

AKÖMA™

FROM THE HEART

MATERIAL SAFETY DATA SHEET

1 - Identification of Product and Supplier

Product Name: **Glycerine Organic**
Supplier: **Akoma International (UK) LTD**
Unit 9A Sawley Park
Nottingham Road
Derby
DE21 6AS
Tel: +44 (0) 1332 613 967
Emergency Contact: Mr. Wynn Mensah – Tel: 01332 613 967

2 – Chemical Product Information and Composition and information on ingredients:

Classification of the substance: Not classified according to the 67/548/CE directive and the 1272/2008/CE regulation
Particular indications concerning the hazards for human and the environment: This substance is not to be labelled
Main constituent: Glycerin
N°EINECS: 200-289-5
Percentage: >99.5

3 – First Aid Measures:

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin contact: Wash skin with plenty of water
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel. FOR EXTERNAL USE ONLY.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

4 – Fire - fighting Measures:

Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures:

Keep people away. Isolate fire and deny unnecessary entry. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment for Firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards:

Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous Combustion Products:

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Combustion products may include and are not limited to:

Carbon monoxide. Carbon dioxide.

5 - Accidental release measures:

Small spills and residues may be absorbed with an inert material and placed in a chemical waste container for destruction with a specialized and approved company.

In case of large spillage: block and pump into appropriate containers. Avoid spillage into sewerage or natural environment.

6 - Handling and storage:

Handling: normal work and hygiene practises for handling non hazardous product. Don't smoke, not eat nor drink in the working zones.

Packaging: steel, aluminum, iron, synthetic material, glass are recommended.

Storage: store in a closed container. Keep in a dry place, ventilated and protected against fire and agents of oxidation.

7 – Exposure controls and personal protection:

Personal Protection:

Eye protection: use chemical safety goggles.

Skin protection: when prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"...). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Components with limit values that require monitoring at the workplace:

CAS: 56-81-5 GLYCEROL (25-50%)

VME (France) 10 mg/m³

8 - Physical data and chemical properties:

Appearance:	Syrupy liquid, unctuous to the touch, colourless or substantially colourless, clear, very hygroscopic
Odor:	Neutral
pH:	approximately 7
density:	1.257 to 1.275 g /cm ³
dynamic viscosity:	1410 mPa.s
Boiling point:	>270°C
Melting point:	18°C
Flash point:	>160°C
Autoignition:	>370°C
Solubility at 20°C:	soluble in water and alcohol. Insoluble in benzene, chloroform, carbon tetrachloride, carbon disulfide, petroleum ether, oils.

9 - Stability and Reactivity:

Stability:	Product stable under recommended storage conditions. Hygroscopic.
Conditions to avoid:	Exposure to elevated temperatures can cause product to decompose. Avoid moisture.
Incompatible materials:	Avoid contact with strong oxidizers
Hazardous Polymerization:	Will not occur
Thermal Decomposition:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Acrolein.

10 - Toxicological information:

Acute toxicity :

LD50 (oral rat):	27 200 mg /Kg
LD50 (oral mouse):	23 000 mg /Kg
LD50 (dermal rabbit):	>18 700 mg /Kg

Irritating and corrosive effects:

Skin irritation: not supposed to be irritant
Eyes irritation: not supposed to be irritant

11 - Ecological information:

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
Biodegradation in water: readily biodegradable
Bioaccumulation: low bioaccumulation potential

Ecotoxicity to the aquatic environment:

PNEC aqua: 780 mg /L : low hazard

Short-term toxicity to fish:

LC50 (24H) : >5000 mg /l (Carassius auratus)

Short-term toxicity to aquatic invertebrates:

EC50 (24h) : >10 000 mg /l (Daphnia magna)

Toxicity to algae:

CE50 (96H) : 77 712 mg /L (by calculation)

Toxicity to microorganisms:

NOEC (16H) : >10 000 mg /L (Pseudomonas putida)

NOEC (20H) : >10 000 mg /L (Uronema parduzci)

NOEC (48H) : >10 000 mg /L (Chilimonas paramaecium)

NOEC (72H) : 3 200 mg /L (Entosiphon sulcatum)

12 - Disposal considerations:

To destroy according local, federal and state regulations. Avoid the discharge in the environment.

13 – Transportation Information:

Product is not classified in ADR (road, directive 94/55/CE), RID (rail, directive 96/49/CE), IMDG (sea), ICAO-TI nor IATA-DGR (air).

14 –Regulatory Information:

This product is not classified according to the 67/548/CE directive nor the 1272/2008/CE regulation.

15 - Other information:

The information contained in this data sheet is based on our actual knowledge concerning the mentioned product at the issuing date of the sheet. The information is provided sincerely. The users of the product are advised of the potential risks, should the product be used for other uses than the ones it is designed for. This data sheet does not exempt the user to know and to apply the legal texts ruling his activity. The user will take solely under his own responsibility the precautions linked to the use he makes of the product.

Sources of information :

Supplier's Material Safety Data Sheet

IUCLID Chemical Data Sheet (ESIS) - "glycerol"

ECHA <http://echa.europa.eu/fr> "glycerol"

OCDE study, IDS initial assessment report for SIAM 14 - Paris, France, 26-28 March 2002

Acronyms et abreviations :

ADR: European agreement for the transport of the dangerous goods by road

RID: International regulation for the transport of the dangerous goods by rail

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals