

1. IDENTIFICATION

Product Name	Hexylene Glycol
Other Names	2-Methyl-2,4-pentanediol
Uses	Uses in coatings and cleaning agents; Lubricants; Metal working fluids; Use as binder and release agent; Functional fluids; Use in laboratories; Road and construction applications; Cosmetics; Use in textile dye vehicles; as a solvent in petroleum refining; as a cement additive; as a chemical intermediate. *Uses advised against: Food additive; Medicinal products.
Chemical Family	No Data Available
Chemical Formula	C ₆ H ₁₄ O ₂
Chemical Name	2,4-Pentanediol, 2-methyl-
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox 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

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Irritation - Category 2A

Toxic To Reproduction - Category 2

Pictograms



Signal Word

Warning

Hazard Statements

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H361d

Suspected of damaging the unborn child.

Precautionary Statements

Prevention

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P201

Obtain special instructions before use.

Response

P302 + P352

IF ON SKIN: Wash with plenty of water.

P337 + P313

If eye irritation persists: Get medical advice.

P332 + P313

If skin irritation occurs: Get medical advice.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313

IF exposed or concerned: Get medical advice.

P362 + P364

Take off contaminated clothing and wash it before reuse.

Storage

P405

Store locked up.

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)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification

Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Hexylene glycol	C6H14O2	107-41-5	>=99 - <=100 %
Non-hazardous ingredients	Unspecified	Unspecified	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth with water. Do not induce vomiting. Get immediate medical advice/attention.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Remove contaminated clothing and shoes immediately. Place affected clothing in a sealed bag for subsequent decontamination. Flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	If exposed or concerned, get medical advice/attention. Treat symptomatically and supportively. There is no specific antidote available. Show this safety data sheet (SDS) to the doctor in attendance. *Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	Skin contact may aggravate existing skin disease. Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Combustible liquid (C2): May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use high volume water jet. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Containers may explode when heated. Explosive mixtures may occur at temperatures at or above the flashpoint. Vapours can travel to a source of ignition and flash back.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic gases, including Carbon oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	93 - 97 °C [Closed cup]
Lower Explosion Limit	1.0 %
Upper Explosion Limit	9.9 %
Auto Ignition Temperature	306 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin and clothing.
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Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to suitable, properly labelled containers for disposal (see SECTION 13). Non-sparking tools should be used.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Turn leaking containers leak-side up to prevent the escape of liquid.
Decontamination	Clean contaminated floors and objects thoroughly while observing environmental regulations.
Environmental Precautionary Measures	Prevent the material from entering sewage system, drains or watercourses. Local authorities should be advised if significant spillages cannot be contained.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	<p>Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Combustible liquid (C2): Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground and bond container and receiving equipment. Take action to prevent static discharges.</p> <p>*Electrical installations/working materials must comply with the technological safety standards.</p>
Storage	<p>Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Avoid exposure to moisture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.</p> <p>*Store contents under inert gas; Keep under nitrogen.</p>
Container	<p>Keep in the original container or suitable packaging material, i.e. Aluminium, Stainless steel, Carbon steel. Unsuitable packaging material: Plastic.</p> <p>*Residual vapours might explode on ignition; do not apply heat, cut, drill and grind or weld on or near the container.</p>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	<p>For Hexylene glycol (CAS No. 107-41-5):</p> <ul style="list-style-type: none"> - Safe Work Australia Exposure Standard: TWA = 25 ppm (121 mg/m3) Peak limitation. - New Zealand Workplace Exposure Standard [Next review 2023]: TWA = 25 ppm (121 mg/m3). - USA, ACGIH Threshold Limit Values (TLV): TWA = 25 ppm; STEL = 50 ppm (vapour). - USA, ACGIH Threshold Limit Values (TLV): STEL = 10 mg/m3 (inhalable aerosol).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: Use a respirator with an approved filter if a risk assessment indicates this is necessary. Recommended: Organic vapour respirator or self-contained breathing apparatus (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Tightly fitting safety goggles; face shield. - Hand protection: Wear protective gloves. Recommended: Nitrile rubber, Butyl rubber, Polychloroprene (PCP). - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Boots, body suit. Choose body protection according to the amount and concentration of the hazardous substance(s) at the work place.
Special Hazards Precautions	No information available.
Work Hygienic Practices	<p>Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Use clean, well-maintained personal protection equipment. Remove immediately all contaminated clothing. Use disposable clothing if appropriate.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Mild, sweet
Colour	Colourless
pH	6.9 - 7.0 (10 % m/v)
Vapour Pressure	0.067 hPa (0.05 mmHg) (@ 20 °C)
Relative Vapour Density	4.08 - 4.1 Air = 1
Boiling Point	197 - 198.5 °C
Melting Point	-50 °C
Freezing Point	No Data Available
Solubility	Completely miscible with water - Miscible with most organic solvents
Specific Gravity	0.922 - 0.923
Flash Point	93 - 97 °C [Closed cup]
Auto Ignition Temp	306 °C
Evaporation Rate	<0.01 (Butyl acetate = 1)
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.9201 - 0.924 g/cm3
Specific Heat	No Data Available
Molecular Weight	118.06 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow = 0 - < 1
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	34 mPa.s (@ 20 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible liquid (C2): May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic gases, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	Explosive mixtures may occur at temperatures at or above the flashpoint.

10. STABILITY AND REACTIVITY

General Information	Not classified as a reactivity hazard.
Chemical Stability	Stable at room temperature.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Take action to prevent static discharges.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, strong reducing agents, strong acids, acid chlorides and anhydrides.
Hazardous Decomposition Products	On combustion or thermal decomposition (pyrolysis), releases Carbon oxides (CO + CO ₂).
Hazardous Polymerisation	Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: The product has a low acute toxicity. Symptoms include headache, dizziness, nausea, in-coordination, central nervous system depression. - Skin corrosion/irritation: Causes skin irritation. Irritating to skin (Draize Test, Occlusive). Repeated or prolonged contact with skin may cause dry skin, redness, dermatitis. - Eye damage/irritation: Causes serious eye irritation, redness, pain. Slight irritation (Rabbit) [OECD TG 405]. Humans: Irritating to eyes (largely based on human evidence). - Respiratory/skin sensitisation: No sensitising effects known. Responding animals in GPMT: < 30 % [OECD TG 406]. - Germ cell mutagenicity: Non-mutagenic. Negative, in vitro (Reverse mutation assay) [OECD TG 471]. Negative (Chromosome aberration test, in vitro) [OECD TG 473]. Negative, in vitro (Gene mutation assays in mammalian cells) [OECD TG 476]. - Carcinogenicity: Non carcinogenic. - Reproductive toxicity: Suspected of damaging the unborn child (Developmental toxicity, NOAEL: 250 mg/kg bw/day). No impairment of fertility has been observed. - STOT (single exposure): The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria. Inhalation of vapours in high concentration may cause irritation of respiratory system, sore throat, cough. - STOT (repeated exposure): The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria. Not considered to cause serious damage to health on repeated exposure. - Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat (male/female): >2,000 mg/kg (Gavage) [OECD TG 420]. - LD50, Rat (male): 4,700 mg/kg (Gavage) [OECD TG 401].
Other	Acute toxicity (Dermal): - LD50, Rat (male/female): >2,000 mg/kg OECD TG 402]. *No mortality observed at this dose.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - Not harmful to aquatic life (LC/LL50, EC/EL50 > 100 mg/L).
Persistence/Degradability	The product is considered to be rapidly degradable in the environment. - Biodegradation: 81 % (28 days) [OECD TG 301 F]. - The 10 day time window criterion is fulfilled.
Mobility	Low possibility for sorption in soil. Ultimate destination of the product: Water.
Environmental Fate	Avoid release to the environment - The product should not be allowed to enter drains, watercourses or the soil.

Bioaccumulation Potential	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container to a licensed waste management company and in accordance with local/regional/national regulations. Do not dispose of with domestic refuse.
Special Precautions for Land Fill	Do not re-use empty containers. Empty remaining contents and allow to drain thoroughly.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Hexylene Glycol
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Hexylene Glycol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Hexylene Glycol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Hexylene Glycol
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Hexylene Glycol
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
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Hexylene Glycol
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
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

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 Additives Process Chemicals and Raw Materials Subsidiary Hazard Group Standard 2020 HSR002503
*HSR003002 (Revoked)

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	203-489-0
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
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 HEGLYC0100, HEGLYC0400, HEGLYC0500, HEGLYC0600, HEGLYC0700, HEGLYC0800, HEGLYC0805, HEGLYC0900, HEGLYC1000, HEGLYC1001, HEGLYC1002, HEGLYC1003, HEGLYC1004, HEGLYC1100, HEGLYC1101, HEGLYC1150, HEGLYC1200, HEGLYC1201, HEGLYC1300, HEGLYC1301, HEGLYC1302, HEGLYC1400, HEGLYC1500, HEGLYC1800, HEGLYC1801, HEGLYC1802, HEGLYC1803, HEGLYC1804, HEGLYC1805, HEGLYC1806, HEGLYC1807, HEGLYC1808, HEGLYC3000

Revision 5

Revision Date 21 Sep 2022

< Less Than

Key/Legend

> 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 Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
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