

## Material Safety Data Sheet according to 93/112/EEC

Volume of Safety Data Sheet 5 pages plus enclosure

Volume of enclosure 2 pages

Revision dated May 16<sup>th</sup>, 2002

### Transparent and opaque glass in bars, sticks, granules, foil and powder

#### 1. Identification of the product and of the company

Identification of the product: Transparent and opaque glass

Company/undertaking identification: Friedrich Farbglashütte GmbH  
– **KUGLER COLORS**<sup>®</sup> –  
Reifträgerweg 29  
D-87600 Kaufbeuren  
Phone: ++49 (0)8341-62049

Exceptional and emergency cases: Phone: ++49(0)8341-62049  
(technical department)

#### 2. Composition/information on ingredients:

Silicate glasses  
Constituents see enclosure;  
all ingredients bonded by vitrification

#### 3. Hazards identification of the product

none if used for the intended purpose

#### 4. First aid measures

Only relevant for glass powder!

after inhalation:  
after skin contact:  
after eye contact:

Remove to fresh air.  
Rinse with water and soap.  
Immediately flush eyes with copious  
amounts of running water (for 10  
minutes), see an oculist. Do not rub

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after ingestion: eyes, mechanical agitation may cause corneal damage.  
Rinse out mouth, drink 1-2 glasses of water, seek medical advice

#### 5. Fire-fighting measures

Suitable extinguishing media: not applicable  
Extinguishing media,  
which must not be used for safety reasons: not applicable  
Special exposure hazards arising from the  
product itself, from combustion products  
or from resulting gases: not flammable  
Special protective equipment  
for fire-fighters: not applicable

#### 6. Accidental release measures

Personal precautions: Avoid dust formation  
Environmental precautions:  
Methods of cleaning up/of removing: Remove mechanically

#### 7. Handling and storage

Handling: Avoid dust formation. Vacuum.  
Storage: Keep container tightly sealed;  
Protect from contamination

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## 8. Exposure controls / personal protection

Information on the system design: No further data see item 7  
 Components with specific control parameters: none  
 Personal protection: Do not eat, drink or smoke while working  
 Respiratory protection: dust mask, particle filter P3  
 Hand protection: suitable protective gloves  
 Eye protection: goggles which can be tightly sealed

## 9. Physical and chemical properties

Physical state: Bars, diameter approx. 30 mm, length approx. 30 cm  
 Sticks, diameter 4-12 mm, length 30-100 mm  
 Granules, diameter 0.5 – 11.5 mm  
 Powder, diameter < 0.25 mm  
 Colour: varied, according to colouration  
 Odour: odourless  
 Melting point: not applicable;  
 plastic deformation > 480 °C  
 viscous > 900 °C  
 liquid > 1300 °C  
 Flash point: not applicable  
 Relative density (20°C): 2,5 - 3,3 g/cm<sup>3</sup>  
 Solubility (20°C): insoluble in water

## 10. Stability and reactivity

Conditions to avoid: none known  
 Materials to avoid: none known if used for its intended purpose  
 Hazardous decomposition products: none known

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## 11. Toxicological information

Inhalation:

Only relevant for glass powder!  
Danger of serious damage to health by prolonged exposure through inhalation  
Chronic health damage is caused by absorption through the gastro-intestinal tract.

## 12. Ecological information

Persistence and degradability: not pertinent; inorganic product

The product contains environmentally relevant heavy metals. Locally set limits in sewage have to be observed.

## 13. Disposal considerations

Waste disposal with the approval of the responsible local authority;

## 14. Transport information

Not a hazardous material according to RID/ADR, GGVS/GGVE, ADNR, IMDG, ICAO-TI/IATA-DGR

## 15. Regulatory information

Classification and labelling according to GefStoffV:

Symbols of danger:

Not subject of the identification regulations.

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S 13:	Keep away from food, drink and animal feeding stuffs
S 20:	When using do not eat, drink or smoke
S 22:	Do not breathe dust

### 16. Other information

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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### Enclosure

#### Constituents

3. Glass No. all No's.:  
Constituents SiO<sub>2</sub>  
K<sub>2</sub>O  
Na<sub>2</sub>O  
B<sub>2</sub>O<sub>3</sub>  
Colouring agents (inorganic)

2. Glass No. Glass No. K1002, K1003, K1005, K1006, K1008 until K1014, K1017 until K1019, K1021, K1022, K1024, K1026, K1027, K1028, K1030 until K1033, K1035 until K1037, K1039, K1040, K1042, K1043, K1045 until K1055, K1057, K1100, K1101, K1103, K1105, K1107, K1212, K1215, K1218, K1228 until K1235, K1240, K2002, K2003, K2005, K2006, K2008 until K2014, K2017 until K2019, K2021, K2022, K2024, K2026, K2027, K2028, K2030 until 2033, K2035 until K2037, K2039, K2040, K2042, K2043, K2045 until K2055, K2057, K2100, K2101, K2103, K2105, K2107, K2212, K2215, K2218, K2228 until K2235, K2240

Additional constituents: PbO

3. Glass No. K1015, K1041, K1044, K1210, K1221  
K2015, K2041, K2044, K2210, K2221

Additional constituents: PbO, BaO

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4. Glass No. K1020, K1140, K1141, K1142, K1143, K1213, K1219, K1220, K2020, K2140, K2141, K2142, K2143, K2213, K2219, K2220

Additional constituents: BaO, ZnO

5. Glass No. K1060, K1062, K1063, K1065, K1066, K1070 until K1076, K1079 until K1092, K1095 until K1099, K1150 until K1152, K1154, K1157 until K1166, K1168, K1171 until K1175, K1178, K1222 until K1224, K1226, K1227, K1241 until K1243, K1245, K2060, K2062, K2063, K2065, K2066, K2070 until K2076, K2079 until K2092, K2095 until K2099, K2150 until K2152, K2154, K2157 until K2166, K2168, K2171 until K2175, K2178, K2222 until K2224, K2226, K2227, K2241 until K2243, K2245

Additional constituents: PbO, CaF<sub>2</sub>

6. Glass No. K1067 until K 1069, K1077, K1078, K1120, K1121, K1125, K1130, K1134, K1216, K2067 until K 2069, K2077, K2078, K2120, K2121, K2125, K2130, K2134, K2216

Additional constituents: ZnO, CaF<sub>2</sub>