

SAFETY DATA SHEET

GLUCONO-DELTA-LACTONE

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

1.1 Product identifier:	
CAS Number:	90-80-2
EC number:	202-016-5
1.2 Relevant identified uses of the substance or mixture and uses advised against:	No further relevant information available. ·
	Application of the substance / the mixture Research use only

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is not classified according to the CLP regulation.
2.2 Label elements:	Labelling according to Regulation (EC) No 1272/2008 Void Hazard pictograms Void Signal word Void Hazard statements Void
2.3 Other hazards:	
Results of PBT and vPvB assessment	PBT: Not applicable. vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description 90-80-2 D-Glucono-delta-Lactone
Identification number(s):	EC number: 202-016-5

SECTION 4: First aid measures

4.1 Description of first aid measures	No special measures required
General information:	
After inhalation:	Supply fresh air; consult doctor in case of complaints.
After skin contact:	Generally the product does not irritate the skin.
After eye contact:	Rinse opened eye for several minutes under running water.
After swallowing:	If symptoms persist consult doctor.
4.2 Most important symptoms and effects, both acute and delayed	No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed	No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media	Suitable extinguishing agents: CO ₂ , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
5.2 Special hazards arising from the substance or mixture	No further relevant information available.
5.3 Advice for firefighters	Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Not required.
6.2 Environmental precautions:	No special measures required.
6.3 Methods and material for containment and cleaning up:	Pick up mechanically.

6.4 Reference to other sections
See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	No special measures required.
Information about fire - and explosion protection:	No special measures required.
7.2 Conditions for safe storage, including any incompatibilities	Storage: 15-30 °C .
Requirements to be met by storerooms and receptacles:	No special requirements.
Information about storage in one common storage facility:	Not required
7.3 Specific end use(s):	No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	No further data; see item 7.
Ingredients with limit values that require monitoring at the workplace:	Not required
Additional information:	The lists valid during the making were used as basis.
8.2 Exposure controls	
Personal protective equipment:	
General protective and hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals

	Respiratory protection: Not required.
Protection of hands:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
	Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
	Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves:	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Penetration time of glove material:	The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
	Eye protection: Not required

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information	
Appearance: Form:	Crystalline powder
Colour:	White
Odour:	Indeterminate
Odour threshold:	Not determined.

pH-value:	Not applicable
Change in condition	153 - 163 °C B
Melting point/Melting range:	
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Ignition temperature:	
Decomposition temperature:	Not determined
Self-igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard
Explosion limits: Lower:	27,5 Vol % Upper: 2 Vol %
Vapour pressure:	Not applicable.
Density at 20 °C:	0,6 g/cm ³
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable
Solubility in / Miscibility with- water at 20 °C:	500 g/l Easily soluble.
Partition coefficient:	(n-octanol/water):Not determined
Viscosity:	Dynamic: Not applicable.
Kinematic:	Not applicable.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	No further relevant information available
10.2 Chemical stability	Thermal decomposition / conditions to be avoided No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known.
10.4 Conditions to avoid	No further relevant information available.
10.5 Incompatible materials:	No further relevant information available.

10.6 Hazardous decomposition products:

No dangerous decomposition products known

SECTION 11: Toxicological information

11.1 Information on toxicological effects	Acute toxicity Based on available data, the classification criteria are not met.
Primary irritant effect:	Skin corrosion/irritation Based on available data, the classification criteria are not met.
	Serious eye damage/irritation Based on available data, the classification criteria are not met. Respiratory or skin sensitisation Based on available data, the classification criteria are not met
	CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
	Germ cell mutagenicity Based on available data, the classification criteria are not met.
	Carcinogenicity Based on available data, the classification criteria are not met
	Reproductive toxicity Based on available data, the classification criteria are not met
	STOT-single exposure Based on available data, the classification criteria are not met.
	STOT-repeated exposure Based on available data, the classification criteria are not met.
	Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability:	No further relevant information available
12.3 Bioaccumulative potential:	No further relevant information available.
12.4 Mobility in soil:	No further relevant information available.
Additional ecological information: General notes:	Generally not hazardous for water
12.2 Persistence and degradability	No further relevant information available
12.3 Bioaccumulative potential	No further relevant information available
12.4 Mobility in soil	No further relevant information available
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available

SECTION 13: Disposal considerations •

13.1 Waste treatment methods	Recommendation Smaller quantities can be disposed of with household waste.
Uncleaned packaging: Recommendation:	Disposal must be made according to official regulations.
Recommended cleansing agents:	Water, if necessary together with cleansing agents

SECTION 14: Transport information

14.1 UN-Number • ADR, ADN, IMDG, IATA:	Not regulated
14.2 UN proper shipping name • ADR, ADN, IMDG, IATA:	Not regulated

14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	Class Not regulated
14.4 Packing group · ADR, IMDG, IATA:	Not regulated
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable
UN "Model Regulation":	Not regulated

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU	REACH Regulation (EC) No. 1907/2006, CLP Regulation (EC) No. 1272/2008 The substance is not classified under any harmful substances.
Named dangerous substances	ANNEX I Substance is not listed
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Product safety department · Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative.