

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



390601 Colored glass, Opal Orange, yellowish, opaque

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Revised edition: 18.12.2018

Version: 2

Printed: 19.02.2021

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Colored glass, Opal Orange, yellowish, opaque

Article No.: 390601

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Colorless and colored glass as an intermediate for further processing

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.com

E-Mail: info@kremer-pigmente.com

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

1.4.2 Poison Center:

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Hazard designation:

Not applicable.

Signal word:

Hazard designation:

Safety designation:

Hazardous components for labelling:

2.3. Other Hazards

3. Composition/Information on Ingredients

Substance

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3.1.

3.2. Mixture

Chemical Characterization: Glass, oxide (colored glass): CAS No. 65997-17-3, EINECS 266-046-0
Inorganic product of fusion.
All components are bound by vitrification.

Information on Components / Hazardous Ingredients:

Selenium (H301-331-373-413)	0 - 9 %	CAS-Nr: 7782-49-2 EINECS-Nr: 231-957-4 EC-Nr:
Cadmium oxide (H350-31-361fd-330-372-400-410)	0 - 7 %	CAS-Nr: 1306-19-0 EINECS-Nr: 215-146-2 EC-Nr:
Diantimony trioxide (H351); REACH Reg. No. 01-2119475613-35	0 - 5 %	CAS-Nr: 1309-64-4 EINECS-Nr: 215-175-0 EC-Nr:
Diarsenic trioxide (H300-314-350-410)	0 - 5 %	CAS-Nr: 1327-53-3 EINECS-Nr: 215-481-4 EC-Nr:
Cobalt oxide (H302-318-332-410); REACH Reg. No. 01-2119513794-36-xxxx	0 - 5 %	CAS-Nr: 1307-96-6 EINECS-Nr: 215-154-6 EC-Nr:
Zinc oxide (H400-410); REACH Reg. No. 01-2119463881-32-0000	0 - 19 %	CAS-Nr: 1314-13-2 EINECS-Nr: 215-222-5 EC-Nr: 030-013-00-7
Barium oxide (H271-301-314); REACH Reg. No. 01-2120078585-44-0000	0 - 12 %	CAS-Nr: 1304-28-5 EINECS-Nr: 215-127-9 EC-Nr: 056-002-00-7
Copper oxide (H400-H410); REACH Reg.-Nr. 01-2119502447-44-0000	0 - 12 %	CAS-Nr: 1317-38-0 EINECS-Nr: 215-269-1 EC-Nr: 029-016-00-6

Additional information:

SVHC (Candidate List of Substances of very High Concern): This product contains a substance in amounts greater than 0.1 % (w/w) listed in the Candidate List according to Article 59 of the REACH Regulation 1907/2006/EC: Diarsenic trioxide, Cadmium oxide.
EC SVHC-List (REACH, Annex XIV): Diarsenic trioxide

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

In case of an accident or if you feel unwell, seek medical advice

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immediately (show Safety Data Sheet where possible).

After inhalation:

*Supply fresh air and keep patient calm.
In case of irritation of the respiratory system seek medical help.*

After skin contact:

*Wash carefully with plenty of water and soap. Consult a physician
in case of skin irritation.*

After eye contact:

*Carefully rinse eyes with water for several minutes.
Seek medical attention if irritation persists.*

After ingestion:

*Rinse mouth with water and drink plenty of water.
Do not induce vomiting.
If symptoms persist, call a physician.*

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

No further information available.

Effects:

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Foam, carbon dioxide (CO₂), extinguishing powder, water spray.

Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: formation of carbon monoxide and dioxide.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Further information:

*Collect contaminated extinguishing water and debris separately;
avoid contamination of sewage system.*

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

*Wear protective clothing.
Avoid formation of dust.
Do not inhale dust.*

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6.2. Environmental Precautions

Environmental precautions:

Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Take up mechanically and collect in suitable containers for disposal.

6.4. Reference to other Sections

*For information for safe handling see Section 7.
See Section 13 for information on disposal.*

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

Wear adequate protective clothing (see para. 8).

Hygienic measures:

Do not eat or drink during work. Do not smoke.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a cool and well ventilated location.

Protect product from humidity.

Protect against heat.

Requirements for storage areas and containers:

Keep container tightly closed.

