

Safety data sheet

according to Regulation (EC) No. 1907/2006 and (EU) 2020/878

Trade name: Therm ISO
Revised on: 26/06/2023
Print date: 26/06/2023

Version: DE 3.0
Replaces version DE 2.1



SCHÄFER

1. Designation of the product and company name

1.1 Name of the product:

Designation on the label / trade name:

Therm ISO

Other designations:

Insulating breaker cores and riser systems,
Silicate bonded moulding

Note:

The product is not subject to registration according to REACH Regulation, Article 2(7).

1.2 Use of the product:

1.2.1 Identified uses:

The product (material) is intended for professional use.
Auxiliaries for the foundry industry, use in the form of finished products

1.2.2 Uses advised against:

Uses outside of the identified uses.
No applications in the private sector.

1.3 Identification of the company:

Supplier (manufacturer / dealer):

For Germany / EU domestic:

GTP Schäfer GmbH
Benzstrasse 15
41515 Grevenbroich
Germany

Email (competent person):

info@gtp-schaefer.de

Contact point for information:

GTP Schäfer GmbH
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41515 Grevenbroich
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1.4 Emergency number:

GTP Schäfer GmbH
Benzstrasse 15
41515 Grevenbroich

Phone: +49 2181 233 94-0 (This number is only available during office hours.)

Mobile: +49 172 2026764

2. Possible hazards

2.1 Classification:

This product (article) contains dangerous substances or mixtures (see chapter 3.2) which, however, are not intended to be released under normal or reasonably foreseeable conditions of use.
The product is not classified as dangerous in the sense of Regulation (EC) No 1272/2008 and does not fall within the scope of this Regulation; there is also insufficient data available for a classification.

2.2 Additional hazard warnings for humans and the environment:

The product may form carbon monoxide/dioxide and soot when it comes into contact with water, acids or alkalis during the casting process or after ignition, depending on the reaction conditions.
Avoid release to the environment in excess of immission control limits for the intended use.
May cause harmful effects if swallowed, inhaled or if in contact with skin.

3. Composition / information on the ingredients:

3.1 Product information:

Description:

Moulding (product) bonded with silicate (potassium and sodium salts of silicic acid) made of hollow spheres (ceramic), silicon dioxide (silica sand) and other fillers.

3.2 Hazardous ingredients:

Chemical name	CAS No.:	EC no.:	INDE X No.:	REACH Reg. no.:	Content (%)	Classification according to Ordinance (EG) 1272/2008			Identification	Safety instructions	Remark
						Signal values	Category	Hazard Notes H-statements			
Silicate:											
Sodium silicate	08/09 /1344	215-687-4	n/a	01-2119448 725-31	≤ 40	Hazard	Met. Corr. 1; Skin Corr. 1B; STOT Single Exp. 3	H290 H314 H335	GHS05 GHS07 GHS05 GHS07	261,262,280, 301+330+331, 303+361+353, 305+351+338	Exists in bound form
Potassium silicate	1312-76-1	215-199-1		01-2119456 888-17		Hazard	Met. Corr. 1; Skin Corr. 1B; STOT Single Exp. 3	H290 H314 H335			

n/a = no information

No hazardous ingredients:

Chemical name	CAS No.:	EC no.:	INDE X No.:	REACH Reg. no.:	Content (%)	Classification according to Ordinance (EG) 1272/2008	Identification	Safety instructions	Remark
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						Signal values	Category	Hazard notices H-statements	Pictogram	P-statements	
Silicon dioxide (quartz sand)	14808-60-7	238-878-4	n/a	01-2120770509-45	≤ 40	n/a	n/a	n/a	n/a	260.270, 314	Exists in bound form
Hollow balls (ceramic)	93924-19-7	300-212-6	n/a	01-2119563688-21	≤ 80	n/a	n/a	n/a	n/a	n/a	Exists in bound form

n/a = no information

3.3 Remark: Classifications not completely written out in this section are listed in chapter 16, as well as safety instructions for the ingredients used.

4. First aid measures:

4.1 General information:

Even if the product (substance) is not classified as dangerous, first aid and medical treatment may be required in case of accidents (e.g. intake) and even if poisoning is suspected.

4.2 In case of inhalation:

After inhalation of large amounts of dust or thermal decomposition products (carbon monoxide/dioxide,) remove the affected person to fresh air and keep calm.

