SECTION1 - IDENTIFICATION OF PRODUCT AND COMPANY

1.1 Product ID

Name: GLYCERINE

Internal Code: -

1.2 Relevant identified uses and uses advised against

Recommendations for Use: Industrial raw material.
Uses advised against: Those not listed.

1.3 Supplier

RENOVA S.A.
Calle 11 y Scapigliatti, 2200 San Lorenzo, Santa Fe, Argentina
T: +54 3476 424899

1.4 Emergency telephone

Emergency (24 hours):
0800 222 2933

SECTION2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to the Globally Harmonized System

This product does not meet the criteria for classification in a hazard class under Resolution 801/2015 of the Superintendence of Occupational Risks in the Ministry of Labor, Employment and Social Security. However, upon request a DATA SHEET will be provided

2.2 Label elements

Pictogram: None

Warning: None

2.3 Other hazards

None.

SECTION3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

GLYCERINE 100 %
CAS 56-81-5

3.2 Mixture

Non applicable

SECTION4 – FIRST AIDS

4.1 First Aids description

General measures:	Avoid exposure to the product, taking appropriate protective measures. Consult your doctor, taking the safety data sheet.
Inhalation:	Move victim and get fresh air. Stay calm. If not breathing, give artificial respiration. If you have breathing difficulty, give oxygen. Call the doctor.
Contact with skin:	Wash immediately after contact with soap and water for at least 20 minutes. DO NOT use kerosene, gasoline or organic solvents to remove the product. Use a kitchen oiled paper. Remove contaminated clothing and wash before reuse. In case of burns, keep the area cooled with fresh water for at least 5 minutes. Do not use ice. Avoid hypothermia. Do not remove clothing stuck to the skin, cut around the area.
Contact with eyes:	Immediately flush with water for at least 20 minutes, and keep the eyelids open to ensure that all eye and lid tissues become clear. Washing eyes within several seconds is essential to achieve maximum effectiveness. If you have contact lenses, remove them after the first 5 minutes, then continue rinsing eye. Seek medical advice.
Ingestion:	Do not induce vomiting. Give water to drink. Never give anything by mouth to an unconscious person. Call your doctor. If vomiting occurs spontaneously, place the victim side to reduce the risk of aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: It can be irritating to the airways
Skin contact: Frequent or prolonged contact may cause skin irritation and dermatitis.
Eye contact: May be irritating to the eye
Ingestion: May cause discomfort

4.3 Indication of immediate medical attention and special treatments.

Note to Physician: If ingested, material may be aspirated into the lungs and cause chemical pneumonia. Treat appropriately. Provide symptomatic treatment. For more information, contact a Poison Control Center.

SECTION5 - FIRE FIGHTING MEASURES

5.1 Extinguishing means

Appropriated means:	Use dry chemical, foam, sand or CO_2. Use the product according to surrounding materials. DO NOT USE water jets. The use of water can cause frothing, or product spillage (by bumping) of water added.

5.2 Special hazards arising from the substance or mixture

Fire hazard:	Fuel. The liquid may burn, but does not readily ignite.

5.3 Advice for firefighters

5.3.1 Fire Fighting Instructions:

Spray containers with water to keep them cool. Cool containers with flooding quantities of water until well after the fire is out.
Prevent water used for fire control or dilution from entering waterways, sewers or springs.
Hot material can cause violent when in contact with water, hot material can be projected and cause serious burns rashes.

5.3.2 Protection during firefighting:

Use self-contained breathing apparatus. Protective clothing provides limited protection only in fire situations and may not be effective in spill situations.

5.3.3 Hazardous decomposition products in case of fire:

In case of fire, it may release irritating fumes and gases and / or toxic gases, such as carbon monoxide and other substances derived from incomplete combustion.

SECTION6 - MEASURES IN CASE OF ACCIDENTAL SPILL

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For staff not part of the emergency services

Avoid sources of ignition. Evacuate personnel to a ventilated area.

