EINECS-No.: not applicable

CAS-No.: not applicable

CLASSIFICATION: -

Risk phrases: -

3. HAZARDS IDENTIFICATION:

Health and environmental hazards: -

4. FIRST AID MEASURES

Inhalation: not applicable

Skin contact: Wash thoroughly with water or soapy water. In case of allergy consult your physician.

Eye contact: Treat in the same way as any foreign body in the eye. Don't rub your eyes and irrigate copiously with clean, fresh water.

MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 2 of 7

Date of issue: May 2007

Date of issue: October 2007

2

Ingestion: not applicable

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Mineral fibers are incombustible. At temperatures above 500 °C the binder contained in the product starts to burn. Extinguish by using common extinguishing methods.

Unsuitable extinguishing media: not applicable

Special hazards jeopardizing persons involved in firefighting activities:
not applicable

Special protective equipment for firemen: not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal protective measures: In case of high dust levels in the working environment use the protective equipment described in section 8.

Measures to protect the environment: not applicable

Cleaning measures after accidental releases:
Clean with an industrial vacuum cleaner.

7. HANDLING AND STORAGE OF DANGEROUS SUBSTANCE / PREPARATION

Instructions for safe handling: Factory-packed insulation material should only be unpacked on site where it is being used.
Do not sweep up spilled dust or blow it away with compressed air.
Clean with an industrial vacuum cleaner.
Provide the necessary ventilation on the building site.
Carefully remove old insulation material.
Use tools that do not rise so much dust.

Storage: Insulation material should be stored in a roofed, dry warehouse.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Maximum workplace concentrations:

MATERIAL SAFETY DATA SHEETProduct name: **TERVOL® mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 3 of 7

Date of issue: May 2007

Date of issue: October 2007

3

500.000 fibers/m³

(MAK Values according to TRGS 900)

Respiratory protection: Use P2 breathing-protection masks particularly in areas with high dust levels (e.g. when removing insulation material exposed to high temperatures or in tight, poorly ventilated rooms).

Hand protection: Wear protective gloves.

Eye protection: In areas with high dust concentrations and when completing work above head height, use tight-fitting protective goggles.

Protective clothing: Wear loose-fitting, buttoned work clothing, not irritating to the skin. In case of sensitive skin use greasy protective face cream.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Yellow-grey material in solid physical state.

Odour: n.a.

pH (at 100 g/l H₂O): 7-8 (at 25°C)

Boiling temperature/range: not applicable

Melting point/range: 800 - 1100°C (mineral fibers)

Inflammability: In view of the required European tests:
EN ISO 1182 (incombustibility test in a conical furnace),
EN ISO 1716 (calorimetric test)
EN 13823 (SBI test -single burning item)
According to Euroclasses (classes of reaction to fire), the Tervol product has been attributed to Euroclass A1.
This means that Tervol has been classified as incombustible.

Flash point: not applicable

Ignitability: not applicable

Self-ignitability: not applicable

MATERIAL SAFETY DATA SHEETProduct name: **TERVOL® mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 4 of 7

Date of issue: May 2007

Date of issue: October 2007

4

Explosive properties: The material has no explosive properties.

Oxidation properties: The material has no oxidation properties.

Vapour pressure: $< 10^{-3}$ mbar (at 25°C)

Relative density: various, depending on type of product (20-200kg/m³)

Solubility: -in water not applicable
- in fat not applicable

Other data: -

10. STABILITY AND REACTIVITY

Thermal decomposition: Formation of gases (unbound, free components of Duromere binder) in small ppm concentrations at first temperature increase above 200 °C.
Full decomposition of binder at temperatures above 500 °C.

Dangerous reactions: none

Dangerous decomposition products: none

Other data: -

11. TOXICOLOGICAL INFORMATION:

Acute toxicity (LD 50/LC 50): not applicable

Effects after a long standing exposition: not applicable

Knowledge from practical application: If properly used, no effects detrimental to health could be noticed during the observations up to the present.