In case of irritation of the respiratory tract / breathing difficulties, consult a doctor immediately.

4.3 In case of contact with the skin:

In case of skin contact, wash thoroughly with plenty of soap and water.

In case of skin reactions, redness or pain, consult a doctor.

4.4 In case of contact with eyes:

In case of contact with eyes (dusts), immediately rinse with running water for 10 to 15 minutes with the eyelids open and consult an ophthalmologist. For contact lens wearers, remove contact lenses immediately and rinse eyes.

If eye irritation occurs, consult an ophthalmologist.

4.5 In case of swallowing:

If large quantities of dust are swallowed or inhaled, have them drink immediately.

Do not induce vomiting.

If swallowed, rinse the mouth with plenty of water (only if the person is conscious) and get medical help immediately.

4.6 Self-protection of the first aider:

When rescuing from a danger area: Pay attention to self-protection!

4.7 Information for the doctor:

Symptoms:

After inhalation of dust:

No acute symptoms expected.

Hazards:

See symptoms

Treatment:

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The following literature sources, as well as other information, can provide information on treatment by a doctor:
IFA-DGUV-Gestis substance database
Kühn / Birett
Treat symptomatically

5. Fire-fighting measures

5.1 Suitable extinguishing agents:

Product (material) is non-flammable, non-inflammable and non-explosive.

5.2 Unsuitable extinguishing agents for safety reasons:

No unsuitable extinguishing media known.

5.3 Special hazards caused by substances or mixtures contained /the product itself, its combustion products or resulting gases:

Thermal decomposition can lead to the release of toxic gases or vapours.
See chapter 2.2

5.4 Special protective equipment for fire fighting:

Use suitable respirator (filter types NO-P2 or combination filter ABEK-P2)
If necessary, wear self-contained breathing apparatus.
Wear suitable personal protective equipment when fighting fires.

5.5 Additional information:

Collect contaminated extinguishing water separately. Do not allow to enter drains, soil or bodies of water.

6. Measures in case of unintentional release:

6.1 Safety measures related to persons:

Avoid contact with eyes, inhalation and ingestion of dusts; dust mask recommended.
Avoid the formation of dust; vacuum up dust without raising dust.

6.2 Environmental protection measures:

Do not allow product or product residues to enter drains, water bodies or soil.
Ensure waste is collected and stored securely in closed containers.

6.3 Procedure for cleaning:

Collect mechanically (avoid the development of dust) and place in suitable containers for disposal.
Alternatively, affected surfaces can also be cleaned with a damp cloth.
Treat the material taken up according to the section Disposal.

6.4 Additional information:

Attention is drawn to the observance of the protective measures in Chapters 7, 8 and 13.

7. Handling and storage:

7.1 Handling:

Only remove the packaging in layers immediately before use.
Observe product information / technical data sheet

7.1.1 Advice for safe handling:

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Only intended use, e.g. in metallurgical processes, is permissible.
Avoid dust formation.
Ensure sufficient ventilation, especially in closed rooms.
The usual precautionary measures when handling chemicals / hazardous substances must be observed.
Wash hands and face thoroughly before breaks and at the end of work.

Safety measures:

Technical measures:

Measures to prevent aerosol and dust formation:

Handle products in a way that avoids abrasion and dust formation (e.g. no pouring handling).

Measures to protect the environment:

Effectively extract any thermal decomposition products that arise and, if necessary, feed them to an exhaust air purification system.

Treat product residues in accordance with legal regulations.

Specific requirements or handling rules:

Do not eat, drink, smoke or have a cold in the workplace.

Wash hands and/or face before breaks and after work.

Keep away from food, drink and animal feed.

Do not inhale dusts and thermal decomposition products.

Only use the product in quantities corresponding to operational requirements.

7.1.2 Information about fire and explosion protection:

Product (material) is non-flammable, non-inflammable and non-explosive.

No special fire protection measures required.

Avoid dust deposits / remove dust deposits regularly.

Observe the usual preventive fire protection measures.

7.2 Storage:

7.2.1 Technical measures and storage conditions:

Store in closed original packaging in a cool, dry and protected place until used.

7.2.2 Packing materials:

Store only in original packaging (cardboard trays).

7.2.3 Requirements for storage rooms and containers:

No special requirements; do not store outside; dry storage.

7.2.4 Notes on storage together:

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Do not store together with:
food and feed

Explosive substances (Storage class 1)

Contaminable substances (storage class 6.2)

Radioactive substances (Storage class 7)

Do not store together with strong acids and alkalis. Store separately from oxidising agents and reducing agents.

Observation of restrictions and requirements for combined storage according to TRGS 509 / TRGS510 with:

Compressed, liquefied or gases dissolved under pressure (storage class 2A)

Aerosol dispensers (storage class 2B)

Flammable liquid or explosive substances (storage class 3A)

Explosive solids (storage class 4.1A)

Substances liable to spontaneous combustion (storage class 4.2)

Substances which, in contact with water, emit flammable gases (storage class 4.3)

Flammable substances (storage class 5.1 B)

Flammable substances containing ammonium nitrate (storage class 5.1 C)

Organic peroxides (Storage class 5.2)

Flammable highly acute toxic substances (cat. 1 and 2) (storage class 6.1A)

Non-flammable highly acute toxic substances (cat. 1 and 2) (storage class 6.1 B)

7.2.5 Further information on storage conditions:

Storage temperature (°C): + 5 to + 30 °C

Rel. Humidity (%): Store dry / protect from moisture

Storage stability: No information

Maximum storage period: Max. recommended storage period is 1 year. Experience has shown that the product can also be used beyond the specified maximum storage period. A warranty for the guaranteed product properties cannot be assumed after the maximum storage period has expired.

Storage class: 13 - Non-flammable solids in non-flammable packaging (according to TRGS 509 / TRGS 510) (recommended)

7.2.6 Specific use:

Recommendation: Observe product information / technical data sheet

8. Limitation and monitoring of exposure / personal protective equipment:

8.1 Exposure limits:

8.1.1 Components with workplace limit values to be monitored or biological limit values:

8.1.1.1 Occupational exposure limits:

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Related to thermal decomposition products / dust emissions

Air limits:

Limit type (country of origin)	Working material	EC no.	CAS no.	Occupational exposure limit		Recommend ed monitoring procedures	Peak limit	Source
Germany	Dust (for dust with a density of 1 g/cm ³)	n/a	n/a	4 mg/m ³ (inhalable aerosol fraction)	0.3 mg/m ³ (alveolar aerosol fraction)	n/a	No exceeding of the level of twice the general dust limit value	DFG

Limit type (country of origin)	Working material	EC no.	CAS no.	Occupational exposure limit		Recommend ed monitoring procedures	Peak limit	Source
				Long-term	Short-term			
Germany	Carbon monoxide	211-128- 3	630-08-0	35 mg/m ³	70 mg/m ³	n/a	15 min, max. 4 times / shift, interval 1 h	DFG
Germany	Carbon dioxide	204-696- 9	124-38-9	9,100 mg/m ³	18,200 mg/m ³	n/a	15 min, max. 4 times / shift, interval 1 h	DFG
No adequate product-related data available.								

n/a = no information

Biological limits:

Limit type (country of origin)	Working material	EC no.	CAS no.	Parameter	Limit value	Test material	Source	Remark
Germany	Carbon monoxide	211-128- 3	630-08-0	CO-Hb	5%	Blood	DFG	at the end of the shift
No adequate product-related data available.								

n/a = no information

8.1.1.2 DNEL- and PNEC values:

DNEL employees				
Exposure route	Duration of action	Endpoint effect	Value	Remark
inhalative / systemic	Long-term	repeated exposure	5.61 mg/m ³	Related to potash and soda silicate
dermal / systemic	Long-term	repeated exposure	1.49-1.59 mg/kg bw/day	Related to potash and soda silicate
inhalative systemic and local	Short-term	repeated exposure	3 mg/m ³	Related to hollow spheres (ceramic)
inhalative local	Long-term	repeated exposure	0.113 mg/m ³	Related to hollow spheres (ceramic)

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No adequate product-related data available.				

DNEL user/consumer				
Exposure route	Duration of action	Endpoint effect	Value	Remark
inhalative / systemic	Long-term	repeated exposure	1.38 mg/m ³	Related to potash and soda silicate
oral / systemic	Long-term	repeated exposure	0.74-0.8 mg/kg bw/day	Related to potash and soda silicate
dermal / systemic	Long-term	repeated exposure	0.74-0.8 mg/kg bw/day	Related to potash and soda silicate
No adequate product-related data available.				

