

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025
Version: EN 2.2

1. Name of the mixture and company name

1.1 Name of the mixture:

Name on the label/trade name:

CERATEC

Other names:

Bauxite sand

Note:

The mixture is not subject to registration in accordance with REACH Regulation, Article 2(7).

1.2 Use of the mixture:

1.2.1 Identified uses:

The product is intended for professional users.

Auxiliary agent for the foundry industry, blasting agent for surfaces of all kinds²

1.2.2 Uses advised against:

Uses outside the identified uses:

No applications in the private sphere.

1.3 Company name:

Supplier (user/distributor):

For Germany / EU domestic:

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Email (expert):

info@gtp-schaefer.de

Contact point for information:

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Phone: +49 2181 233 94-0

Fax +49 2181 233 94-55

Email: info@gtp-schaefer.de

National contact:

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Phone +49 2181 233 94-0

Fax +49 2181 233 94-55

Email: info@gtp-schaefer.de

1.4 Emergency number:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



Trade name: CERATEC
Revised on: October 6, 2025 **Version:** EN 2.2
Print date: October 6, 2025

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich

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

Mobile +49 0172 / 202 67 64

2. Potential hazards

2.1 **Classification:**

This mixture contains ingredients (see section 3.2) that should not be released under normal or reasonably foreseeable conditions of use.

The mixture is not classified as hazardous within the meaning of Regulation (EC) 1272/2008 and does not fall within the scope of labeling requirements of this regulation; there is also insufficient data available for classification.

2.2 **Additional hazard information for humans and the environment:**

Depending on the reaction conditions, the mixture may form carbon monoxide/dioxide.

During the intended use, release into the environment above the immission control limits must be avoided.

Please refer to the information in the safety data sheet in all cases.

3. Composition/information on ingredients:

3.1 **Information on the mixture:**

Description:

Mixture of aluminum oxide (main component), silicon dioxide (quartz sand), di-iron trioxide, and various mineral oxides as minor components, each with a proportion of < 5% (w/w).

3.2 **Hazardous ingredients:**

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Chemical name	CAS No.:	EC No.:	INDEX No.:	REACH Reg. No.:	Content (%)	Classification according to Regulation (EC) 1272/2008			Labeling Pictogram	Safety instructions P statements	Remarks
						Signal words	Category	Hazard statements H statements			

Non-hazardous ingredients:

Chemical name	CAS No.:	EC No.:	INDEX No.:	REACH Reg. No.:	Content (%)	Classification according to Regulation (EC) 1272/2008			Labeling Pictogram	Safety instructions P statements	Remarks
						Signal words	Category	Hazard statements H statements			
Aluminum oxide	1344-28-1	215-691-6	N/A	01-2119529-248-35	≥ 75	N/A	N/A	N/A	N/A	N/A	Available in bound form
Silicon dioxide (quartz sand)	14808-60-7	238-878-4	N/A	01-2120770-509-45	10	N/A	N/A	N/A	N/A	260, 270, 314	Available in bound form
Di-iron trioxide	1309-37-1	215-168-2	N/A	01-2119457-614-35	< 5	N/A	N/A	N/A	N/A	N/A	Available in bound form
Titanium dioxide	13463-67-7	236-675-5	022-006-002	01-2119489-379-17	2 - 5	N/A	N/A	N/A	N/A	P201, P202, P280, P308+P313	Available in bound form

N/A = no information available

3.3 Note:

The abbreviations not fully explained in this section are listed in Chapter 16, as are safety instructions for the components used.

4. First aid measures:

4.1 General information:

Even if the mixture is not classified as hazardous, first aid and medical treatment may be necessary in the event of accidents (e.g., ingestion).

4.2 After inhalation:

Move the affected person to fresh air and keep them warm and calm.

If breathing is difficult, give oxygen.

If respiratory tract irritation occurs, consult a doctor.

4.3 After skin contact:

No special measures required; washing with soap and water is recommended.

If skin reactions, redness, or pain occur, consult a physician.

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025

Version: EN 2.2

4.4 After eye contact:

In case of contact with eyes (dust), immediately rinse with running water for 10 to 15 minutes with eyelids open. Contact lens wearers should remove their lenses immediately and rinse their eyes.

If eye irritation occurs, consult an ophthalmologist.

4.5 After swallowing:

If swallowed, rinse mouth with plenty of water (only if the person is conscious) and give to drink immediately; seek medical attention.

4.6 Self-protection for the first responder:

When rescuing from a hazardous area: Ensure your own safety!

4.7 Information for the doctor:

Symptoms:

After inhaling dust:

No acute symptoms to be expected.

Treatment:

Information on treatment by a physician can be found in the following literature sources, among others:

IFA-DGUV-Gestis substance database

Kühn / Birett

Treat symptomatically.

5. Firefighting measures

5.1 Suitable extinguishing media:

The mixture is inert, non-combustible, and non-flammable. In case of fire, spray water, foam, or CO₂ are suitable.

Adapt extinguishing measures to the surroundings.

5.2 Extinguishing media unsuitable for safety reasons:

No unsuitable extinguishing media known.

5.3 Special hazards arising from the substances or mixtures contained / the mixture itself, its combustion products or resulting gases:

Thermal decomposition may release toxic gases or vapors.

See also section 2.2

5.4 Special protective equipment for firefighting:

Use suitable respiratory protection (filter types P2/P3 or particle filter device (DIN EN 143))

If necessary, wear self-contained breathing apparatus.

Wear suitable personal protective equipment when fighting fires.

Fire class:

Not applicable

5.5 Additional information:

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

6. Measures in case of accidental release:

6.1 Personal precautions:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)
2020/878



Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025
Version: EN 2.2

Avoid contact with eyes, inhalation, and ingestion of dust; dust mask recommended.

Avoid dust formation; vacuum up dust without stirring it up.

Ensure adequate ventilation.

Use suitable respiratory protection.

6.2 Environmental protection measures:

Do not allow product or product residues to enter the sewage system, waterways, or soil.
Ensure that waste is collected and stored safely in closed containers.

6.3 Cleaning procedure:

Collect mechanically (avoid dust formation) and place in suitable containers for disposal. Dust may cause a slipping hazard.
Treat the collected material as described in the disposal section.

6.4 Additional information:

Please observe the protective measures in sections 7, 8, and 13.

7 Handling and storage:

7.1 Handling:

Observe product information/technical data sheet.
Remove packaging immediately before use.

7.1.1 Instructions for safe handling:

Only use as intended, e.g., in metallurgical processes.
Avoid dust formation. Ensure adequate ventilation, especially in closed rooms.
Observe the usual precautions for handling chemicals/hazardous substances.
Wash hands and face thoroughly before breaks and at the end of work.

Protective measures:

Technical measures:

Measures to prevent aerosol and dust formation:

Dust should be extracted immediately at the source; avoid dust formation (e.g., no pouring).

Use closed devices where possible.

Provide exhaust air purification if necessary.

Environmental protection measures:

No special measures required.

Dispose of product residues in accordance with legal regulations.

Specific requirements or handling regulations:

Do not eat, drink, smoke, or sniff at the workplace.
Wash hands and/or face before breaks and at the end of work.
Keep away from food, beverages, and animal feed.
Do not inhale dust.
Only use the product in quantities that meet operational requirements.

7.1.2 Fire and explosion protection information:

The product is inert, non-combustible, and non-flammable.

Avoid dust deposits / remove dust deposits regularly.

Observe standard preventive fire protection measures.

No other special measures are necessary.

7.2 Storage:

7.2.1 Technical measures and storage conditions:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Keep container tightly closed.
No special measures otherwise.

7.2.2 Packaging materials:

Store/keep only in the original container (cardboard trays).

7.2.3 Requirements for storage rooms and containers:

No special requirements; do not store outdoors; store in a dry place.