6.1.2 For first responders

Avoid sources of ignition. Evacuate personnel to a ventilated area. Use self-contained breathing apparatus and skin and eye protection. Use waterproof gloves. Ventilate immediately, especially in low areas where vapors may accumulate. Do not reuse or repackage the spilled product.
Consider the information and recommendations Sections 5 and 7. Use protective equipment recommended in section 8.

6.2 Environmental precautions

Contain liquid with a dam. Prevent entry into waterways, sewers, basements or confined areas.
Hazard of physical pollution if spilled (coastlines, soil, etc.) due to its floating capacity and oily consistency.
Prevent entry of product into sewers and water intakes.
Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment. Spills form a film on the water surface preventing oxygen transfer.

6.3 Methods and materials for containment and cleaning

Collect the product through sand, vermiculite, earth or inert absorbent and completely clean or wash the area. Apply water and collected in containers marked for disposal as chemical waste residue.

6.4 Reference to other sections

See Section 8 - Exposure Controls and Personal Protection, and Section 13 - Considerations for waste.

SECTION7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not eat, drink or smoke during handling. Avoid contact with eyes, skin and clothing. Wash arms, hands and nails after handling. The use of gloves is recommended. Facilitate access to safety showers and emergency eyewash.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Store in a clean, dry, well-ventilated area. Protect from the sun. Keep containers closed.
Packaging materials:	Those supplied by the manufacturer.
Incompatible products:	Strong oxidizing agents, acids and bases.

7.3 Specific end uses

Industrial Raw Material.

SECTION8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

CMP (Res. MTESS 295/03):	10 mg/m³, Glycerine mist
CMP-CPT (Res. MTESS 295/03):	N/D
CMP-C (Res. MTESS 295/03):	N/D
TLV-TWA (ACGIH):	10 mg/m³, Glycerine mist
TLV-STEL (ACGIH):	N/D
PEL (OSHA 29 CFR 1910.1000):	10 mg/m³, Glycerine mist
IDLH (NIOSH):	N/D

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Keep ventilated workplace. Normal ventilation for standard manufacturing operations is generally adequate. Local campaigns should be used for operations that produce or release large amounts of product. In low or confined areas, mechanical ventilation should be provided.
Provide shower and eyewash stations.

8.2.2 Personal protective equipment

Protection of eyes and face:	Should wear safety glasses, splash-proof chemical (complying with EN 166).
Skin Protection:	When handling this product a PVC impermeable, a nitrile or butyl protective gloves (that meet the standards IRAM 3607-3608-3609 and 374), work clothes and safety shoes resistant to chemicals should be used.
Respiratory protection:	Where necessary, use respiratory protection to oil mists. Special attention should be paid to oxygen levels in the air. If large releases occur, use self-contained breathing apparatus (SCBA).

SECTION9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on physical and chemical properties

Aspect:	Viscous liquid.
Odor:	Characteristic smooth.
Odor threshold:	Undetermined
pH:	N/D
Melting / freezing point :	18°C (64°F)
Point / boiling range:	290°C (554°F)
Evaporation rate:	N/D
Flammability point:	>190°C
Flammability limits:	2,7% - 19%
Steam pressure (50°C):	0,0025 mmHg
Steam density (air=1):	N/D
Density (20°C):	1,26 g/cm^3
Solubility (25°C):	Fully miscible in water.
Partition coefficient (log$K_{o/w}$):	-1,75
Ignition temperature:	370°C (698°F)
Viscosity (cSt a 40°C):	225 cSt
Henry Constant (20°C):	undetected
Log Koc:	undetected
Explosive properties:	Not explosive. According to column 2 of Annex VII of REACH, this study is not necessary because in the molecule, no chemical groups associated with explosive properties are present.
Oxidizing properties:	According to column 2 of Annex XVII of REACH, this study is not necessary because: the substance and its chemical structure are incapable of reacting exothermically with combustible materials.

9.2 Additional information

Other properties: None.

SECTION10 – STABILITY AND REACTIVITY

10.1 Reactivity

The material does not react dangerously

10.2 Chemical stability

It does not cause dangerous reactions if handled and stored in accordance with the rules.
Stored at normal room temperatures (-40 ° C to + 40 ° C), the product is stable

10.3 Possibility of hazardous relations

The material does not develop dangerous polymerization.

10.4 Conditions to avoid

Avoid high temperatures

10.5 Incompatible materials

Strong oxidizing agents, acids and bases.

10.6 Hazardous decomposition products

When heated, it may release toxic and irritating vapors. In case of fire, see section 5.

SECTION11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	LD50 oral (rat, OECD 401): > 2000 mg/kg LD50 der (rabbit, OECD 402): > 2000 mg/kg LC50 inh. (rat, 4hs., OECD 403): 2,75 mg/l
Skin irritation or skin corrosion:	Skin irritation (rabbit, OECD 404): non-irritant
Irritation Serious eye damage:	Eye irritation (rabbit, OECD 405): non-irritant
Respiratory or skin sensitization:	Skin sensitivity (guinea pig OECD 406): non-sensitizing Respiratory sensitization (guinea pig OECD 403): non-sensitizing

Mutagenicity, carcinogenicity and reproductive toxicity:

There is no information about any component of this product present at levels greater than or equal to 0.1% as probable, possible or confirmed by the IARC (International Agency for Research on Carcinogens) human carcinogen.

Acute and delayed effects:

Routes of exposure: Inhalation, skin contact and eye.

Inhalation: May be irritating to the airways
Skin contact: Frequent or prolonged contact may cause skin irritation and dermatitis.
Eye contact: May be irritating to the eye
Ingestion: May cause discomfort.

SECTION12 – INFORMACIÓN ECOLÓGICA

12.1 Toxicity

EC50 (O. mykiss, OECD 203, 48 h): > 100 mg/l
EC50 (D. magna, OECD 202, 48 h): > 100 mg/l
EC50 (P. subcapitata, OECD 201, 48 h): > 100 mg/l
EC50 (T. pyriformis, OECD 209, 48 h): > 100 mg/l
EC50 (D. rerio, OECD 204, 14 d): > 10 mg/l
EC50 (D. magna, OECD 211, 14 d): > 10 mg/l

PNEC (water): undetermined
PNEC (sea): undetermined
PNEC-STP: undetermined

12.2 Persistence and degradability

BIODEGRADABILITY (estimated): Biodegradable.

12.3 Bioaccumulation potential

Log $K_{o/w}$: -1,75
BIOACUMMULATION IN FISH – BCF (OCDE 305): undetermined

12.4 Mobility in soil

LogK_{oc}: undetermined
Henry constant (20°C): undetermined

12.5 Results of PBT and vPvB (PBT y mPmB)

This substance / mixture does not meet the PBT criteria of Annex XIII of REACH.
This substance / mixture does not meet the vPvB criteria in Annex XIII of REACH.

12.6 Other adverse effects

AOX and metal content: It contains no organic halogens and non-metals.

SECTION13 – DISPOSAL CONSIDERATIONS

Both the excess product and empty containers must be disposed of according to current legislation concerning protection of the environment and in particular of hazardous waste (Argentine National Law No. 24,051 and its regulations). You will classify the waste and dispose of it by an authorized company.
Procedure of disposal: incineration or treatment of sewage.

SECTION14 – TRANSPORT INFORMATION

14.1 GROUND TRANSPORTATION

Proper Shipping Name:	NOT DANGEROUS FOR TRANSPORT
IN ° UN / ID:	NOT DANGEROUS FOR TRANSPORT
Hazard Class:	NOT DANGEROUS FOR TRANSPORT
Packing Group:	NOT DANGEROUS FOR TRANSPORT
Risk Code:	NOT DANGEROUS FOR TRANSPORT
Limited and excepted quantity:	NOT DANGEROUS FOR TRANSPORT

14.2 AIR TRANSPORT (ICAO/IATA)

Proper Shipping Name:	NOT DANGEROUS FOR TRANSPORT
IN ° UN / ID:	NOT DANGEROUS FOR TRANSPORT
Hazard Class:	NOT DANGEROUS FOR TRANSPORT
Packing Group:	NOT DANGEROUS FOR TRANSPORT
Instructions for passenger and cargo aircraft:	NOT DANGEROUS FOR TRANSPORT
Instructions for cargo planes:	NOT DANGEROUS FOR TRANSPORT
CRE:	NOT DANGEROUS FOR TRANSPORT

