## MATERIAL SAFETY DATA SHEET

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Section 1 - Product and Company Information Product Name SEPHAROSE Product Number 4B200 Brand SIGMA Sigma-Aldrich Company Street Address 3050 Spruce Street City, State, Zip, Country SAINT LOUIS MO 63103 US Technical Phone: 314 771 5765 414 273 3850 Ext. 5996 Emergency Phone: 800 325 5052 Fax: Section 2 - Composition/Information on Ingredient CAS # SARA 313 Substance Name SEPHAROSE PRODUCTS CONTAINING 20% None No ETHANOL. Ingredient Name CAS # Percent SARA 313 ETHYL ALCOHOL, NON-DENATURED, 200 64-17-5 20 No PROOF Section 3 - Hazards Identification EMERGENCY OVERVIEW Combustible (USA) Flammable (EU). Irritant. Irritating to eyes, respiratory system and skin. Target organ(s): Liver. Nerves. HMIS RATING HEALTH: 2\* FLAMMABILTTY: 2 **REACTIVITY: 0** NFPA RATING HEALTH: 2 FLAMMABILITY: 2 **REACTIVITY: 0** \*additional chronic hazards present. 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 not breathing give artificial respiration. If breathing is difficult, give oxygen.

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
FLASH POINT N/A
AUTOIGNITION TEMP N/A
FLAMMABILITY N/A
EXTINGUISHING MEDIA Suitable: Water spray. 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. Specific Hazard(s): Combustible liquid. Emits toxic fumes under fire conditions.
Section 6 - Accidental Release Measures
PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL Evacuate area.
PROCEDURE(S) OF PERSONAL PRECAUTION(S) Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.
METHODS FOR CLEANING UP Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.
Section 7 - Handling and Storage
HANDLING User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.
STORAGE Suitable: Keep tightly closed. Keep away from heat and open flame. Store at 2-8°C
Section 8 - Exposure Controls / PPE
ENGINEERING CONTROLS Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT Respiratory: Government approved respirator. Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles. Skin-Specific: Chemical resistant apron.

GENERAL HYGIENE MEASURES Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

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	0.989 g/cm3			
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				

Section 10 - Stability and Reactivity

# STABILITY Stable: Stable. Conditions to Avoid: Protect from moisture. Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Alkali metals, Ammonia, Oxidizing agents, Peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

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.
TARGET ORGAN(S) OR SYSTEM(S) Nerves. Liver.
SIGNS AND SYMPTOMS OF EXPOSURE Can cause CNS depression. Exposure can cause: Nausea, headache, and vomiting. Narcotic effect. Damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
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. This combustible material may be burned 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: Combustible liquid, n.o.s. UN#: NA1993 Class: COMBUSTIBLE LIQUID Packing Group: Packing Group III Hazard Label: None PIH: Not PIH IATA Non-Hazardous for Air Transport: Non-hazardous for air transport.
Section 15 - Regulatory Information
<pre>EU ADDITIONAL CLASSIFICATION Symbol of Danger: Xi Indication of Danger: Irritant. R: 10 36/37/38 Risk Statements: Flammable. Irritating to eyes, respiratory system and skin. S: 16 26 36 Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.</pre>
US CLASSIFICATION AND LABEL TEXT Indication of Danger: Combustible (USA) Flammable (EU). Irritant. Risk Statements: Irritating to eyes, respiratory system and skin. Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with

plenty of water and seek medical advice. Wear suitable protective clothing. US Statements: Target organ(s): Liver. Nerves. 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

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 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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.