7.2.4 Storage compatibility:

Do not store together with:

Food and animal feed

Explosive substances (storage class 1)

Strongly oxidizing substances (storage class 5.1A)

Infectious substances (storage class 6.2)

Radioactive substances (storage class 7)

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

Observe restrictions and requirements for joint storage in accordance with TRGS 509 / TRGS 510 with:

Gases (storage class 2A)

Flammable liquids (storage class 3)

Other explosive substances (storage class 4.1A)

Pyrophoric or self-heating substances (storage class 4.2)

Substances that form flammable gases in contact with water (storage class 4.3)

Oxidizing substances (storage class 5.1 B)

Ammonium nitrate and substances containing ammonium nitrate (storage class 5.1 C)

Organic peroxides and self-decomposing substances (storage class 5.2)

Flammable acutely toxic substances (Cat. 1 and 2) (storage class 6.1A)

Non-flammable acutely 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

Relative humidity (%): Store in a dry place / protect from moisture

Storage stability: No information available.

Maximum storage period: The maximum recommended storage period is 1 year. Experience has shown that the product can also be used beyond the specified maximum storage period. However, we cannot guarantee the product properties 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: Refer to product information / technical data sheet

8.

8.1 Exposure limits:

8.1.1 Components with workplace exposure limits or biological limits to be monitored:

8.1.1.1 Occupational exposure limits:

Air limits:

Limit value type (country of origin)	Work substance	EC No.	CAS No.	Workplace limit value		Recommend ed monitoring monitoring procedure	Peak limitation	Source
				inhalable aerosol fraction	alveolar aerosol fraction			

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)
2020/878



Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025
Version: EN 2.2

Germany	Dust (for dusts with a density of 1 g/cm³)	N/A	N/A	4 mg/m	0.3 mg/m³	N/A	No exceedance of twice the general dust limit value	DFG
Germany	Aluminum oxide	215-691- 6	1344-28-1	1.5 mg/m	0.05 mg/m³	N/A	Carcinogenic substance, Cat. 2, 15 min, max. 4 times/shift, interval 1 h	DFG, IFA- DGUV
Germany	Di- Iron trioxide	215-168- 2	1309-37-1	N/A	n.a.	N/A	Carcinogenic substance, Cat. 3	DFG
Germany	Silicon dioxide (quartz)	238-878- 4	14808-60- 7	N/A	0.05 mg/m³	N/A	Carcinogenic substance, Cat. 1, Classification value	DFG, TRGS 559
Germany	Titanium dioxide	236-675- 5	13463-67- 7	10 mg/m	0.3 mg/m³	N/A	Carcinogenic substance, Cat. 4, 15 min, max. 4 times/shift, interval 1 h	DFG, TRGS 900
No sufficient product-related data available.								

Limit value type (country of origin)	Working substance	EC No.	CAS No.	Workplace limit value		Recommend ed monitoring monitoring procedure	Peak limitation	Source
				Long-term	Short-term			
Germany	Carbon monoxide	211-128- 3	630-08-0	35 mg/m³	70 mg/m³	N/A	15 min, max. 4 times/shift, interval 1 h	DFG
Germany	Carbon dioxide	204-696- 9	124-38-9	9,100 mg/m³	18,200 mg/m³	N/A	15 min, max. 4 times/shift, interval 1 h	DFG
No sufficient product-related data available.								

8.1.1.2 Occupational exposure limits:

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

8.1.1.3 DNEL and PNEC values:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

DNEL Worker				
Route of exposure	Duration of exposure	Endpoint effect	Value	Comment
Inhalation Systemic/local	Long-term	Repeated exposure	3 mg/m	based on aluminum oxide
inhalation local	Long-term	repeated exposure	0.8 mg/m ³	based on titanium dioxide
No sufficient product-related data available.				

