

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.09.2019

Version number 1

Revision: 09.09.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** F 2282 TRANSPARENT - BLAU
· Transparente Glasfarbe

· **Article number:** F 2282

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Preparation of ceramic parts and coatings

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Rüger & Günzel GmbH
D 63263 Neu-Isenburg - Dornhofstraße 71
Telefon +49- 61 02 / 812940 - Telefax +49 61 02 / 8129440
E-Mail: info@rgfarben.de

www.rgfarben.de

· **Informing department:** Product safety department.

· **1.4 Emergency telephone number:**

Mo-Fr. 7.30 - 16.00 Uhr - Tel.+49-6102/812940 // 24h-emergency phone no. +49 151 54 62 77 41
poison emergency call:
or
Beratungsstelle bei Vergiftungen
II. Medizinische Klinik und Polyklinik der Universität Mainz
Langenbeckstr. 1
55131 Mainz
www.giftinfo.uni-mainz.de 06131 - 19240

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.
Repr. 1A H360Df May damage the unborn child. Suspected of damaging fertility.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms



GHS07 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

Fritte, Glas des Systems Pb-Si-Al-B, Chemikalie; CAS-Nr 65997-18-4 Class 8.2.REACH Registernummer:01-2119548361-42-0016

· Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H351 Suspected of causing cancer.

H360Df May damage the unborn child. Suspected of damaging fertility.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

· Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· Description: Mixture of the substances listed below with harmless additions.

· Dangerous components:

Fritte, Glas des Systems Pb-Si-Al-B, Chemikalie; CAS-Nr 65997-18-4 Class 8.2.REACH Registernummer:01-2119548361-42-0016	50-100%
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<p>⚠ Carc. 2, H351; Repr. 1A, H360Df; STOT RE 1, H372; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332</p>	
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· Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation Supply fresh air; consult doctor in case of symptoms.

· After skin contact Rinse with warm water.

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- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Inform doctor. Do not give milk or fatty oils.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Formation of poisonous gases during heating or in fires.
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Put on breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use only in well-ventilated areas.
Put on breathing apparatus.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Do not empty into drains.
- **6.3 Methods and material for containment and cleaning up:** Collect mechanically.
- **6.4 Reference to other sections**
Do not handle until all safety precautions have been read and understood.
Wear suitable protective clothing and gloves.
Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Take note of emission threshold.
Use only in well-ventilated areas.
Handle and open container with care.
Prevent formation of dust.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class** 6.1 D

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· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Wash hands during breaks and at the end of the work.

Store protective clothing separately.

Do not inhale dust / smoke / mist.

Do not eat, drink or smoke while working.

· **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Short term filter device:

Filter P2.

Not necessary if room is well-ventilated.

· **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Solvent resistant gloves

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least > 480 minutes (Permeation according to EN 374).

· **Eye protection:** Tightly sealed safety glasses.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Powder

Colour: According to product specification

· **Odour:** Odourless

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** 7

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· Change in condition	
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
· Flash point:	Not applicable
· Inflammability (solid, gaseous)	Not determined.
· Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. Explosive when mixed with oxidising substances.
· Critical values for explosion:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density at 20 °C	4.03 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Insoluble
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
Stable up to melting point.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed or if inhaled.

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· **LD/LC50 values that are relevant for classification:**

Components	Type	Value	Species
Fritte, Glas des Systems Pb-Si-Al-B, Chemikalie; CAS-Nr 65997-18-4 Class 8.2.REACH Registernummer:01-2119548361-42-0016			
Oral	LD50	500 mg/kg (ATE)	
Inhalative	LC50/4 h	1.5 mg/l (ATE)	

· **Primary irritant effect:**

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity**
May damage the unborn child. Suspected of damaging fertility.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**
Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Behaviour in sewage processing plants:**
The product can be mechanically separated.
Heavy metal can be dissolved by liquids containing acid or alkali.
Then elimination out of the water through chemical flocculation.
- **Additional ecological information:**
- **General notes:**
The product contains materials that are harmful to the environment.
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

After prior treatment product has to be landfilled under adherence to the regulations pertaining to the disposal of particularly hazardous waste.

· **Waste disposal key number:** 55515 (Pigmente und Farbstoffe anorganisch)

· **European waste catalogue**

08 02 99	wastes not otherwise specified
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· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Waste disposal key number:**

18715 (Verpackungsmaterial mit schädlichen Verunreinigungen oder Restinhalten, vorwiegend anorganisch)

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR**

UN3077
 2811 / 2291

· **IMDG, IATA**

UN3077

· **14.2 UN proper shipping name**

· **ADR**

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fritte , Chemikalie;
 Fritte ist ein Gemisch aus anorganischen chemischen Substanzen, hergestellt durch rapides Abschrecken einer geschmolzenen , komplexen Kombination von Stoffen. Die so verarbeiteten chemischen Substanzen werden zu nichtmigrierenden Komponenten in gläsernen festen Flock oder Granulaten. diese Kategorie schließt alle unten spezifizierten chemischen Substanzen ein, wenn sie zielbewußt in der produktion von fritten verarbeitet werden. Die vorrangigen Vertreter dieser Kategorie sind Oxide von einigen oder allen unten aufgeführten Elemente. Fluoride dieser Elemente könne auch in kombination mit diesen vorrangigen Substnzen eingeschlossen sein.)

· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fritte , Chemikalie;
 Fritte ist ein Gemisch aus anorganischen chemischen Substanzen, hergestellt durch rapides Abschrecken einer geschmolzenen , komplexen Kombination von Stoffen. Die so verarbeiteten chemischen Substanzen werden zu nichtmigrierenden Komponenten in gläsernen festen Flock oder Granulaten. diese Kategorie schließt alle unten spezifizierten chemischen Substanzen ein, wenn sie zielbewußt in der produktion von fritten verarbeitet werden. Die vorrangigen Vertreter dieser Kategorie sind Oxide von einigen oder allen unten aufgeführten Elemente. Fluoride dieser Elemente könne auch in kombination mit diesen vorrangigen

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· IATA

Substnzen eingeschlossen sein.), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Fritte , Chemikalie;
 Fritte ist ein Gemisch aus anorganischen chemischen Substanzen, hergestellt durch rapides Abschrecken einer geschmolzenen , komplexen Kombination von Stoffen. Die so verarbeiteten chemischen Substanzen werden zu nichtmigrierenden Komponenten in gläsernen festen Flock oder Granulaten. diese Kategorie schließt alle unten spezifizierten chemischen Substanzen ein, wenn sie zielbewußt in der produktion von fritten verarbeitet werden. Die vorrangigen Vertreter dieser Kategorie sind Oxide von einigen oder allen unten aufgeführten Elemente. Fluoride dieser Elemente könne auch in kombination mit diesen vorrangigen Substnzen eingeschlossen sein.)

· 14.3 Transport hazard class(es)

· ADR



· Class

9 (M7) Miscellaneous dangerous substances and articles.

· Label

9

· IMDG, IATA



· Class

9 Miscellaneous dangerous substances and articles.

· Label

9

· 14.4 Packing group

· ADR, IMDG, IATA

III

· 14.5 Environmental hazards:

Product contains environmentally hazardous substances: Fritte , Chemikalie;
 Fritte ist ein Gemisch aus anorganischen chemischen Substanzen, hergestellt durch rapides Abschrecken einer geschmolzenen , komplexen Kombination von Stoffen. Die so verarbeiteten chemischen Substanzen werden zu nichtmigrierenden Komponenten in gläsernen festen Flock oder Granulaten. diese Kategorie schließt alle unten spezifizierten chemischen Substanzen ein, wenn sie zielbewußt in der produktion von fritten verarbeitet werden. Die vorrangigen Vertreter dieser Kategorie sind Oxide von einigen oder allen unten aufgeführten Elemente. Fluoride dieser Elemente könne auch in kombination mit diesen vorrangigen Substnzen eingeschlossen sein.

· Marine pollutant:

Yes

· Special marking (ADR):

Symbol (fish and tree)

Symbol (fish and tree)

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· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Kemler Number:	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FRITTE , CHEMIKALIE; FRITTE IST EIN GEMISCH AUS ANORGANISCHEN CHEMISCHEN SUBSTANZEN, HERGESTELLT DURCH RAPIDES ABSCHRECKEN EINER GESCHMOLZENEN , KOMPLEXEN KOMBINATION VON STOFFEN. DIE SO VERARBEITETEN CHEMISCHEN SUBSTANZEN WERDEN ZU NICHTMIGRIERENDEN KOMPONENTEN IN GLÄSERNEN FESTEN FLOCK ODER GRANULATEN. DIESE KATEGORIE SCHLIESST ALLE UNTEN SPEZIFIZIERTEN CHEMISCHEN SUBSTANZEN EIN, WENN SIE ZIELBEWUST IN DER PRODUKTION VON FRITTEN VERARBEITET WERDEN. DIE VORRANGIGEN VERTRETER DIESER KATEGORIE SIND OXIDE VON EINIGEN ODER ALLEN UNTEN AUFGEFÜHRETEN ELEMENTE.FLUORIDE DIESER ELEMENTE KÖNNE AUCH IN KOMBINATION MIT DIESEN VORRANGIGEN SUBSTNZEN EINGESCHLOSSEN SEIN.), 9, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

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- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H302 Harmful if swallowed.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.
- H360Df May damage the unborn child. Suspected of damaging fertility.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.

· **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Acute toxicity - oral
 Acute toxicity - inhalation
 Carcinogenicity
 Reproductive toxicity
 Specific target organ toxicity (repeated exposure)
 Hazardous to the aquatic environment - short-term
 (acute) aquatic hazard

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Department issuing data specification sheet:** Environment protection department.

· **Contact:** Hr. Frank Bauer

· **Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- ICAO: International Civil Aviation Organisation
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity – Category 4
- Carc. 2: Carcinogenicity – Category 2
- Repr. 1A: Reproductive toxicity – Category 1A
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1