

1. IDENTIFICATION

Product Name	Maltol
Other Names	4H-Pyran-4-one, 3-hydroxy-2-methyl-; Ethylmaltose
Uses	Flavourings
Chemical Family	3-Hydroxy-2-methyl-4-pyranone
Chemical Formula	C ₆ H ₆ O ₃
Chemical Name	Maltol
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details


For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not scheduled

Globally Harmonised System

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
Hazard Categories	Acute Toxicity (Oral) - Category 4		
Pictograms			
Signal Word	Warning		
Hazard Statements	H302	Harmful if swallowed.	
Precautionary Statements	Prevention	P264	Wash hands thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
	Response	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
		P330	Rinse mouth.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	6.1D	Substances that are acutely toxic - Harmful
	Environmental Hazards	9.3C	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Hydroxymethylpyrone	No Data Available	118-71-8	>99 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Immediately drink plenty of water; Seek medical advice and show this container or label.
Eye	Rinse thoroughly with plenty of water for at least 15 minutes lift the upper and lower eyelid and seek medical advice
Skin	Take off all contaminated clothing, wash with plenty of water, seek medical attention if required.
Inhaled	Provide with fresh air, if breathing is difficult, seek medical attention.
Advice to Doctor	No Data Available
	No Data Available

Medical Conditions Aggravated by Exposure

5. FIRE FIGHTING MEASURES

General Measures	Do not stay in danger zone without self-contained breathing apparatus.
Flammability Conditions	No Data Available
Extinguishing Media	Carbon dioxide (CO ₂), foam, powder
Fire and Explosion Hazard	Cool container with water spray from a safe distance. Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or groundwater. Keep away from sources of ignition
Hazardous Products of Combustion	Combustible. Vapours heavier than air. Forms explosive mixtures with air at ambient temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. All combustion residues and contaminated water from fire-fighting should be disposed of according to regulations. DO NOT approach containers suspected to be hot. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Flash Point	>110 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	740 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms. Avoid generation of dusts; do not inhale dusts.
Clean Up Procedures	Take up with liquid-absorbent material. Forward for disposal. Clean affected area
Environmental Precautionary Measures	Do not allow to enter sewage system.

7. HANDLING AND STORAGE

Handling	Take precautionary measures against static discharges. Keep away from source of ignition. When using do not eat or drink.
Storage	Tightly closed, in a well-ventilated place. Keep away from source of ignition - no Smoking
Container	Store in original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Avoid contact with eyes, skin, clothing, and breathing vapour.
Exposure Limits	No Data Available
Biological Limits	Information not available
Engineering Measures	Local exhaust ventilation.
Personal Protection Equipment	Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with

the respective supplier.

- Respiratory protection: Required when vapours/aerosols are generated.
 - Eye protection: Wear eye/ face protection
 - Hand protection: Wear suitable gloves
 - Industrial hygiene: Change contaminated clothing
- Application of skin-protective barrier cream recommended.

Work Hygienic Practices

Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder
Odour	Fruity
Colour	White to pale yellow
pH	5.3
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	161 - 163 °C
Freezing Point	No Data Available
Solubility	1.2g/100ml (Organic solvents - Soluble)
Specific Gravity	No Data Available
Flash Point	>110 °C
Auto Ignition Temp	740 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available

Reactions That Release Gases or Vapours No Data Available

Release of Invisible Flammable Vapours and Gases No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability product is stable under normal storage conditions.
Conditions to Avoid Heat
Materials to Avoid Strong oxidising agents
Hazardous Decomposition Products Carbon monoxide, carbon dioxide
Hazardous Polymerisation Information not available

11. TOXICOLOGICAL INFORMATION

General Information LD50 oral, rat: 1410 mg/kg
May be harmful if inhaled, swallowed, or if absorbed through the skin
Ingestion May be harmful if swallowed.
Ingestion May be harmful if swallowed
Skin Irritant May be harmful if absorbed through the skin
Carcinogen Category No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity No information available
Persistence/Degradability No information available
Mobility No information available
Environmental Fate Do not allow to enter water, drain or soil.
Bioaccumulation Potential No information available
Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of according to local regulations.
Special Precautions for Land Fill No Data Available

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available

UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	MALTOL
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR004797
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	204-271-8
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined

New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	MALTOL1000, MALTOL1001, MALTOL1002, MALTOL1003, MALTOL1004, MALTOL1100, MALTOL2000, MALTOL3250, MALTOL3251, MALTOL4025, MALTOL8000
Revision	1
Revision Date	30 Aug 2015
Reason for Issue	New SDS
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal</p>

ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight