



Johnson Matthey

Advanced Glass Technologies

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Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 8

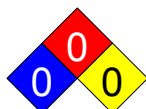
Reviewed on 04/10/2015

1 Identification

- **Product identifier** Glass enamel powder
- **Trade name:**
- **Product ID#:** **UNLEADED ONGLAZE CHROME GREEN** **94K1004**
- **Product Use:** Glass enamel powder
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Johnson Matthey Inc.
498 Acorn Lane
Downingtown, PA 19335
tel. 1 610 873-3200
fax. 1 610 873-3255
- **Information department:** Product Safety Department 1 (610) 873-3200 M-F 8am-5pm
- **Emergency telephone number:** 1 856 384-7050

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Hazard description:**
- **American Hazard Description**
Based upon the components the following hazards may exist:
Target Organs - Lungs
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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- **HMIS ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Hazardous components:		
CAS: 65997-18-4 EINECS: 266-047-6	frits, chemicals	75-100%
	chromium (III) compounds, n.o.s. (calculated as Cr2O3)	10-<25%
· Main components:		
CAS: 65997-18-4 EINECS: 266-047-6	frits, chemicals	75-100%
	chromium (III) compounds, n.o.s. (calculated as Cr2O3)	10-<25%

- **SVHC -**
- **Additional information:**
For the wording of the listed risk phrases refer to section 16.
This product is partly or entirely the result of a melting, calcining or sintering process at high temperatures. It therefore does not necessarily exhibit the properties of the abovementioned metallic constituents. The mentioned metals are present in a complex matrix and are expressed as their oxides; it is however highly unlikely that these oxides are actually present in the product, unless explicitly specified.

4 First-aid measures

- **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:**
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Remove contaminated clothing and wash skin with soap and water. Wash or clean clothing before reuse.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear full firefighting gear and SCBA

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
The application of this product requires well exhausted firing kilns and efficient ventilation of working areas.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
There is no PEL established for this mixture. Recommend monitoring based upon the components in the mixture.

65997-18-4 frits, chemicals

PEL	Long-term value: 15 mg/m ³ recommended PEL for nuisance dust
TLV	Long-term value: 15 mg/m ³ recommended TLV for nuisance dust

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chromium (III) compounds, n.o.s. (calculated as Cr2O3)

PEL	Long-term value: 0.5 mg/m ³ as Cr
REL	Long-term value: 0.5 mg/m ³ as Cr; See Pocket Guide App. C
TLV	Long-term value: 0.5 mg/m ³ as Cr

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not required.

· **Protection of hands:**

· **Material of gloves**

Nitrile rubber, NBR

Chemical resistant gloves

· **Eye protection:** Not required.

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Powder

Color: Green

· **Odor:** Odorless

· **pH-value:** Neutral

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor pressure at 20 °C (68 °F):** 0 hPa

· **Density:** Not determined.

· **Solubility in / Miscibility with**

Water: Insoluble.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Solvent content:**

Organic solvents: 0.0 %

Water: 0.0 %

Solvent (USA): 0.0 %

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Solids content: 100.0 %
Other information No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

chromium (III) compounds, n.o.s. (calculated as Cr2O3)

Oral	LD50	> 10000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Not regulated |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Not regulated |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Not regulated |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · DOT | |
| · Remarks: | Not regulated |
| · ADR | |
| · Remarks: | Not regulated |
| · ADN | |
| · Remarks: | Not regulated |
| · IMDG | |
| · Remarks: | Not regulated |

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· IATA	
· Remarks:	Not regulated
· UN "Model Regulation":	-

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

chromium (III) compounds, n.o.s. (calculated as Cr2O3)

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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Warning: This product contains a chemical known to the State of California to cause cancer

None of the ingredients is listed.

· Warning: This product contains a chemical known to the State of California to cause female reproductive hazards.

None of the ingredients is listed.

· Warning: This product contains a chemical known to the State of California to cause male reproductive hazards

None of the ingredients is listed.

· Warning: This product contains a chemical known to the State of California to cause development toxicity

None of the ingredients is listed.

· Canadian Ingredient disclosure list

· Limit 0,1%

None of the ingredients is listed.

· Limit 1%

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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Product ID#: UNLEADED ONGLAZE CHROME GREEN**94K1004**· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:**

J. Rose
EHS Specialist

· **Date of preparation / last revision** 04/10/2015 / 7· **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)

ICAO: International Civil Aviation Organisation

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· *** Data compared to the previous version altered.**

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