DNEL User/consumer				
	Duration of action	Endpoint effect	Value	Comment
Inhalation Systemic/local	Long-term	Repeated exposure	0.75 mg/m ³	based on aluminum oxide
oral systemic/local	Long-term	Neurotoxicity	1.32 mg/kg bw/d	based on aluminum oxide
inhalation Local	Long-term	repeated exposure	0.133 mg/m ³	based on titanium dioxide
No sufficient product-related data available.				

PNEC			
Protection goal	Extrapolation factor	Value	Comment
No sufficient product-related data available.			

8.2 Exposure limitation and monitoring:

8.2.1 Limitation and monitoring of exposure at the workplace:

Product-related measures to prevent exposure:

Only permitted for intended use.

Instructional measures to prevent exposure:

Safety instructions for handling the mixture are listed in Chapter 16.

Organizational measures to prevent exposure:

Only use as intended.

It must be determined whether the occupational exposure limits are being complied with. Reference is made to European Directive EN 689 on the assessment of exposure to chemical substances.

Technical measures to prevent exposure:

See Section 7. No further measures are necessary.

Technical measures and the use of appropriate working methods take precedence over the use of personal protective equipment.

Personal protective equipment:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Respiratory protection:

Personal respiratory protection is not normally necessary.

Respiratory protection is required in the following cases:

If technical extraction or ventilation measures are not possible or insufficient, respiratory protection must be worn (thermal decomposition products/dust).

Exceeding the respective occupational exposure limit for thermal decomposition products / dust.

Suitable respiratory protection:

Filter device with filter or blower filter device Type:

Filter types P2/P3 or combination filter ABEK-P2

Self-contained breathing apparatus:

Use at concentrations above the application limit of filter devices, at oxygen contents below 17 vol% or in unclear conditions.

The wearing time limits according to GefStoffV in conjunction with the rules for the use of respiratory protective equipment (BGR 190) must be observed.

Hand protection:

Hand protection is not normally necessary; depending on the other substances used, the wearing of gloves is recommended. The use of water-insoluble skin protection agents is recommended.

For frequent hand contact:

Gloves for protection against mechanical hazards in accordance with DIN EN 388

The wearing time limits according to GefStoffV in conjunction with the rules for the use of protective gloves (BGR 195) must be observed.

Eye protection:

In case of dust accumulation: Dust goggles with side protection (in accordance with EN 166).

Body protection:

Not required. Normal long-sleeved work clothes are sufficient.

Hygiene:

After handling the mixture, hands, forearms, and face should be washed, especially before breaks or at the end of work activities.

8.2.2 Limitation and monitoring of environmental exposure:

Product-related measures to prevent exposure:

No special measures required.

Instructional measures to prevent exposure:

Only handle the product in accordance with its intended use.

Organizational measures to prevent exposure:

Low-dust handling.

Use product only in the quantities required.

Technical measures to prevent exposure:

Effective extraction of dust/thermal decomposition products at source.

9. Physical and chemical properties:

9.1 General information:¹⁾

Appearance: granular/powdery

Physical state: Solid

Color:

Gray/black

Odor:

Odorless

9.2 Important health, safety, and environmental information:

Basic safety-related data on the mixture¹⁾ :

	Value	Method	Remarks
--	-------	--------	---------

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

pH value (20°C):	7.2 – 7.6		
Melting point/range (°C):	> 1,790 °C	Not specified.	
Boiling point/range (°C):	Not applicable		
Flash point (°C):	Not applicable		Mixture is non-flammable
Ignition temperature:	Not applicable		Mixture is not self-igniting
Vapor pressure:	Not applicable		
Density (g/cm³):	Not applicable		
Bulk density (g/cm³):	1.95 – 2.05 ¹	No information available.	
Water solubility (20°C in g/l):	Practically insoluble	No data available.	
Partition coefficient n-octanol/water (log Pow):	Not applicable		
Viscosity, dynamic (mPa*s):	Not applicable		
Dust explosion capability:	Not applicable		
Explosion limits	Not applicable		
Lower:			
Upper:			

10 Stability and reactivity:

10.1 Conditions to avoid:

No special measures required.

10.2 Substances to avoid:

Not known. See also Section 7.2.4.

10.3 Hazardous decomposition products:

Carbon monoxide / carbon dioxide

Exposure limits for individual substances are listed in Chapter 8.

11. Toxicological information:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

11.1 Acute toxicity:

	Effective dose	Species	Evaluation	Method	Note
Acute oral toxicity	LD ₅₀ /14d: >5,000 mg/kg	Rat	No effects	EU B.1	Based on iron trioxide
Acute oral toxicity	LD ₅₀ /14d: >10,000 mg/kg	Rat	No effects	OECD 401	Based on aluminum oxide
Acute oral toxicity	LD ₅₀ /14d: >5,000 mg/kg	Mice Rat	No toxicological or clinical effects	OECD 420 OECD 401 and 425	Based on titanium dioxide
Acute inhalation toxicity	LC ₅₀ /4h: 5.05 g/m ³	Rat	No effects	OECD 403	Based on iron trioxide
Acute inhalation toxicity	LC ₅₀ /4h: > 2.3 g/m ³	Rat	No or minor clinical effects	OECD 403	Based on aluminum oxide
Acute inhalation toxicity	LC ₅₀ /4h: > 3.43 g/m ³	Rat	No toxicological effects	OECD 403	Based on titanium dioxide

Mixture:

Oral toxicity:

No sufficient product-related data available that is relevant for classification.

Dermal toxicity:

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

Inhalation toxicity:

Inhalation of dust may cause irritation of the respiratory tract (nose and throat) and respiratory impairment.

Specific target organ toxicity (STOT) after single exposure:

No sufficient product-related data relevant for classification available.

Specific symptoms in animal studies:

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

11.2 Corrosive/irritant effect on the skin:

	Duration of exposure	Species	Assessment	Method	Comment
Primary irritant effect on the skin	4 h	Rabbit	No irritation	OECD 404	Based on iron(III) oxide
Primary irritant effect on the skin	24 / 72 h	Rabbit	No or slight skin irritation; Not relevant for classification	OECD 404	Based on aluminum oxide
Primary irritant effect on the skin	4 h	Rabbits / Rats	No or slight skin irritation; Not relevant for classification	OECD 404	Based on titanium dioxide

Mixture:

No sufficient product-related data available that is relevant for classification.

11.3 Severe eye damage/irritation:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Eye irritation	24 h / 192 h	Rabbits	No irreversible damage	OECD 405	Based on iron(III) oxide
Eye irritation	single exposure	Rabbits	Eye redness; Not relevant for classification	OECD 405	Based on aluminum oxide
Eye irritation	single exposure	Rabbit	Eye redness; Not relevant for classification	OECD 405	Based on titanium dioxide

Mixture:

Eye irritation:

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

11.4 Respiratory or skin sensitization:

Titanium dioxide:

No sensitization according to OECD 406 in guinea pigs

Mixture:

After inhalation:

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

After skin contact:

No sufficient product-related data available for classification.

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

Aluminum oxide:

A 12-month test on rats, hamsters, and guinea pigs according to OECD 452 (repeated inhalation) revealed extensive alveolar proteinosis (clogging of the alveoli with fats and proteins).

Iron trioxide:

A 13-week test on rats in accordance with OECD 408 showed no significant effects at a NOAEL of $\geq 1,000$ mg/kg bw/d.

Titanium dioxide:

In several 90-day tests according to OECD 408 with rats, no or only minor clinical effects were observed at a NOAEL of 1,000 mg/kg bw/d.

Mixture:

Repeated inhalation of high amounts of dust can cause mucous membrane irritation and impairment of the respiratory tract, as well as coughing, sore throat, sneezing, and shortness of breath.

Otherwise, no sufficient product-related data relevant for classification are available.

Specific target organ toxicity (STOT) after repeated exposure:

No sufficient product-related data relevant for classification available.

11.6

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

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Aluminum oxide:

Carcinogenicity:

Carcinogen, Category 2 (based on fiber dust); substance with carcinogenic effects and, based on animal and epidemiological studies, contributing to cancer risk.

Reproductive toxicity:

A test according to OECD 416 (two-generation reproductive toxicity) with rats showed no specific effects; another test according to OECD 422 with rats also showed no specific effects at a NOAEL of 1,000 mg/kg bw/d.

Iron trioxide:

Carcinogenicity:

Carcinogen, category 3; substance data (tests with rats) provide evidence of a carcinogenic effect (lung tumors) without genotoxic effects being predominant.

Silicon dioxide (alveolar fraction):

Carcinogenicity:

Carcinogen, category 1; causes cancer and contributes to cancer risk; often causes changes in lung tissue structure (silicosis).

Titanium dioxide:

Carcinogenicity:

Carcinogen, category 4; substance with carcinogenic effects, in which genotoxic effects play no or only a minor role; at most, several studies have pointed to inflammatory reactions, necrosis, cell death, or oxidative stress.

Reproductive toxicity:

A 14-day test according to OECD 443 on rats yielded a NOAEL of $\geq 1,000$ mg/kg bw/d without clinical effects; studies on prenatal developmental toxicity according to OECD 414 on rats yielded the same results.

Mixture:

Carcinogenicity:

No sufficient product-related data available.

In vitro mutagenicity:

No adequate product-related data available.

In vivo mutagenicity:

No adequate product-related data available.

Germ cell mutagenicity:

No adequate product-related data available.

Reproductive toxicity:

Insufficient product-related data available.

11.6 Practical experience / Aspiration hazard:

Classification-relevant observations: No data available regarding product handling.

Other observations: No data available regarding product handling.

11.7 Information on other hazards:

No observations/data available on endocrine-disrupting properties or blindness/phototoxicity when handling the product.

12. Environmental information:

12.1 Ecotoxicity:

Aquatic toxicity	Effective dose	Exposure duration	Species	Method	Assessment	Remarks
Acute fish toxicity	LC0: ≥ 10 g/l	96 h	Fish	OECD 203	No toxic effects	Based on iron trioxide
Acute fish toxicity (prolonged)	LC ₅₀ : > 0.87 mg/l	14 d	Fish	OECD 204	No significant mortality	Based on titanium dioxide (dispersed)
Acute daphnia toxicity	EC ₅₀ : ≥ 100 mg/l	48 h	Daphnia	OECD 202	No toxic effects	Based on iron trioxide
Acute daphnia toxicity	EC ₅₀ : > 100 mg/l	48 / 72 h	Daphnia	OECD 202	No toxic effects	Based on titanium dioxide
Chronic daphnia toxicity	NOEC: ≥ 20 mg/l	21 d	Daphnia	OECD 211	No effects on reproduction	Based on titanium dioxide
Chronic daphnia toxicity	NOEC: $\geq 0.2 - \geq 100$ mg/l	28 d	Daphnia	OECD 225	No toxic effects	Based on titanium dioxide
Acute algal toxicity	NOEC: ≥ 20 mg/l	72 h	Algae	OECD 201	No toxic effects	Based on iron trioxide

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

Acute algal toxicity	NOEC: ≥ 100 mg/l	72 h	Algae	OECD 201	No toxic effects on growth and biomass	Based on titanium dioxide
Aquatic plant toxicity	EC ₅₀ : > 100 mg/l	7 d	Duckweed	OECD 221	No toxic effects on growth	Based on titanium dioxide
Activated sludge test	NOEC: ≥ 100 mg/l	3 h	Microorganisms	OECD 209	No effects on oxygen consumption	Based on titanium dioxide
Sediment toxicity	EC ₅₀ : $> 1,333$ mg/kg	28 d	Earthworms	OECD 225	No effects on biomass and mortality rate	Based on titanium dioxide

Numerous studies with micro- and nano-titanium dioxide describe a low toxicological potential for terrestrial plants (84-day tests on monocotyledonous and dicotyledonous plants with a NOEC $\geq 1,000$ mg/kg in soil dry weight) and soil microorganisms (OECD 216 and OECD 217 tests with an EC₍₁₀₎ and EC₍₅₀₎ > 100 mg/kg in soil dry weight).

Mixture:

No sufficient product-related data relevant for classification available. Due to the inert nature of the mixture, no harmful effects on the living and non-living environment are to be expected.

12.2 Persistence and degradability:

Iron trioxide:

Biological degradation test according to ISO 8192: EC₅₀ / 3 h: > 10 g/l

Mixture:

Due to the inert nature of the mixture (composed of inorganic substances, not affected by degradation), no data are available on physical or photochemical elimination.

12.3 Bioaccumulation potential:

Titanium dioxide:

A 16-day test on fish in accordance with OECD 305 determined a low bioaccumulation potential (factor: 0.0071).

A 28-day test according to OECD 225 on earthworms showed a very low bioaccumulation potential.

Mixture:

Due to the inert nature of the mixture (composed of inorganic substances), no data on bioaccumulation potential are available.

12.4 Mobility:

Known or expected distribution to environmental compartments:

Titanium dioxide:

Studies on distribution behavior have shown very low mobility due to strong binding to colloids and suspended substances in soil, sediments, and water.

Mixture:

No data available on the mixture's surface tension, adsorption/desorption, or distribution in environmental compartments.

12.5 Result of the determination of PBT properties:

Neither the individual substances nor the mixture meet the criteria for classification as PBT or vPvB.

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name:

CERATEC

Revised on:

October 6, 2025

Version: EN 2.2

Print date:

October 6, 2025

12.6 Endocrine-disrupting properties:

Due to the inert nature of the mixture (composed of inorganic substances), no data are available.

12.7 Other adverse effects:

No other harmful effects on ozone depletion and greenhouse effect potential or photochemical ozone formation are known.

12.8 Other information:

Separation of aqueous phase possible by filtration.

13. Disposal information:

13.1 Disposal/waste (product):

Unused product:

Contact the manufacturer regarding recycling. Check the possibility of recycling.
Otherwise, dispose of in accordance with the German Closed Substance Cycle Waste Management Act (KrWG): non-hazardous waste in accordance with § 3 of the German Waste Catalog Ordinance (AVV).

Used product:

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

13.2 EAK / AVV waste code:

Suggested list of waste codes/waste descriptions according to AVV:

Unused product:

10 10 06 Casting molds and sand prior to casting, except those covered by 10 10 05*

Used product:

10 10 08 Casting molds and sand after casting, except those covered by 10 10 07*

13.3 Packaging:

Uncontaminated and completely emptied 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.

Class:

Classification code:

,

Water transport (ADN(R) / IMDG Code):

,

Official name: Not classified for this mode of transport.

Class:

Classification code:

EmS:

IMDG code:

Product is not transported as bulk cargo.

Hazard label:

UN No.:

Packing group:

Hazard label:

UN No.:

Packing group:

Marine pollutant:

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

Official name:

Not classified for this mode of transport.

Hazard label:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



SCHÄFER

Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025

Version: EN 2.2

Class:
Classification code:

UN No.:
Packing group:

14.2 Special precautions for the user:

No special precautions are required for transport or movement within or outside the company premises.

15. Legal regulations:

15.1 EU regulations:

Substance safety assessment:

Registration dossiers have been prepared for individual substances in this mixture:

- Registration dossiers for aluminum oxide, diiron trioxide, silicon dioxide, and titanium dioxide by the European Chemicals Agency (ECHA).

Labeling:

Hazard symbols and hazard statements:

Hazardous components for labeling:

H statements:

P statements:

Special labeling:

Not applicable, as no labeling is required

Not applicable, as labeling is not required

Not applicable, as not subject to labeling requirements

Not applicable, as not subject to labeling requirements

Approval and/or restrictions on use:

Approvals:

No information

Restrictions on use:

No information

15.2 National regulations (Germany):

Information on employment restrictions:

The respective national regulations on the protection of young workers and expectant mothers must be observed.

Major Accidents Ordinance (12th BImSchV):

Not subject to 12th BImSchV.

Water hazard class:

Not hazardous to water according to AwSV, Annex 1 (self-classification), based on the individual substances and the mixture

Technical Instructions on Air Quality Control (TA-Luft):

The respective emission limits must be observed:

Total dust, including fine dust: 20 mg/m³

Carbon monoxide: 150 mg/m³

Quartz fine dust: 0.5 mg/m³

TRGS 559 and 900 on limit values in the air at the workplace; DFG

Other regulations, restrictions, and prohibitions:

16. Other information:

16.1 Wording of H and P statements:

Full text of the H and P statements for the individual components of the mixture mentioned in Chapter 3, the mixture itself, and abbreviations of the labels for the individual substances mentioned in Chapter 2:

Hazard statements:

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)
2020/878



Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025

Version: EN 2.2

Safety instructions:

Prevention:

P201 Obtain special instructions before use.
P202 Read and understand all safety instructions before use.
P260 Do not breathe dust, fumes, gas, mist, vapor, or aerosol.
P270 Do not eat, drink, or smoke after use
P273 Avoid release to the environment
P280 Wear protective gloves/protective clothing/eye protection/face protection

Reaction:

P308+P313 If exposed or if affected: Get medical advice/attention
P314 If you feel unwell, seek medical advice/attention

16.2 Training

instructions:

Employees must be regularly instructed on the scope and associated hazards in accordance with legal requirements.

16. Recommended restrictions on use:

No private use.

Safety data sheet

in accordance with Regulation (EC) No. 1907/2006 and (EU)

2020/878



Trade name: CERATEC
Revised on: October 6, 2025
Print date: October 6, 2025

Version: EN 2.2

16.4 Further information:

The information in this safety data sheet corresponds to our best knowledge at the time of printing. The information is intended to provide you with guidance on the safe handling of the mixture mentioned in this safety data sheet during storage, processing, transport, and disposal. The information is not transferable to other mixtures. If the mixture mentioned in this safety data sheet is mixed, blended, or processed with other materials, or 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 safety data sheets for the ingredients
- 2.) Technical data sheet CERATEC B / CERATEC C, GTP Schäfer GmbH
- 3.) IFA-DGUV (Institute for Occupational Safety and Health of the German Social Accident Insurance), GESTIS substance database
- 4.) DFG (German Research Foundation) - MAK and BAT values list 2025, Communications 61, <https://mak-dfg.publisso.de>
- 5.) ECHA/EU - REACH registration dossier for aluminum oxide, as of September 29, 2025
- 5.) ECHA/EU - REACH registration dossier for silicon dioxide, as of April 24, 2025
- 7.) ECHA/EU - REACH registration dossier for di-iron trioxide, as of August 9, 2024
- 3.) ECHA/EU - REACH registration dossier for titanium dioxide, as of May 22, 2025
- 3.) RIGOLETTO database "Catalogue of substances hazardous to water" Federal Environment Agency (UBA) in accordance with AwSV (Ordinance on Facilities for Handling Substances Hazardous to Water); as of: September 30, 2025
- 10.) TA-Luft 2021
- 11.) TRGS 900 Technical Rules for Hazardous Substances – Occupational Exposure Limits; as of May 6, 2025
- 12.) TRGS 509 Technical Rules for Hazardous Substances – Storage of Liquid and Solid Hazardous Substances in Stationary Containers; Status: March 26, 2024
- 13.) TRGS 510 Technical Rules for Hazardous Substances – Storage of Hazardous Substances in Mobile Containers; Status: February 16, 2021
- 14.) TRGS 559 Technical Rules for Hazardous Substances – Quartz-containing Dust, as of: June 5, 2020