PNEC			
Protection target	Estimation factor for extrapolation	Value	Remark
Freshwater		7.5 mg/L	Related to potash and soda silicate
Seawater		1 mg/L	Related to potash and soda silicate
Sewage treatment plant	1	348 mg/L	Related to potash and soda silicate
Freshwater	50	2 mg/L	Related to hollow spheres (ceramic)
Seawater	500	0.2 mg/L	Related to hollow spheres (ceramic)
Sewage treatment plant	10	100 mg/L	Related to hollow spheres (ceramic)
Soil organisms	1000	333.3 mg/kg soil dw	Related to hollow spheres (ceramic)
No adequate product-related data available.			

bw = body weight (body weight)
dw = dry weight

8.2 Limitation and monitoring of exposure:

8.2.1 Limitation and monitoring of exposure at the workplace:

Product-related measures to avoid exposure:

Only intended , identified use permitted.

Instructional measures to avoid exposure:

Only intended , identified use permitted. Safety instructions for handling the individual components are given in Chapter 16.

Organisational measures to avoid exposure:

Only intended , identified use permitted. It must be determined whether the occupational exposure limits are complied with.

Technical measures to avoid exposure:

See Chapter 7. No additional measures are required.

Technical measures and the use of suitable work processes have priority over the use of personal protective equipment.

Personal protective equipment:

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<u>Respiratory protection:</u>	<p>Normally no personal respiratory protection is required.</p> <p><u>Respiratory protection is required for:</u></p> <p>If technical extraction or ventilation measures are not possible or insufficient, respiratory protection must be worn (thermal decomposition products / dust).</p> <p>Exceedance of the respective occupational exposure limit concentration of thermal decomposition products / dust.</p> <p><u>For riser production:</u></p> <p>Filter unit with filter or blower filter unit type: P2</p> <p><u>Intended use:</u></p> <p>Filter unit with filter or blower filter unit type:</p> <p>Filter types NO-P2 or combination filter ABEK-P2 or fan-assisted respirator (at least TH2P).</p> <p>Self-contained breathing apparatus:</p> <p>Use at concentrations above the application limit of filter devices, at oxygen contents below 17 vol% or in unclear conditions.</p> <p>The wearing time limits according to GefStoffV in connection with the rules for the use of respirators (BGR 190) must be observed.</p>
<u>Hand protection:</u>	<p>Normally no hand protection necessary.</p> <p>The use of water-insoluble skin protection products is recommended.</p> <p><u>In case of frequent hand contact:</u></p> <p>Gloves for protection against mechanical hazards according to DIN EN 388</p> <p>The wearing time limits according to GefStoffV in connection with the rules for the use of protective gloves (BGR 195) must be observed.</p>
<u>Eye protection:</u>	<p>In case of dust accumulation: Dust goggles with side protection (according to EN 166).</p>
<u>Body protection:</u>	<p>Not required. Normal long-sleeved work clothes are sufficient.</p>
<u>Hygiene:</u>	<p>Hands, forearms and face should be washed after handling the product, especially before breaks or at the end of work activities.</p>

8.2.2 Limitation and monitoring of environmental exposure:

Product-related measures to avoid exposure:

No special measures required.

Instructional measures to avoid exposure:

Only handle the product within the scope of its intended use.

Organisational measures to avoid exposure:

Low-dust handling.

Only use the product (material) in the required quantities.

Technical measures to avoid exposure:

Effective extraction of thermal decomposition products at the point of origin.

9. Physical and chemical properties:

9.1 General information

Appearance: Product defined form

State of aggregation:	firm	Colour:	Light to dark grey	Odour:	odourless
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9.2 Important health, safety and environmental information:

May form e.g.CO, CO₂, soot during the casting process.
Health hazardous dust

9.3 Safety-relevant basic data:

	Value	Method	Remark
pH value (20°C):	approx. 6 - 8	DIN 19260	Measurement in aqueous suspension
Melting point / range (°C):	1,200 – 1,600		
Boiling point / range (°C):	Not applicable		
Flash point (°C):	Not applicable		
Ignition temperature (°C):			Product is not self-igniting
Vapour pressure:	Not applicable		Not applicable, as composed of non-volatile inorganic and high molecular weight organic solids
Density (g/cm ³):	800 - 1,200	DIN 51757	
Bulk density (kg/m ³):	Not determined		
Water solubility (20°C in g/l):	Practically insoluble		Solubility of inorganic components to be expected
Partition coefficient n-octanol / water (log Pow):	Not applicable		
Viscosity, dynamic (mPa*s):	Not applicable		Not applicable, as solid
Dust explosion ability:	Product is not dust explosive		
Explosive limits	Not applicable		
Lower:			
Upper:			

10. Stability and reactivity:

10.1 Conditions to avoid:

No particular restrictions known.

10.2 Substances to avoid:

Acids and oxidising agents
See also chapter 7.2.4.

10.3 Hazardous decomposition products:

Carbon monoxide / dioxide
Carbon black
Exposure limit values for individual substances are listed in chapter 8.

11. Toxicological information

11.1 Toxicokinetics, metabolism and distribution:

Human toxicological data:

	Effective dose	Species	Method	Remark
No sufficient, product-related, classification-relevant data available.				

11.2 Acute effects (toxicological effects):

	Effective dose	Species	Method	Remark
Acute oral toxicity	LD ₅₀ : >5,000 mg/kg	Rat	EPA OPPTS 870.1100	Related to potassium silicate

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Acute oral toxicity	LD ₅₀ : 3,400 mg/kg	Rat	OECD 401	Related to sodium silicate
Acute dermal toxicity	LD ₅₀ /24h: > 5,000 mg/kg	Rat	EPA OPPTS 870.1200	Related to potassium silicate
Acute inhalation toxicity:	LC ₅₀ /4h: > 2,060 mg/m ³	Rat	EPA OPPTS 870.1300	Related to potassium silicate
No sufficient, product-related, classification-relevant data available.				

n/a = no information

Specific target organ toxicity (STOT) at single exposure:

No sufficient, product-related, classification-relevant data available.

Irritation and corrosion:

	Exposure duration	Species	Valuation	Method	Remark
Primary irritant effect on the skin	24 / 48 / 72 h and 5 d	Rabbit	Slightly - moderately irritant	OECD 404	Related to potassium silicate
Primary irritant effect on the skin	24 / 48 / 72 h	Rabbit	Corrosive	OECD 404	Related to sodium silicate
Irritation of the eyes	7 d	Rabbit	Slightly irritant	OECD 405	Related to potassium silicate
Irritation of the eyes	4 h	Rabbit	Irritant - strong irritant	FHSA 16	Related to sodium silicate
No sufficient, product-related, classification-relevant data available.					

n/a = no information

Oral toxicity:

No sufficient, product-related, classification-relevant data available.

Dermal toxicity:

Contact with dust causes irritation of the skin and mucous membranes.

Inhalation toxicity:

Inhalation of dusts can lead to irritation of the respiratory tract (nose and throat) and breathing difficulties.

Irritation of the eyes:

No sufficient product-related data available; contact with dust can cause mechanical irritation and injury.

Sensitisation:

In case of contact with the skin: No sufficient, product-related, classification-relevant data available.

In case of inhalation: No sufficient, product-related, classification-relevant data available.

Aspiration hazard:

In case of inhalation: No sufficient, product-related, classification-relevant data available.

Toxicity after repeated exposure (subacute, subchronic, chronic):

No sufficient, product-related, classification-relevant data available.

Sodium silicate showed increased urination and soft stools in rats in a 28-d test according to OECD 407.

Specific target organ toxicity (STOT) in case of repeated exposure:

No sufficient, product-related, classification-relevant data available.

CMR effects (carcinogenic, mutagenic and toxic for reproduction):

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Silicon dioxide (alveolar fraction):

Carcinogenicity: Carcinogen, category 1; carcinogenic and contributing to cancer risk

Silicate:

Carcinogenicity: No data available

In-vitro mutagenicity: Negative (Ames test activated / non-activated; Salmonella typhimurium)
(potassium silicate)
Negative (bacteria test activated / non-activated) (sodium silicate)

In-vivo mutagenicity: No cell changes (mouse) (potassium silicate)
No cell changes (mouse) (sodium silicate)

Germ cell mutagenicity: No data available

Reproductive toxicity: No effects (rat) (potassium silicate)
No specific effects (rat) (sodium silicate)

No sufficient, product-related, classification-relevant data available.