Information on fire and explosion protection:

Do not store together with: foodstuffs, beverages and feed.

Do not store together with explosives, oxidants, radioactive and infectious substances.

Storage class:

10-13 (TRSG 510)

Further Information:

Storage temperature: 20°C

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TRGS 900

TLV: 1.25 mg/m³ air-borne fraction (general dust limit)

TLV: 10 mg/m³ inhalable fraction (general dust limit)

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Peak limit Category: 2 (II)

Barium compounds (as Ba), soluble (except Barium oxide and Barium hydroxide): 0.5 mg/m³ (inhalable fraction); 1 (I)

Diantimony trioxide (CAS 1309-64-4): 0.006 mg/m³ (airborne fraction); 8 (I)

Selenium (CAS 7782-49-2): 0.05 mg/m³ (airborne fraction); 1 (II)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Zinc oxide:

5 mg/m³ (worker, inhalation, long-term exposure - systemic effects)

0.5 mg/m³ (worker, inhalation, long-term exposition - local effects)

87 mg/kg bw/d (worker/consumer, skin contact, long-term exposure - systemic effects)

2.5 mg/m³ (consumer, inhalation, long-term exposure - systemic effects)

0.83 mg/kg bw/day (consumer, swallowing, long-term exposure - systemic effects)

Barium oxide:

0.5 mg/m³ (worker, inhalation, long-term exposition - systemic effects)

Diantimony trioxide

0.315 mg/m³ (worker, inhalation, long-term exposition - local effects)

67 mg/kg bw/d (worker, skin contact, long-term exposition - systemische effects)

0.095 mg/m³ (consumer, inhalation, long-term exposition - local effects)

33.5 mg/kg bw/d (consumer, skin contact/swallowing, long-term exposition - systemic effects)

Diarsenic trioxide:

0.112 mg/kg bw/d (worker/consumer, skin contact, long-term exposition - systemic effects)

0.0022 mg/kg bw/d (consumer, swallowing, long-term exposition - systemic effects)

Predicted No-Effect Concentration (PNEC):

Zinc oxide:

Fresh water: 0.0206 mg/l

Sea water: 0.0061 mg/l

Fresh water sediment: 117.8 mg/kg

Seawater sediment: 56.5 mg/kg

Sewage treatment system (STP): 0.1 mg/l

Barium oxide:

Fresh water: 0.065 mg/l

Sea water: 0.006 mg/l

Fresh water sediment: 351 mg/kg

Sea water sediment: 35.1 mg/kg

Intermittent release: 0.162 mg/l

Sewage treatment system (STP): 100 mg/l

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Soil: 2.6 mg/kg
Copper oxide:
Fresh water: 0.0078 mg Cu/l
Sea water: 0.0052 mg/l
Fresh water sediment: 87.1 mg Cu kg / dwt
Seawater sediment: 676 mg Cu kg / dwt
Sewage treatment system (STP): 0.23 mg Cu/l
Soil: 65 mg/kg
Diantimony trioxide:
Fresh water: 0.135 mg/l
Sea water: 0.013 mg/l
Fresh water sediment: 13.4 mg/kg
Sea water sediment: 2.68 mg/kg
Sewage treatment system (STP): 3.05 mg/l
Soil: 44.3 mg/kg

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation in case of dust formation.

Personal Protection

General protective measures:

*Avoid contact with skin, eyes and clothing.
Do not eat, drink or smoke during work.
Contaminated work clothing should not be worn out of the workplace. Wash contaminated clothing before reusing.*

Respiratory protection:

Respiratory equipment required in case of insufficient ventilation, filter type P3.

Hand protection:

Protective gloves (EN 374)

Protective glove material:

*Recommended: Protective index 6, > 480 min. of permeation time accord. EN 374.
Nitrile rubber (0.35 mm), chloroprene rubber (0.5 mm), butyl rubber (0.5 mm)
Fluoro carbon rubber (0.5 mm), polyvinyl chloride (PVC; 0.5 mm)*

Eye protection:

Tightly fitting safety goggles (EN 166).

Body protection:

Protective clothing.

