



R-DTI ducting thermal insulation

1. Identification of the substance/mixture and of the company

1.1 Product identifier

SIDERISE R-DTI thermal insulation.

1.2 Relevant identified uses of the substance

Thermal insulation composite for the insulation of ducts and services.

1.3 Details of the supplier of the safety data sheet

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Data for inner layer

(Please also refer to data for outer layer.)

2. Hazards identification

2.1 Label elements

2.1.1 Globally Harmonized System, EU (GHS)

This product does not require a hazard warning label in accordance with GHS.

2.1.2 According to Directive 67/548/EEC or 1999/45/EC

The product does not require a hazard warning label in accordance with EC Directives.

2.2 Classification of the substance or mixture

2.2.1 According to Regulation (EC) No 1272/2008 [CLP]

No need for classification according to GHS criteria for this product.

2.2.2 According to Directive 67/548/EEC or 1999/45/EC

No particular hazards known.

2.3 Other hazards - According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/Information on ingredients

3.1 Identification of substance or preparation

Polymer based on: melamine resin.

4. First aid measures

4.1 Description of first aid measures

Remove contaminated clothing.

4.1.1 Inhalation

No hazards anticipated. If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

4.1.2 Skin

Wash thoroughly with soap and water. Consult a doctor if skin irritation persists.

4.1.3 Eye

If difficulties occur: Wash affected eyes for at least 15 minutes under running water with eyelids held open. If symptoms persist, seek medical advice.

4.1.4 Ingestion

Rinse mouth and then drink plenty of water. If difficulties occur: Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 Symptoms

No reaction of the human body to the product known.

4.2.2 Hazards

No hazard is expected under intended use and appropriate handling.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire fighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Water spray, foam, dry powder, carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following products can be emitted: carbon monoxide, carbon dioxide, formaldehyde...%, fumes/smoke, carbon black, toxic gases/vapours
Formation of further decomposition and oxidation products depends upon the fire conditions.

5.3 Advice for firefighters

Special protective equipment:
Wear a self-contained breathing apparatus.

5.4 Further information

The degree of risk is governed by the burning substance and the fire conditions. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid skin contact and inhalation of dust/aerosol.

6.2 Environmental precautions

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

7. Handling and storage

7.1 Precautions for safe handling

Protect against moisture. Avoid dust formation. Processing machines must be fitted with local exhaust ventilation. Ensure thorough ventilation of stores and work areas.

7.2 Conditions for safe storage, including any incompatibilities

May be kept indefinitely if stored properly. Protect against moisture.

7.3 Information about protection against explosions and fires

No special precautions necessary.

7.4 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure controls / personal protection

8.1 Control parameters

Components with workplace control parameters 50-00-0: formaldehyde...%. The limit values will not be achieved if the product is processed properly and suitable ventilation is provided.

8.2 Exposure controls

8.2.1 Individual protection measures, such as personal protective equipment

■ Eye protection

Required when there is a risk of eye contact. Safety glasses.

■ Respiratory protection

Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFPI).

■ Hand protection

Protective gloves against mechanical risks (EN 388).

■ Body protection

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

8.2.2 General safety and hygiene measures

No special measures necessary if stored and handled correctly. Handle in accordance with good industrial hygiene and safety practice. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) **Appearance:** Blocks, foam material, sheets.
- b) **Colour:** Various; depending upon colourant.
- c) **Odour:** Odourless.
- d) **Odour threshold:** Not determined.
- e) **pH value:** Not applicable.
- f) **Melting point:** The substance / product decomposes therefore not determined.
- g) **Boiling range:** The substance / product decomposes therefore not determined.
- h) **Flash point:** The substance / product decomposes therefore not determined.
- i) **Evaporation rate:** Not applicable. The product is a non-volatile solid.
- j) **Flammability:** Not highly flammable.
- k) **Lower explosion limit:** As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
- l) **Upper explosion limit:** As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
- m) **Ignition temperature:** > 580°C (ASTM D1929)
- n) **Vapour pressure:** Not applicable.
- o) **Density:** Approx. 4 - 12 g/l (20°C, 1,013 hPa).
- p) **Relative density:** Approx. 0.004 - 0.012 (20°C, 1,013 hPa).
- q) **Relative vapour density (air):** Not applicable. The product is a non-volatile solid.
- r) **Solubility in water:** Not soluble (20°C, 1,013 hPa).
- s) **Self ignition:** Not self-igniting.
- t) **Thermal decomposition:** > 350°C

u) **Explosion hazard:** Not explosive.

v) **Fire promoting properties:** Not fire-propagating.

9.2 Other information: The product can absorb 100 times its own weight.

a) **Classification of reaction to fire:** B1 (DIN 4102-1)

b) **Bulk density:** Not applicable.

10. Stability and reactivity

10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2 Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3 Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.

10.4 Conditions to avoid

Avoid humidity.

10.5 Incompatible materials

Substances to avoid: Strong acids, strong oxidizing agents, Halogens/ halogenation agents.

10.6 Hazardous decomposition products

Possible decomposition products: At prolonged and/or strong thermal stressing above the decomposition temperature dangerous decomposition products can be formed.

11. Toxicological information

11.1 Information on toxicological effects

a) **Acute toxicity:** Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg

b) Irritation: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

c) Respiratory/skin sensitization: There is no evidence of a skin-sensitizing potential. A sensitizing effect on particularly sensitive individuals cannot be excluded.

d) Germ cell mutagenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

e) Carcinogenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. There is no formation of respirable dust during intended uses. However, if dust formation occurs at processing/finishing processing steps like regranulation, mechanical machining (for example drilling, grinding etc.), occupational protection regulations have to be considered.

f) Reproductive toxicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

g) Repeated dose toxicity and Specific target organ toxicity (repeated exposure): Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

h) Other relevant toxicity information: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

12. Ecological information

12.1 Toxicity

Assessment of aquatic toxicity: There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the structure of the product.

12.2 Persistence and degradability

Assessment biodegradation and elimination (H₂O): The polymer component of the product is poorly biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.

In accordance with the required stability the product is not readily biodegradable. The product has not been tested. The statement has been derived from the structure of the product.

12.3 Bio-accumulative potential

Because of the product's consistency and low water solubility, bioavailability is improbable.

12.4 Mobility (and other compartments if available)

Assessment transport between environmental compartments: Study scientifically not justified.

12.5 Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (persistent/bioaccumulative/toxic) or vPvB (very persistent/very bioaccumulative).

12.6 Additional information

Add. remarks environm. fate & pathway: Due to the consistency of the product, dispersion into the environment is impossible. Therefore no negative effects on the environment may be anticipated based on the present state of knowledge.

13. Disposal considerations

13.1 Waste treatment methods

Check for possible recycling. Observe national and local legal requirements.

13.2 Packaging

Contaminated packaging: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product. Completely emptied packagings can be given for recycling.

14. Transportation

14.1 Land transport

ADR: Not classified as a dangerous good under transport regulations.

RID: Not classified as a dangerous good under transport regulations.

14.2 Inland waterway transport

ADN: Not classified as a dangerous good under transport regulations.

14.3 Sea transport

IMDG: Not classified as a dangerous good under transport regulations.

14.4 Air transport

IATA/ICAO: Not classified as a dangerous good under transport regulations.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

None specified.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2 Chemical safety assessment

A safety data sheet for this product is legally not required and is provided by us just as a courtesy to our customers.

Product is not classified as hazardous.

Chemical Safety Assessment not required.

15.3 Important notice

The information included in the Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.

No liability will be accepted (except as by specified by law) for use of information taken from this safety data sheet. It is the responsibility of the user of this product to observe the rules and regulations.

16. Other information

16.1 Standard information

In addition to the information given in the safety data sheet we refer to the product specific 'Technical Information'. The product does not contain recycled material.

16.2 Additional information

This Safety Data Sheet refers specifically to the products listed and can not be used for other products.

Data for outer layer

(Please also refer to data for inner layer.)

1. Identification of the substance/mixture and of the company

See page 1.

2. Hazards identification

2.1 Label elements

This product has been evaluated according to the criteria determined in the regulations and does not need any caution labelling when used appropriately. When applied in accordance with regulations there are no risks known for the user. The classification is based on the current legal regulations for dangerous goods as well as information of the preliminary supplier.

