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Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

Product Description:	Glycerine (USP/EP Grade)
Synonyms	Glycerol
CAS-No	56-81-5
EC-No.	200-289-5
Molecular Formula	C3 H8 O3
Reach Registration Number	Exempt 1907/2006/EC Annex V.9

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

Recommended Use	Laboratory chemicals, Food Production, Cosmetic Production
Sector of use	-
Product category	-
Process categories	-
Environmental release category	-
Uses advised against	No Information available

1.3. Details of the supplier of the safety data sheet

Company	UK entity/business name
	Intra Laboratories Ltd
	Unit 5 & 8 Devonshire Meadows Plymouth, PL6 7EZ

E-mail address	admin@intralabs.co.uk
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1.4. Emergency telephone number

Intra Laboratories Ltd, UK – 01752 724109

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Based on available data, the classification criteria are not met

Environmental hazards

Based on available data, the classification criteria are not met

2.2. Label elements

Hazard Statements

None

Precautionary Statements

None

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Glycerin	56-81-5	200-289-5	>95	-

Reach Registration Number	Exempt 1907/2006/EC Annex V.9
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Full text of Hazard Statements: see section 16

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Self-Protection of the First Aider	No special precautions required.

4.2. Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation.

6.2. Environmental precautions

Should not be released into the environment.

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6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. To maintain product quality, do not store in heat or direct sunlight. Protect from moisture. Do not freeze.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	The United Kingdom	European Union	Ireland
Glycerin	TWA: 10 mg/m ³ 8 hr (mist only)		TWA: 10 mg/m ³ 8 hr. (mist)

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) No information available

<u>Route of exposure</u>	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral Dermal Inhalation			56 mg/m ³	

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Predicted No Effect Concentration (PNEC)

No information available

Fresh water	0.885 mg/l
Fresh water sediment	3.3 mg/kg dw
Marine water	0.0885 mg/l
Marine water sediment	0.33 mg/kg dw
Water Intermittent	8.85 mg/l
Microorganisms in sewage treatment	1000 mg/l

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Soil (Agriculture) 0.141 mg/kg dw

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye Protection Safety glasses with side-shields (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers recommendations	-	EN 374	(minimum requirement)
Nitrile rubber				
Neoprene				
PVC				

Skin and body protection Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Particle filter

Small scale/Laboratory use Maintain adequate ventilation

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear	
Physical State	Very viscous Liquid	
Odor	Slight	
Odor Threshold	No data available	
pH	5	100 g/L aq.sol
Melting Point/Range	18 °C / 64.4 °F	
Softening Point	No data available	
Boiling Point/Range	290 °C / 554 °F	
Flash Point	160 °C / 320 °F	Method - No information available
Evaporation Rate	No information available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	Lower 2.7 vol % Upper 19 vol %	

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Vapor Pressure	0.003 mbar @ 50 °C	
Vapor Density	3.17	(Air = 1.0)
Specific Gravity / Density	1.261	
Bulk Density	Not applicable	Liquid
Water Solubility	>500 g/L (20°C)	

Solubility in other solvents	No information available
Partition Coefficient (n-octanol/water)	
Component	log Pow
Glycerin	-1.76
Autoignition Temperature	400 °C / 752 °F
Decomposition Temperature	> 290°C
Viscosity	1069 mPa.s at 20 °C
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

Molecular Formula	C3 H8 O3
Molecular Weight	92.09

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity None known, based on information available

10.2. Chemical stability Hygroscopic.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid Incompatible products. Excess heat.

10.5. Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerin	12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 2.75 mg/L/4h (Rat)(mist)

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- (b) **skin corrosion/irritation;** Based on available data, the classification criteria are not met
- (c) **serious eye damage/irritation;** Based on available data, the classification criteria are not met
- (d) **respiratory or skin sensitization;**
Respiratory Based on available data, the classification criteria are not met
Skin Based on available data, the classification criteria are not met
- (e) **germ cell mutagenicity;** Based on available data, the classification criteria are not met
- (f) **carcinogenicity;** Based on available data, the classification criteria are not met
 There are no known carcinogenic chemicals in this product
- (g) **reproductive toxicity;** Based on available data, the classification criteria are not met
- (h) **STOT-single exposure;** Based on available data, the classification criteria are not met
- (i) **STOT-repeated exposure;** Based on available data, the classification criteria are not met
Target Organs None known.
- (j) **aspiration hazard;** Based on available data, the classification criteria are not met
- Symptoms / effects, both acute and delayed** No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Glycerin	LC50: 51 - 57 mL/L, 96h static (Oncorhynchus mykiss)	EC50: > 500 mg/L, 24h (Daphnia magna)		

12.2. Persistence and degradability Readily biodegradable
Persistence Persistence is unlikely.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Glycerin	-1.76	No data available

12.4. Mobility in soil The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

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12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Other adverse effects

Endocrine Disruptor Information
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors
This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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Contaminated Packaging	Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.
European Waste Catalogue (EWC)	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO	Not regulated
14.1. <u>UN number</u>	
14.2. <u>UN proper shipping name</u>	
14.3. <u>Transport hazard class(es)</u>	
14.4. <u>Packing group</u>	
ADR	Not regulated
14.1. <u>UN number</u>	
14.2. <u>UN proper shipping name</u>	
14.3. <u>Transport hazard class(es)</u>	
14.4. <u>Packing group</u>	
IATA	Not regulated
14.1. <u>UN number</u>	
14.2. <u>UN proper shipping name</u>	
14.3. <u>Transport hazard class(es)</u>	
14.4. <u>Packing group</u>	
14.5. <u>Environmental hazards</u>	No hazards identified
14.6. <u>Special precautions for user</u>	No special precautions required
14.7. <u>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</u>	Not applicable, packaged goods

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SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed.

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Glycerin	200-289-5	-		X	X	-	X	X	X	X	KE-2929 7

National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Glycerin	WGK 1	

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

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OECD - Organisation for Economic Co-operation and Development

ATE - Acute Toxicity Estimate

BCF - Bioconcentration factor

VOC - Volatile Organic Compounds

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Creation Date	02 Dec 2019
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Revision Summary	Not applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet