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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier — CASPOL* 5003

Synonyms: Reaction mass of glycol monoricinoleate and glycerol monoricinolate; Reaction mass of 2-hydroxyethyl 12-hydroxyoctadec-9-enoate and 2,3-dihydroxypropyl 12-hydroxyoctadec-9-enoate

Chemical Abstracts Registry No: Major component - 106-17-2; Minor component - 1323-38-2

REACH Registration Number: 01-2120770772-48-0000

1.2. Relevant identified uses of the substance or mixture and uses advised against

Reactive diluent

1.3. Details of the supplier of the safety data sheet

Aurorium
201 North Illinois Street
Suite 1800
Indianapolis
Indiana 46204
USA
+1-336-292-1781

Representative for REACH Registration:
REACH@aurorium.com

e-mail Address: sds@aurorium.com

1.4. Emergency telephone number

Aurorium: +1-336-292-1781
CHEMTREC (USA): 1-800-424-9300 (collect calls accepted)
CHEMTREC (International): +1-703-527-3887 (collect calls accepted)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture (According to Regulation 29 CFR 1910.1200 and the Globally **Harmonized System)**

Environmental Acute Category 1 (M Factor = 1)
Environmental Chronic Category 1 (M Factor = 1)

2.2. Label elements

Hazard Symbols (Pictogram):

Signal Word: Warning

Hazard Precautions: H400 - Very toxic to aquatic life.

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H410 - Very toxic to aquatic life with long lasting effects.

Prevention Precautionary Statements: P273 - Avoid release to the environment.

First Aid Precautionary Statements: P391 - Collect spillage.

Disposal Precautionary Statements: P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

2.3. Other hazards

Other Hazards: Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory/ Annex VI	EU CLP Classification (1272/2008)
Reaction mass of 2-hydroxyethyl 12-hydroxyoctadec-9-enoate and 2,3-dihydroxypropyl 12-hydroxyoctadec-9-enoate	106-17-2; 1323-38-2	~ 100	947-976-2	Not listed.	Aquatic Acute 1; H400 Aquatic Chronic 1; H410

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable).

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

Eye Contact: Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician. Get medical attention if irritation or other symptoms exist.

Inhalation: No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels remove to fresh air and get medical attention if cough or other symptoms develop.

Ingestion: If swallowed, contact physician or poison control center immediately. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Acute: Single exposure to inhaling vapors or mist is not likely to be hazardous. Not likely to be toxic by ingestion. Single dose oral toxicity is low. Not expected to cause dermal irritation.

Delayed Effects: None known.

4.3. Indication of any immediate medical attention and special treatment needed

Note to Physician: No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Appropriate Extinguishing Media:	Carbon dioxide, Dry chemical, Alcohol foam, Water spray

5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion:	Carbon dioxide, Carbon monoxide Dense Smoke
Potential for Dust Explosion:	Not applicable.
Special Flammability Hazards:	Material may burn, but does not ignite readily. Avoid high temperature.

5.3. Advice for firefighters

Basic Fire Fighting Guidance:	Evacuate area and fight fire from a safe distance. Wear pressure-demand self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures:	Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Special Instructions:	See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

6.2. Environmental precautions

Prevent releases to soils, drains, sewers and waterways.

6.3. Methods and material for containment and cleaning up

Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Isolate the spill area. Stop the leak if it is safe to do so. Material can then be collected (eg., suction) for later disposal. After collection of material, flush area with water. Retain all contaminated water for proper disposal.

6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards:	Not applicable.
Practices to Minimize Risk:	Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains. Handle in a manner to prevent generation of aerosols, vapors or dust clouds.
Special Handling Equipment:	Not applicable.

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7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations:	This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use.
Dangerous Incompatibility Reactions:	Oxidizing materials
Incompatibilities with Materials of Construction:	None known

7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limit:	Not established
Air Monitoring Method:	Not required

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Other Engineering Controls:	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.
Personal Protective Equipment:	Impervious gloves (EN374), boots, and clothing (EN14605), chemical goggles or face shield where necessary, and an approved chemical cartridge respirator (Half mask (EN140) or full face (EN136)) or supplied air breathing apparatus.
Respirator Caution:	Observe OSHA regulations for respirator use (29 CFR 1910.134) or equivalent guidance. Air-purifying respirators must not be used in oxygen-deficient atmospheres.
Thermal Hazards:	Not applicable.
Environmental Exposure Controls:	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	Clear, yellow liquid with light vegetable oil odor.		
Vapor Pressure:	< 1 Pa	Evaporation Rate:	< 1 (Butyl Acetate = 1)
Specific Gravity or Density:	0.965 g/cm3	Vapor Density (air = 1):	No data available.
Boiling Point:	Estimated 440 °C	Freezing / Melting Point:	5 °F

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Solubility in Water:	Not soluble (0.06164 mg/L)	Octanol / Water Coefficient:	5.91
pH:	No data available.	Odor Threshold:	Not applicable
Viscosity:	36,000 mm^2/s	Autoignition Temperature:	388 ˚C (730˚F)
Flash Point and Method:	232°C (450°F) PMCC	Flammable Limits:	No data available.
Flammability (solid, gas):	No data available.	Decomposition Temperature:	No data available.
Explosive Properties:	Not explosive.	Oxidizing Properties:	Not an oxidizer.