14.3 MARINE TRANSPORT (IMO)

Transportation packaging according to the IMDG Code

Proper Shipping Name:	NOT DANGEROUS FOR TRANSPORT
UN / ID in °:	NOT DANGEROUS FOR TRANSPORT
Hazard Class:	NOT DANGEROUS FOR TRANSPORT

Packing Group:	NOT DANGEROUS FOR TRANSPORT
EMS:	NOT DANGEROUS FOR TRANSPORT
Stowage and segregation:	NOT DANGEROUS FOR TRANSPORT
Marine pollutant:	NO
Name for transport documentation:	NOT CLASSIFIED AS DANGEROUS FOR TRANSPORT

SECTION15 – REGULATION OF USE

15.1 Regulations and legislation on health, safety and specific for the substance or mixture

Not hazardous to the ozone layer (1005/2009 / EC).
Volatile organic compounds (VOC) (2004/42 / EC): N / A

15.2 Chemical Safety Assessment

The supplier has not made an assessment of chemical safety of this substance / mixture.

SECTION16 – OTHER INFORMATIOM

16.1 Abbreviations and acronyms

N / A: not applicable.
N / D: No information available.
CAS: Chemical Abstracts Service
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists.
TLV: Threshold Limit Value
TWA: Time Weighted Average
STEL: Short Term Exposure REL:
PEL: Permissible Exposure Limit.
INSHT: National Institute for Safety and Health at Work.
ATE: Acute toxicity estimate.
LD50: Lethal Dose.
LC50: Lethal Concentration.
EC50: Average Effective Concentration.
IC50: Inhibitory Concentration Medium.
|: Changes from the previous revision.

16.2 Key literature references and sources of data

SAFETY DATA SHEET according to Resolution 801/2015 of the Superintendence of Occupational Risks, MTESS, and IRAM 41400: 2013 - SAFETY DATA format.
Resolution 295/2003 Ministry of Labor, Employment and Social Security, Argentina Republic - Environmental exposure controls.
Resolution 310/2003 Superintendence of Occupational Risks, Ministry of Labor, Employment and Social Security, Argentina - carcinogens.
National Law No. 24.051 and its regulations, Argentina Republic - Act of hazardous waste.
Resolution 195/97 Department of Public Works and Transportation, Republic Argentina - General Regulation on the Transport of Dangerous Goods by Road.
Regulation (EC) 1272/2008 on classification, labeling and packaging of chemical and mixture substances, as amended.
Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), as amended.
Dir. 91/689 / EEC on hazardous waste and Dir. 91/156 / EEC waste management.
European Agreement on the International Carriage of Dangerous Goods by Road (ADR 2015)).
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2015).
International Maritime Dangerous Goods (IMDG 34 ed.), IMO Resolution MSC 90/28 / Add.2.
IBC code / Marpol, IMO Resolution MEPC 64/23 / Add.1.
Regulations of the International Air Transport Association (IATA 56 ed., 2015) on the transport of dangerous goods by air.
Globally Harmonized System of Classification and Labelling of Chemicals, Revised fifth edition, 2015 (SGA 2015).
International Agency for Research on Cancer (IARC) classification of carcinogen. Revision: 03/23/2015.

16.3 Classification and procedure used to determine the classification of the mixture

Procedures according to SGA / GHS and Resolution 801/2015 of the Superintendence of Occupational Risks, MTESS.
The classification has been made based on similar chemical and product information.
Section2: classification by analogy with other products, and based on product data.
Section9: product data.
Flammability: according to test data.
SECTION11 and 12: analogy with other products.
Acute toxicity: calculation method of estimating acute toxicity.

16.4 Disclaimer

This document is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained herein has been compiled from sources considered reliable by Renova SA and represents the knowledge of the Company. It not intended to be a comprehensive document on hazard communication regulations worldwide.

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