2.2 Main hazards

In case of fire toxic gases may be generated. The decomposition of polymeres (plastic material content) begins at temperatures of more than 300°C and smoke flames may occur. Additionally:

- Vapours of the heated material may cause irritation of the respiratory tract, cough or lacrimation.
- Respirable dust may irritate the outer eye and the skin after longer exposure.
- Contact with the heated material may cause flash burn.
- Contact with the edges of fast moving rolls may cause cut-wounds.
- Lying or standing rolls have to be secured against unintentional movement.
- Consider the weight of the rolls when using lifting devices or transport means.

3. Composition/Information on ingredients

3.1 Identification of substance or preparation

Composite material made from: Aluminium foil / aluminium band (up to 0.25 mm) Polyethylene Glas filament yarn with polyvinyl alcohol as binder.

3.2 Representative hazardous substances for health or environment

Polyethylene CAS 9002-88-4

content : 5-25%

Polyvinyl alcohol CAS 9002-89-5

content : < 5%

For wording of the S-clauses see Regulatory Information.

3.3 Identification number(s)

Not applicable.

4. First aid measures

4.1 Description of first aid measures

In case of disturbance of health please consult a doctor.

4.1.1 Inhalation

After inhalation of vapours of the heated material leave the sphere of influence and lead affected person into fresh air. In case the symptoms remain, please consult a physician.

4.1.2 Skin

In case of skin burns caused by contact with hot material cool skin immediately with plenty of cold water. Do not remove adherent polymer from skin or clothes but flush immediately with cold water.

Skin burns need to be treated by a physician immediately. Secure sufficient treatment of cut wounds.

In case of skin irritation caused by particles thoroughly wash the affected skin with a mild cleansing agent and water. In case the symptoms remain, please consult a physician.

4.1.3 Eye

Flush the eye immediately with plenty of cold water for 15 minutes holding eyelids apart. In case of lasting eye irritation or redness consult an ophthalmologist. In case of particles having entered into the eye, consult an ophthalmologist.

4.1.4 Ingestion

Rinse mouth with water; no remarkable hazards to expect. In case of any symptoms consult a physician and present this safety data sheet.

4.1.5 Information to physician

No information available.

5. Fire fighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Water spray jet; foam; extinguishing powder or carbon dioxide. Co-ordinate fire-fighting measures to the fire surroundings.

5.1.2 Unsuitable extinguishing media

Do not use full water jet to avoid spreading the flames. No use of water in the near surroundings of activated electric installations.

5.2 Special hazards arising from the substance or mixture

In case of fire hazardous vapours and gases may be liberated: carbon monoxide; carbon dioxide and small amounts of aldehydes, ketones, organic acids or hydrocarbons. In case of incomplete combustion smoke and carbon particles may be liberated.

In case of fire liberation of hazardous gases, amongst others hydrogen bromide (over 350°C).

5.3 Advice for firefighters

Special protective equipment:

Wear full protective clothing and self-contained breathing apparatus.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Special danger of slipping caused by loose composite material parts on the ground. Avoid generation of dust.

6.2 Environmental precautions

Take up loose composite material parts mechanically and dispose of according to local regulations. In case greater amounts of the material have entered open water or public or other wastewater systems, remove material mechanically. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Remove mechanically and place in appropriate containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid heating over 300°C during heat sealing. Use local exhaust ventilation over the working area. Do not breathe smoke or vapours liberated by the melted material.

Use appropriate lifting devices or industrial trucks when handling the rolls or pallets.

7.2 Conditions for safe storage, including any incompatibilities

Main hazards are slipping rolls or pallets and fork-lift movements which can injure personnel.

Store at room temperature and in dry, well-ventilated area. Avoid condensation of air moisture. Do not store near to highly inflammable material. Keep away from sources of ignition. Keep away from direct sunlight.

8. Exposure controls / personal protection

8.1 Control parameters

Secure sufficient exhaust and ventilation at the working place. Do not exceed general dust limit of 3 mg/m³ in 8 h.

8.2 Exposure controls

The components are not subject to any occupational exposure control when used properly.

8.2.1 Individual protection measures, such as personal protective equipment

■ Eye protection

In case of possible hazards by dust, material parts or overheated polyethylene, safety glasses should be worn.

■ Respiratory protection

To avoid the risk of over-exposure to vapours and smoke during handling the product, e. g. hot-sealing, use a local exhaust device and assure sufficient ventilation.

■ Hand protection

Direct contact with composite material does generally not cause skin irritation. In case contact with heated surfaces during use of composite material cannot be avoided in the process, wear heat-resistant gloves.