9.2. Other information

Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity	Not classified as dangerously reactive.
10.2. Chemical stability	Stable
10.3. Possibility of hazardous reactions	Not expected to occur.
10.4. Conditions to avoid	Incompatible materials Heat and open flame
10.5. Incompatible materials	Oxidizing materials
10.6. Hazardous decomposition products	Products of incomplete combustion may include carbon monoxide, carbon dioxide and dense smoke.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Oral LD_{50}:	5000 mg/kg (rat)	Unpublished data
Acute Dermal LD_{50}:	2000 mg/ kg (rat)	Unpublished data
Acute Inhalation LC_{50}:	No data available.	
Skin Irritation:	Non-irritating to skin.	
Eye Irritation:	May cause slight irritation.	
Skin Sensitization:	No dermal reaction in 48 hour human patch test.	
Mutagenicity:	This material has been determined to be non-mutagenic in the Ames reverse mutation assay.	
Reproductive / Developmental Toxicity:	No data available.	
Carcinogenicity:	This material is not listed by IARC, NTP or OSHA as a carcinogen. No test data is available that indicates this material is a carcinogen.	
Target Organs:	No data available.	

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Aspiration Hazard:	Based on physical properties, not likely to be an aspiration hazard.
Primary Route(s) of Exposure:	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.
Most important symptoms and effects, both acute and delayed	Single exposure to inhaling vapors or mist is not likely to be hazardous. Not likely to be toxic by ingestion. Single dose oral toxicity is low. Not expected to cause dermal irritation. Delayed Effects: None known.
Additive or Synergistic effects:	None known.

SECTION 12: Ecological information

12.1. Toxicity	EC50 (72h) Pseudokirchneriella subcapitata (algae) 0.76 mg/L EC50 (48h) Daphnia magna 1.8 mg/L
12.2. Persistence and degradability	Readily biodegradable.
12.3. Bioaccumulative potential	No data available
12.4. Mobility in soil	No data available
12.5. Results of PBT and vPvB assessment	This substance is not a PBT or vPvB.
12.6. Other adverse effects	No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

US EPA Waste Number:	Non-Hazardous
Waste Classification: (per US regulations)	The waste may be classified as "special" or hazardous per State regulations.
Waste Disposal:	NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:

14.1. UN number	UN3082	14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (glycol and glycerol monoricinolates)
14.3. Transport hazard class(es)	9	14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant		

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NA Emergency Guidebook Numbers:	171	IMDG EMS:	S-F; F-A
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code			Not applicable.

SECTION 15: Regulatory information

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

Chemical Inventory Lists:	Status:		
USA TSCA:	Listed	EC / list No.:	947-976-2
Canada(DSL/NDSL):	DSL	Japan:	2-2744X
Korea:	KE-20772	Australia:	Listed
China:	702	Philippines:	Listed
Taiwan:	Listed	New Zealand:	Listed

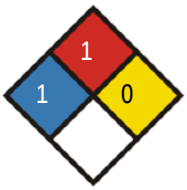
German Water Hazard Classification: WGK 2 - Hazard to waters *(self-classification)*

SARA 313: Not listed.

State Regulations: Not applicable.

HMIS IV:

NFPA:



15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

Classification Method: On basis of test data

Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.
CAS = Chemical Abstracts Service.
CFR = Code of Federal Regulations.
DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.
EC = European Community.
EINECS = European Inventory of Existing Commercial Chemical Substances.
ELINCS = European List of Notified Chemical Substances.
EU = European Union.
GHS = Globally Harmonized System.
LC = Lethal Concentration.
LD = Lethal Dose.
NFPA = National Fire Protection Association.
NIOSH = National Institute of Occupational Safety and Health.
NTP = National Toxicology Program.
OSHA = Occupational Safety and Health Administration
PEL = Permissible Exposure Limit.
RQ = Reportable Quantity.
SARA = Superfund Amendments and Reauthorization Act of 1986.
TLV = Threshold Limit Value.
WHMIS = Workplace Hazardous Materials Information System.

Important Note: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees

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and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.

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