Cancerogeneous effects:

FRAUNHOFER Institut
Toxikologie und Aerosolforschung

MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 5 of 7

Date of issue: May 2007

Date of issue: October 2007

5

Zertifikat zur Faserpersistenz (Prüfungs-Nr.: 02G98028) Certificate of fiber persistence (Test No. 02G98028)

The test was performed according to the applicable EU protocol (ECB/TM/27, rev. 7, 1998) by means of an intratracheal instillation of fibrous material in animals: 7

WHO-fiber fraction (length > 20 µm, L/D > 3/1): 28 days (95% confidence interval 16-40 days)

Acc. to Enclosure No. 1 point 6, Note Q (Rules on the classification, packaging and labelling of dangerous substances, Official Gazette of the RS, No. 101/02) the classification as cancer-generating material is not necessarily prescribed, if the results of a short-duration test of intratracheal biopersistence show a half-life time of fibers longer than 20 µm being shorter than 40 days.

Other data: -

12. ECOTOXICOLOGICAL INFORMATION:

Stable product with no known adverse environmental effects.

13. DISPOSAL CONSIDERATIONS

Waste material: Waste material should be disposed of in accordance with Rules on the management of waste (Official gazette of the RS, Nos. 84/98, 45/00, 20/01, 13/03) and Regulation on the landfill of waste (Ur. I. RS, št. 32/06)..

Non-hazardous entry: 101299 »wastes not otherwise specified – waste stone wool«.

Recycling of waste materials: Waste mineral wool can be recycled by the manufacturer.

Packaging of waste materials: Packaging of waste material should be disposed of in accordance with Rules on the management of waste (Official gazette of the RS, Nos. 84/98, 45/00, 20/01, 13/03). Packaging material can be recycled.

14. TRANSPORT INFORMATION

Overland transportation ARD/RID/GGVS/GGVE

MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**
Replaces issue No.: 4
Date of issue: May 2007

Revision no.: 5
Date of issue: October 2007

Page 6 of 7
6

Class: not applicable
Number: not applicable
UN-No.: not applicable
Designation of goods: TERVOL

Maritime transportation IMDG/GGVSEE

Class: not applicable
UN-No.: not applicable
Packaging group: not applicable
EMS-No.: not applicable
MFAG: not applicable

Air transportation:

Class: not applicable
UND/ID-No.: not applicable
Packaging group: not applicable
Correct technical name: stone wool insulating material
Other data: -

15. REGULATORY INFORMATION:

INDEX-No.: 650-016-00-2

Classification: -

Designation: -

Symbols: -

R phrases: -

S phrases: -

According to EU Directives, designation of bonded (polymerised) stone wool products is not mandatory.

16. FURTHER INFORMATION:

The document has been harmonized with EU Directives 91/155, 93/112 and 2000/58/EC.

Data and classifications with regard to EU Directive 67/548/EC and its revision 97/69/EC; IARC Monograph, Volume 81: Man-made vitreous fibres.

MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**

Replaces issue No.: 4

Revision no.: 5

Page 7 of 7

Date of issue: May 2007

Date of issue: October 2007

7

According to European regulation, material complying with Note Q of EU Directive 97/69/EC is not classified as a possible carcinogen. Note Q ensures high biosolubility which is being measured twice in a year by testing the prescribed chemical composition of fibres. The test is performed by the certified Fraunhofer Institut für Silicatiforschung (RAL quality mark).

This Material Safety Data Sheet has been prepared by Knauf Insulation, d.d. as a result of our current knowledge and experience. Information in this Material Safety Data Sheet serve as guidance for safe handling, storage, transport and disposal of material and is not a product specification. No warranty expressed or implied is hereby made.



MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**
Replaces issue No.: 4
Date of issue: May 2007

Revision no.: 5
Date of issue: October 2007

Page 8 of 7
8



MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**
Replaces issue No.: 4
Date of issue: May 2007

Revision no.: 5
Date of issue: October 2007

Page 9 of 7
9



MATERIAL SAFETY DATA SHEET

Product name: **TERVOL® mineral wool insulation material**
Replaces issue No.: 4
Date of issue: May 2007

Revision no.: 5
Date of issue: October 2007

Page 10 of 7
10