11.3 Experiences from practice

Classification relevant observations: No data available regarding product handling.

Other observations: No data available regarding product handling.

11.4 Information on other hazards / endocrinology:

Observations, information, data on health effects which may be caused by endocrine-disrupting properties are not available with regard to the use of the product.

12. Environment-related information:

12.1 Ecotoxicity:

Aquatic toxicity	Effective dose	Exposure duration	Species	Method	Valuation	Remark
Acute fish toxicity	LC ₀ : >146mg/l	48 h	Fish	DIN 38412 Part 15		Related to potassium silicate
Acute fish toxicity	LC ₅₀ : 3185 mg/l	96 h	Fish	OECD 203		Related to sodium silicate
Acute daphnia toxicity	EC ₀ : > 146 mg/l	24 h	Daphnie	OECD 202		Related to potassium silicate
Acute daphnia toxicity	EC ₅₀ : 1,700 mg/l	48 h	Daphnie	OECD 202		Related to sodium silicate
Acute algal toxicity	EbC ₅₀ : 207 mg/l	72 h	Algae (biomass)	DIN 38412 Part 9		Related to sodium silicate
Acute algal toxicity	ErC ₀ : > 345 mg/l	72 h	Alga (growth)	DIN 38412 Part 9		Related to sodium silicate
No sufficient, product-related, classification-relevant data available.						

n/a = no information

12.2 Mobility:

Known or expected distribution to environmental compartments:

No surface tension or adsorption/desorption data available.

12.3 Bio-accumulative potential:

Due to the inert character of the product (material) (composed of inorganic substances), no data on bioaccumulation potential are available, nor on the individual substances.

12.4 Persistence and degradability:

No sufficient, product-related data available (inorganic product, not affected by degradation)

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12.5 Result of the determination of the PBT properties:

The PBT properties of the substances used were not determined.

12.6 Endocrine disrupting effects on the environment:

No adverse effects known.

12.7 Other harmful effects:

No other adverse effects known.

13. Notes on disposal

13.1 Disposal / waste (product):

Unused product:

Contact manufacturer regarding recycling. Check the possibility of recycling.

Otherwise disposal according to the Closed Substance Cycle Waste Management Act (KrWG): hazardous waste according to § 3 Waste Catalogue Ordinance (AVV).

Consumed product:

Only dispose of completely reacted and cooled product.

Disposal in accordance with the Closed Substance Cycle Waste Management Act (KrWG).

13.2 EAK / AVV waste code:

Suggested list for waste codes/waste designations according to AVV:

Unused product:

10 10 05* casting moulds and sands containing dangerous substances before casting

10 10 06 foundry moulds and sands before casting other than those mentioned in 10 10 05

Consumed product:

10 10 07* casting moulds and sands containing dangerous substances after casting

10 10 08 casting moulds and sands after casting other than those mentioned in 10 10 07

13.3 Packaging:

Non-contaminated and empty packaging can be recycled.

14. Transport information

14.1 Transport hazard classes:

Land transport (ADR (RID)):

Official designation: Not classified for this mode of transport. Hazard label:

Class:

UN number:

Classification code:

Packing group:

Water transport (ADN(R) / IMDG-code):

Official designation: Not classified for this mode of transport. Hazard label:

Class:

UN number:

Classification code:

Packing group:

EmS:

Marine Pollutant:

IMDG Code:

Product is not transported in bulk.

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according to Regulation (EC) No. 1907/2006 and (EU) 2020/878



SCHÄFER

Trade name: Therm ISO
Revised on: 26/06/2023
Print date: 26/06/2023

Version: DE 3.0
Replaces version DE 2.1

Air transport (ICAO-TI / IATA-DGR):

Official designation: Not classified for this mode of transport. Hazard label:
Class: UN number:
Classification code: Packing group:

14.2 Special precautions for the user:

No special precautions regarding transport or movement within or outside the premises
Premises are required.

15. Legislation

15.1 EU Regulations

Chemical safety assessment:

For individual substances in this product, risk assessments were carried out and registration dossiers prepared:

- Risk assessments for the potassium and sodium salts contained in the sodium silicate mixture by the OECD;
- Registration dossiers on Cenospheres and on the potassium and sodium salts contained in the sodium silicate mixture by the European Chemicals Agency (ECHA).

