Section 1 - Product and Company Information

Product Name: Invertase, Grade VII, From Bakers Yeast
Product Number: 14504
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3500 Spruce Street
City, State, Zip. Country: Saint Louis, MO 63103 US
Technical Phone: 800-325-9832
Fax: 800-325-9052

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 311</th>
<th>EC no</th>
<th>Annex 1 Index Number</th>
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<tr>
<td>INVERTASE</td>
<td>9001-57-4</td>
<td>No</td>
<td>232-615-7</td>
<td></td>
</tr>
</tbody>
</table>

Formula: Synonyms

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation.

HMIS Rating
Health: 2  Flammability: 0  Reactivity: 0

NFPA Rating
Health: 2  Flammability: 0  Reactivity: 0

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

Section 4 - First Aid Measures

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 contact, immediately wash skin with soap and copious amounts of water.

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.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media
Suitable: Use extinguishing media appropriate to surrounding fire conditions.

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

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid contact with eyes, skin, and clothing. Avoid inhalation. Avoid prolonged or repeated exposure.

Storage
Suitable: Keep tightly closed. Store at 2-8°C.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath.

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 dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
Physical State
Solid

Sigma Chemical - 14504
Sigma-Aldrich Corporation
www.sigma-aldrich.com
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
Partition Coefficient: N/A
Decomposition Temp.: N/A
Flash Point 'F: N/A
Flash Point 'C: N/A
Explosion Limits: N/A
Flammability: N/A
Autoignition Temp.: N/A
Solubility: N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable.

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Nature of decomposition products not known.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion
May be harmful if swallowed.

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

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.

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.

Section 14 - Transport Information

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.

Section 15 - Regulatory Information

EU Additional Classification
Safety Statements
F: 22 42/43
Do not breathe dust. Avoid contact with skin and eyes.

US Classification and Label Text
US Statements
Caution: Avoid contact and inhalation.

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 information required by the CPR.

DSL: No
NDSL: No

Section 16 - Other Information

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...