



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

**1 Identification**

- **Product identifier** Coloured glaze
- **Trade name:**
- **Product ID#:** **UNLEADED ONGLAZE YELLOW** **94H1000**
- **Product Use:**  
Coloured glaze  
Preparation of ceramic parts and coatings
- **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**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:** Not applicable.
- **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** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS08
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
antimony nickel titanate yellow
- **Hazard statements**  
H350 May cause cancer.
- **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P405 Store locked up.

(Contd. on page 2)

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 1)

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

· **Hazard description:**· **American Hazard Description**

Based upon the components the following hazards may exist:  
Antimony and Nickel are cancer hazards

Target Organs - Hair, Lungs

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 1  
Fire = 0  
Reactivity = 0

· **HMIS ratings (scale 0 - 4)**

Health = 1  
Fire = 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 frits and/or raw materials of natural origin and inorganic pigments in powder form· **Hazardous components:**

CAS: 65997-18-4 EINECS: 266-047-6	frits, chemicals		75-100%
CAS: 8007-18-9 EINECS: 232-353-3	antimony nickel titanate yellow	Carc. 1A, H350	10-<25%

· **Main components:**

CAS: 65997-18-4 EINECS: 266-047-6	frits, chemicals		75-100%
CAS: 8007-18-9 EINECS: 232-353-3	antimony nickel titanate yellow	Carc. 1A, H350	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.

USA

(Contd. on page 3)

**Product ID#: UNLEADED ONGLAZE YELLOW**

**94H1000**

(Contd. of page 2)

#### **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.

#### **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** Not required.
- **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:** Pick up mechanically.
- **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.  
Provide suction extractors if dust is formed.
- **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.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 3)

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

### 8007-18-9 antimony nickel titanate yellow

PEL	Long-term value: 1 mg/m <sup>3</sup> as Ni
REL	Long-term value: 0.015 mg/m <sup>3</sup> as Ni; See Pocket Guide App. A
TLV	Long-term value: 0.2 mg/m <sup>3</sup> as Ni; inhalable fraction

- **CAS No. Designation of material % Type Value Unit**

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

### nickel compounds, n.o.s. (calculated as NiO)

PEL	Long-term value: 1 mg/m <sup>3</sup> TWA is 1 mg/m <sup>3</sup>
REL	Long-term value: 0.015 mg/m <sup>3</sup> as Ni, TWA is 0.015 mg/m <sup>3</sup>
TLV	Long-term value: 0.2 mg/m <sup>3</sup> as Ni

### antimony compounds, n.o.s. (calculated as Sb<sub>2</sub>O<sub>3</sub>)

PEL	Long-term value: 0.5 mg/m <sup>3</sup> as Sb
REL	Long-term value: 0.5 mg/m <sup>3</sup> as Sb

### titanium compounds, n.o.s. (calculated as TiO<sub>2</sub>)

PEL	Long-term value: * 15 mg/m <sup>3</sup> * total dust
REL	LFC (LOQ 0.2 mg/m <sup>3</sup> )

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.

(Contd. on page 5)

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 4)

- **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:

· <b>Form:</b>	Powder
· <b>Color:</b>	Yellow
· <b>Odor:</b>	Odorless
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

#### · Change in condition

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

#### · Ignition temperature:

· **Decomposition temperature:** Not determined.

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

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

#### · Explosion limits:

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

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

· **Density:** Not determined.

· **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:

· <b>Dynamic:</b>	Not applicable.
· <b>Kinematic:</b>	Not applicable.

#### · Solvent content:

· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	0.0 %
· <b>Solvent (USA):</b>	0.0 %

· **Solids content:** 100.0 %

(Contd. on page 6)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 5)

· **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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

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

8007-18-9 antimony nickel titanate yellow

1

· **NTP (National Toxicology Program)**

8007-18-9 antimony nickel titanate yellow

K

· **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.
- **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.

(Contd. on page 7)

USA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**· **Other adverse effects** No further relevant information available.

(Contd. of page 6)

### 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

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

USA

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

Product ID#: **UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 7)

## 15 Regulatory information

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

· <b>Section 355 (extremely hazardous substances):</b>
--

None of the ingredients is listed.
------------------------------------

· <b>Section 313 (Specific toxic chemical listings):</b>
--

8007-18-9	antimony nickel titanate yellow	*
-----------	---------------------------------	---

· <b>TSCA (Toxic Substances Control Act):</b>
---

All ingredients are listed.
-----------------------------

· <b>Proposition 65</b>
-------------------------

· <b>Warning: This product contains a chemical known to the State of California to cause cancer</b>
---

8007-18-9	antimony nickel titanate yellow	*
-----------	---------------------------------	---

· <b>Warning: This product contains a chemical known to the State of California to cause female reproductive hazards.</b>
---

None of the ingredients is listed.
------------------------------------

· <b>Warning: This product contains a chemical known to the State of California to cause male reproductive hazards</b>
--

None of the ingredients is listed.
------------------------------------

· <b>Warning: This product contains a chemical known to the State of California to cause development toxicity</b>
---

None of the ingredients is listed.
------------------------------------

· <b>Canadian Ingredient disclosure list</b>
--

· <b>Limit 0,1%</b>
---------------------

None of the ingredients is listed.
------------------------------------

· <b>Limit 1%</b>
-------------------

None of the ingredients is listed.
------------------------------------

· <b>Carcinogenicity categories</b>
-------------------------------------

· <b>EPA (Environmental Protection Agency)</b>
--

None of the ingredients is listed.
------------------------------------

· <b>TLV (Threshold Limit Value established by ACGIH)</b>
---

8007-18-9	antimony nickel titanate yellow	A4
-----------	---------------------------------	----

· <b>MAK (German Maximum Workplace Concentration)</b>
---

None of the ingredients is listed.
------------------------------------

· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
---

None of the ingredients is listed.
------------------------------------

· <b>National regulations:</b>
--------------------------------

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

- |   |
|---|
| · <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out. |
|---|

## 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.

(Contd. on page 9)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 04/10/2015

Version 5

Reviewed on 04/10/2015

**Product ID#: UNLEADED ONGLAZE YELLOW****94H1000**

(Contd. of page 8)

**· Relevant phrases**

H350 May cause cancer.

**· Contact:**

J. Rose

EHS Specialist

**· Date of preparation / last revision 04/10/2015 / 4****· 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)

Carc. 1A: Carcinogenicity, Hazard Category 1A

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

USA