Environmental precautions:

No special measures required.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

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<i>Form:</i>	<i>powder</i>
<i>Color:</i>	<i>colorless to colored</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>not relevant</i>
<i>pH-Value:</i>	<i>not applicable</i>
<i>Melting temperature:</i>	<i>not determined</i>
<i>Boiling temperature:</i>	<i>not applicable</i>
<i>Flash point:</i>	<i>not available</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</i>
<i>Upper explosion limit:</i>	<i>no information available</i>
<i>Lower explosion limit:</i>	<i>no information available</i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	<i>This product is a non-volatile solid.</i>
<i>Density:</i>	<i>2.4 - 3.3 g/cm³</i>
<i>Solubility in water:</i>	<i>insoluble</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>not determined</i>
<i>Auto-ignition temperature:</i>	<i>not applicable</i>
<i>Decomposition temperature:</i>	<i>not applicable</i>
<i>Viscosity, dynamic:</i>	<i>not applicable</i>
<i>Explosive properties:</i>	<i>Risk of dust explosion.</i>
<i>Oxidizing properties:</i>	
<i>Bulk density:</i>	<i>1.4 - 2.2 kg/dm³</i>

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9.2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

Flow point: > 900°C

Softening point: > 580°C

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

Unknown.

10.4. Conditions to Avoid

Conditions to avoid:

Protect from humidity and heat.

Thermal decomposition:

10.5. Incompatible Materials

Oxidizing agents.

Strong acids.

Strong reducing agents.

10.6. Hazardous Decomposition Products

If heated above 900°C: formation of fumes of inorganic metal compounds.

10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral:

Zinc oxide: > 5000 mg/m³ (rat)

Bariumoxide: ATE: 100 mg/kg

Copper oxide: > 2500 mg/kg (rat; OECD 423)

Cobalt oxide: 159 mg/kg (rat; OECD 401)

Diantimony trioxide: > 34600 mg/kg (rat)

Diarsenic trioxide: 14.6 mg/kg (rat)

Cadmium oxide: 2330 mg/kg (rat)

Selenium: ATE: 100 mg/kg

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LD50, dermal:

Zinc oxide: > 2000 mg/kg (rat)
Copper oxide: > 2000 mg/kg (rat; OECD 402)
Cobalt oxide: > 2000 mg/kg (rat; OECD 402)
Diantimony trioxide: > 8300 mg/kg (rabbit)

LC50, inhalation:

Zinc oxide: > 1.79 mg/l (4h, aerosol, rat)
Barium oxide: ATE: 11 mg/l (vapor); ATE: 1.5 mg/l (aerosol)
Cobalt oxide: 0.06 mg/l (4h, aerosol, rat; OECD 436)
Cadmium oxide: ATE: 0.5 mg/l (vapor); ATE: 0.05 mg/l (aerosol)
Selenium: ATE: 3 mg/l (vapor); ATE: 0.5 mg/l (aerosol)

Primary effects

Irritant effect on skin:

No information available

Irritant effect on eyes:

No information available.

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

No relevant data found.

Mutagenicity:

No relevant data found.

Reproductive toxicity:

No relevant data found.

Carcinogenicity:

No relevant data found.

Teratogenicity:

No relevant data found.

Specific target organ toxicity (STOT):

Single exposure: no information available.
Repeated exposure: no information available.

Additional toxicological information:

Aspiration hazard: no data available

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

Zink oxide: LC50: 4.92 mg/l (96h, Brachydanio rerio)
Copper oxide: LC50: 0.0105-9.15 mg/l (96h, fish); NOEC: 0.0022-0.188 mg/l (7-330d, fish)
Cobalt oxide: LC50: 0.52-85 mg/l (96h, fish); NOEC: 0.0747-99

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mg/l (7-81d, fish)

Diantimony trioxide: LC50: 14.4 mg/l (96h, *Pimephales promelas*);
NOEC: 0.0075-4.5 mg/l (30d, *Pimephales promelas*)

Diarsenic trioxide: NOEC: 2.13 mg/l (35d, various species)

Cadmium oxide: NOEC: 0.00047-0.132 mg/l (7-100d, fish)

Daphnia toxicity:

Zinc oxide: LC50: 4.92 mg/l (21d, *Daphnia magna*)

Barium oxide: EC50: 14.5 mg/l (48h, *Daphnia magna*)

Copper oxide: EC50: 0.0085-1.21 mg/l (48h, Crustacea); NOEC:
0.004-0.181 mg/l (2-240d, Crustacea)

Cobalt oxide: EC50: 0.605-167 mg/l (48h, Crustacea); NOEC:
0.00683-3.73 mg/l (7-28d, Crustacea)

Diantimony trioxide: EC50: 12,1 mg/l (48h, *Daphnia magna*);
NOEC: 1,74 mg/l (21d, *Daphnia magna*; OECD 211)

Diarsenic trioxide: NOEC: 0.631 mg/l (51d, *Americamysis bahia*)

Cadmium oxide: EC50: 0.036 mg/l (48h, *Daphnia magna*); NOEC:
0.0003-25 mg/l (2-35d, Crustacea)

Bacteria toxicity:

Zinc oxide: > 1000 mg/l (3h, active sludge)

Barium oxide: > 1000 mg/l (3h, active sludge; OECD 209)

Cobalt oxide: 120 mg/l (0.5h, active sludge; OECD 209)

Algae toxicity:

Copper oxide: ErC50: 0.0165-0.897 mg/l (72h, algae); NOEC:
0.0102 mg/l (19d, *Macrocystis pyrifera*)

Cobalt oxide: ErC50: 0.144 mg/l (72h, *Pseudokirchneriella*
subcapitata; OECD 201); NOEC: 0.0018 mg/l (7d, *Champia*
parvula)

Diantimony trioxide: ErC50: > 36.6 mg/l (72h, *Pseudokirchneriella*
subcapitata; OECD 201); NOEC: 0.323 mg/l (3d,
Pseudokirchneriella subcapitata; OECD 201)

Diarsenic trioxide: NOEC: 0.065 mg/l (14d, *Champia parvula*)

Cadmium oxide: ErC50: 0.023 mg/l (72h, *Pseudokirchneriella*
subcapitata; OECD 201); NOEC: 0.00085-0.063 mg/l (1-5d, algae)

12. 2. Persistence and Degradability

Methods for the evaluation of the biological degradability are not applicable for inorganic substances.

12. 3. Bioaccumulation

No bioaccumulation expected.

Bioconcentration factor (BCF):

Barium oxide: 74.4 (*Lepomis macrochirus*)

Copper oxide: 0.02 - 20 (*Crangon crangon*)

Cobalt oxid: 23 (*Asterias rubens*)

Diantimony trioxide: 0.001 - 670

12. 4. Mobility

No information available.

12. 5. Results of PBT- und vPvP Assessment

Not classified as PBT substance / Not classified as a vPvB substance.

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12.6. Other Adverse Effects

Water hazard class:

Not hazardous.

Behaviour in sewage systems:

Further ecological effects:

Do not let product enter waterways or sewage system.

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

*Dispose of according to official national and local regulations.
Reuse, when possible.*

European Waste Code (EWC):

*101112 - WASTES FROM THERMAL PROCESSES; wastes from
manufacture of glass and glass products; waste glass other than
those mentioned in 10 11 11*

Uncleaned packaging:

Contaminated packaging must be treated like the substance.

Waste Code No.:

150106 - Mixed packaging.

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR (land transportation).

IMDG/IATA:

No hazardous goods according to IMDG.

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

not applicable

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Hazard no.:

14. 4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14. 5. Environmental Hazards

no

14. 6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14. 7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

14. 8. Further Information

Do not store together with foodstuffs.

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

0, not hazardous (German Regulation)

Local regulations on chemical accidents:

Seveso III Directive: not applicable under Directive 2012/18/EC.

Employment restrictions:

Restriction and prohibition of application:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles, Registered no. 19 (Diarsenic trioxide)

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles, Registered no. 23 (Cadmium oxide)

Technical instructions on air quality:

5.2.1. Total dust, including fine dust at $m \geq 0.2$ kg/h, conc. 20 mg/m³, resp. at ≤ 0.2 kg/h, conc. 0.15 mg/m³: not determined

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

EC SVHC-List (REACH, Annex XIV): Diarsenic trioxide

EC SVHC-List (REACH, Annex XIV): Cadmium oxide

15. 3. Further Information

VOC Content: 0 %

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.