

## MATERIAL SAFETY DATA SHEET

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Version 1.3

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Section 1 - Product and Company Information

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|------------------|--|
| Product Name     | GLUCOSE OXIDASE TYPE V-S FROM<br>ASPERGILLUS NIGER |
| Product Number   | G6891  |
| Brand            | SIGMA  |
| Company          | Sigma-Aldrich                                      |
| Address          | 3050 Spruce Street<br>SAINT LOUIS MO 63103 US      |
| Technical Phone: | 800-325-5832                                       |
| Fax:             | 800-325-5052                                       |
| Emergency Phone: | 314-776-6555                                       |

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Section 2 - Composition/Information on Ingredient

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| Substance Name                                     | CAS # | SARA 313 |
|--|-------|----------|
| GLUCOSE OXIDASE TYPE V-S<br>FROM ASPERGILLUS NIGER | None  | No       |

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Section 3 - Hazards Identification

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## EMERGENCY OVERVIEW

Irritant.

Irritating to eyes, respiratory system and skin.

Warning: Causes irritation. Avoid contact with eyes, skin, and clothing.

For additional information on toxicity, please refer to Section 11.

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Section 4 - First Aid Measures

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## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

## DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

## EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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Section 5 - Fire Fighting Measures

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FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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## Section 6 - Accidental Release Measures

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PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

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## Section 7 - Handling and Storage

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STORAGE

Store at 2-8°C

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## Section 8 - Exposure Controls / PPE

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ENGINEERING CONTROLS

Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

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## Section 9 - Physical/Chemical Properties

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Appearance

Physical State: Liquid

Property

Value

At Temperature or Pressure

Molecular Weight

N/A

pH

N/A

BP/BP Range

N/A

MP/MP Range

N/A

Freezing Point

N/A

Vapor Pressure

N/A

Vapor Density

N/A

|                       |     |
|-----------------------|-----|
| Saturated Vapor Conc. | N/A |
| SG/Density            | N/A |
| Bulk Density          | N/A |
| Odor Threshold        | N/A |
| Volatile%             | N/A |
| VOC Content           | N/A |
| Water Content         | N/A |
| Solvent Content       | N/A |
| Evaporation Rate      | N/A |
| Viscosity             | N/A |
| Surface Tension       | N/A |
| Partition Coefficient | N/A |
| Decomposition Temp.   | N/A |
| Flash Point           | N/A |
| Explosion Limits      | N/A |
| Flammability          | N/A |
| Autoignition Temp     | N/A |
| Refractive Index      | N/A |
| Optical Rotation      | N/A |
| Miscellaneous Data    | N/A |
| Solubility            | N/A |

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption. Causes irritation.

### SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

### CONDITIONS AGGRAVATED BY EXPOSURE

The toxicological properties have not been thoroughly investigated.

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## Section 12 - Ecological Information

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No data available.

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## Section 13 - Disposal Considerations

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### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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Section 15 - Regulatory Information

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EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi

Indication of Danger: Irritant.

R: 36/37/38

Risk Statements: Irritating to eyes, respiratory system and skin.

S: 26-36

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Irritant.

Risk Statements: Irritating to eyes, respiratory system and skin.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

US Statements: Warning: Causes irritation. Avoid contact with eyes, skin, and clothing.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.