Labelling:

Hazard symbols and hazard designation:

Hazard-determining components for labelling:
H-statements:
P-statements:
Special labelling of certain products:

n/a, as not subject to compulsory labelling
n/a, as not subject to compulsory labelling
n/a, as not subject to compulsory labelling
n/a, as not subject to compulsory labelling

Approval and / or restrictions on use:

Approvals:

No information.

Usage restrictions:

No information.

15.2 National regulations (Germany)

Notes on employment restrictions:

The respective national regulations for the protection of young people at work and the protection of expectant mothers must be observed.

Major Accident Ordinance (12th Federal Immission Control Ordinance (BImSchV)):

As a product, it is not subject to the 12. BImSchV

Water hazard class:

1 hazardous to water (self-classification according to VwVwS not applicable, as it is a product)

Technical Instructions Air (TA-Luft):

The respective emission limit values must be observed:
Total dust, including fine dust: 20 mg/m³
Carbon monoxide: 150 mg/m³

Other regulations, restrictions and prohibition ordinances:

TRGS 900 limit values in the air at the workplace; DFG

16. Other information

16.1 Wording of the H and P statements:

Full text of the H- and P-phrases of the individual components of the product (material) mentioned in chapter 3 as well as abbreviations of the labels of the individual substances mentioned in chapter 2:

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Hazard warnings:

H290: May be corrosive to metals
H314: Causes severe skin burns and eye damage
H335: May irritate the respiratory tract

Safety instructions:

Prevention:

P260 Do not inhale dust, smoke, gas, mist, vapour, aerosol
P261 Avoid inhalation of dust, smoke, gas, mist, vapour, aerosol
P262 Do not get in eyes, on skin or on clothing
P270 Do not eat, drink or smoke after use
P280 Wear protective gloves, clothing, eye protection, face protection

Reaction:

P301+330+331 If swallowed: Rinse out mouth. Do not induce vomiting
P303+361+353 In case of contact with skin (or hair): Immediately remove all soiled, soaked garments.
Wash skin with water, shower.
P305+351+338 In case of contact with the eyes: Rinse gently with water for a few minutes.
Remove any contact lenses if possible. Continue rinsing.
P314 If you feel unwell, seek medical advice

16.2 Training notes:

The employees are to be regularly instructed in accordance with the legal requirements about the scope and the associated hazard.

16.3 Recommended restriction of use:

No private application.

16.4 Further information:

The information in this safety data sheet corresponds to the best of our knowledge at the time of printing. The information is intended to provide points of reference for the safe handling of the product named in this safety data sheet for storage, processing, transport and disposal. The information cannot be transferred to other products. Insofar as the product specified in this safety data sheet is blended, mixed or processed with other materials, or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise.

16.5 Data sources:

- 1.) Current material safety data sheets
- 2.) RIGOLETTO database "Catalogue of substances hazardous to water" Federal Environment Agency (UBA); revision: 11/04/2023
- 3.) TA Air 2021
- 4.) TRGS 900 Technical Rules for Hazardous Substances - Occupational Exposure Limits; revision: 23/06/2022
- 5.) DFG (German Research Foundation) - MAK- and BAT-Werte-Liste, Mitteilungen 58, Wiley-VCH, 2022
- 5.) ECHA/EU - REACH Registration Dossier Potash Water Glass, dated 22.06.2023
- 7.) ECHA/EU - REACH registration dossier sodium silicate, dated 31.03.2023
- 8.) ECHA/EU - REACH Registration Dossier Ashes (residues), cenospheres, (hollow spheres) dated 21.11.2022
- 9.) ECHA/EU - REACH Registration Dossier Silicon Dioxide, dated 27/5/2018
- 10.) OECD/ICCA - SIDS Initial Assessment Report "Soluble Silicates", 2006
- 11.) TRGS 509 Technical rules for hazardous substances - Storage of liquid and solid hazardous substances in stationary containers; dated: 20/07/2022
- 12.) TRGS 510 Technical rules for hazardous substances - Storage of hazardous substances in portable containers; dated: 16/02/2021
- 13.) DGUV I209-095 Dust containing quartz in the foundry industry; dated: 03-2023