■ Body protection

Standard: working clothes and safety shoes.

8.2.2 General safety and hygiene measures

Clean dirty clothes by suction not by compressed air. Wash hands after handling the product, before food intake and after work is finished.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) **Appearance:** Solid.

b) **Colour:** Shiny metallic, backside whitish matt with typical stitchbonded structure.

c) **Odour:** No typical odour under normal storage conditions.

d) **Melting point:** Not determinable as composite material.
Melting range between 80°C and 140°C (Polyethylene)
Melting range between 650°C and 660°C (Aluminium foil)
Melting range between 160°C and 240°C (Binder stitchbonded glass).

e) **Flash point:** Over 300°C the polyethylene may decompose and smoke may appear.

f) **Spontaneous combustibility:** Polyethylene-part: over 350°C.

g) **Explosion risk:** Not explosive.

h) **Relative density:** Not determinable as composite material.

Polyethylene: about 920-960kg/m³

Aluminium foil: about 2,700kg/m³

Stitchbonded glass: about 2,000 - 2,500kg/m³

i) **Solubility in water:**

Polyethylene: insoluble

Aluminium foil: insoluble

Stitchbonded glass: not determined

10. Stability and reactivity

10.1 Reactivity

Stable at conventional use and storage.

10.2 Conditions to avoid

Avoid heating on air > 300°C during heat-sealing, danger of liberation of decomposition products.

10.3 Incompatible materials

Highly oxygenating materials.

10.4 Hazardous decomposition products

No spontaneous decomposition under normal storage conditions. Hazardous combustion products may contain carbon monoxide, carbon dioxide and small amounts of aldehydes, ketones, organic acids or hydrocarbons. In case of incomplete combustion smoke and carbon particles may be liberated.

11. Toxicological information

11.1 Information on toxicological effects

a) **Acute toxicity:** No data available for this product. No reports giving indication for acute toxicity.

b) **Practical experience:** No data available.

b) **Additional toxicological information:** No reports on negative long-term effects when used appropriately. No classification according to ordinance on hazardous substances.

12. Ecological information

12.1 Toxicity

No reports on possible toxicity available.

12.2 Persistence and degradability

Not applicable.

12.3 Bio-accumulative potential

Not applicable.

12.4 Mobility (and other compartments if available)

Not applicable.

12.5 Results of PBT assessment

No information available.

12.6 Additional information

The product, as solid composite material, does not have ecotoxicological effects on the environment. The polyethylene part is a water-insoluble, indifferent, nondispersible, solid plastic material. No water-endangering known for aluminium foil and other components. WGK 0 (self-rating).

13. Disposal considerations

13.1 Waste treatment methods

Recycling if possible, otherwise disposal according to local regulations or incineration in appropriate waste incineration plant.

13.2 Packaging

If roll is packed, packaging should be recycled or disposed of following the local regulations.

13.3 Further disposal considerations

Waste code: EAK 150105 - composite packagings.

14. Transportation

14.1 Land transport

ADR: Not classified.
RID: Not classified.
GGVS/GGVE: Not classified.

14.2 Air transport

IATA: Not classified.

14.3 Ocean transport

IMDG: Not classified.
GGVSee: Not classified.

14.4 UN class (product and packaging)

Not classified.

15. Regulatory information

15.1 Note on regulatory information

This Safety Data Sheet corresponds to Preparation regulation (1999/45/EC); substance regulation (67/548/EWG); REACH-VO (1907/2006/EC)

15.2 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2.1 S-phrases

S22 - do not breathe dust
(This information is only valid for the stitchbonded glass part in the product).
S36/37 - wear appropriate protective gloves and protective clothing during work.
(sharp edges and heated product).

15.2.2 National regulations

This product does not have to be labelled according to currently valid

Ordinance on hazardous substances as well as EU regulations.

WGK 0 - not water-endangering.

15.3 Chemical safety assessment

A chemical safety assessment (REACH) of the components contained in this product has not yet been made..

15.4 Important notice

The information included in the Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.

No liability will be accepted (except as by specified by law) for use of information taken from this Safety Data Sheet. It is the responsibility of the user of this product to observe the rules and regulations.

16. Other information

16.1 Additional information

This Safety Data Sheet refers specifically to the products listed and can not be used for other products.

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