Safety Data Sheet OIL RED O

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SECTION 1: Identification

GHS Product identifier

Product name	OIL RED O
Product number	AORO

Recommended use of the chemical and restrictions on use
Laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

National contact

Name	Australian Biostain Pty Ltd
Address	16 Shipwright Road 5016 Largs North SA Australia

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 2A
- Specific target organ toxicity following single exposure, Cat. 3
- Flammable liquids, Cat. 2

GHS label elements, including precautionary statements

Pictograms

Signal word	**Warning**

Hazard statement(s)

H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physcian if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use agents recommended in Section 5 of SDS for extinction
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Components

Component	CAS no.	Concentration
Isopropanol (EC no.: 200-661-7; Index no.: 607-403-00-6)	**67-63-0**	**>= 99 % (weight)**
CLASSIFICATIONS: Flammable liquids, Cat. 2; Serious eye damage/eye irritation, Cat. 2A; Specific target organ toxicity following single exposure, Cat. 3. HAZARDS: H225 - Highly flammable liquid and vapor; H319 - Causes serious eye irritation; H336 - May cause drowsiness or dizziness.		
Oil Red O (EC no.: 215-295-3)	**1320-06-5**	**< 0.5 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).
If inhaled	f inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical attention if irritation develops or persists.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Caution: Use of water spray when fighting fire may be inefficient.
Small fire: Use alcohol resistant foam, dry chemical, CO2 or water spray.
Large fire: Use alcohol resistant foam, fog or water spray - Do not use water jets.
If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers. Alcohol resistant foam is a preferred firefighting medium, but if not available, fine water spray can be used.

Specific hazards arising from the chemical
HIGHLY FLAMMABLE: These liquids have a low flashpoint - Will be easily ignited by heat, sparks or flame. Vapours will form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Many liquids are lighter than water. Containers may explode when heated. Fire will produce irritating, poisonous and/or corrosive gases. Vapours from runoff may create explosion hazard.

Special protective actions for fire-fighters
Wear SCBA and fully-encapsulating, gas-tight suit when handling these substances. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Methods and materials for containment and cleaning up
ELIMINATE all ignition sources (no smoking, flares, sparks or flame) within at least 50m - All equipment used when handling the product must be earthed. Do not touch or walk through spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Vapour-suppressing foam may be used to control vapours - Water spray may be used to knock down or divert vapour clouds. Absorb with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling
Use in well ventilated areas away from all ignition sources. Intrinsically safe equipment only must be used in area where this chemical is being used. The use of compressed air for filling, discharging, mixing or handling is prohibited due to the vapour hazard. Containers must be earthed to avoid generation of static charges when agitating or transferring product.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed and in a cool, dry, well-ventilated place, away from direct sunlight and other sources of heat or ignition. Isolate from incompatible substances. Store away from oxidizing agents. Keep containers closed at all times - check regularly for leaks. Do not eat, drink or smoke in areas of use or storage. Empty containers retain residue (liquid and/or vapour and can be dangerous. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources or ignition.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 67-63-0
Isopropanol
AU/SWA (Australia): 500 ppm; 1230 mg/m3 STEL inhalation; 400 ppm; 983 mg/m3 TWA inhalation;

Appropriate engineering controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against
chemicals should comply with AS 3765 Clothing for Protection Against Hazardous
Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection
Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Red, clear, mobile liquid.
Color	No data available.
Odor	Alcoholic
Odor threshold	No data available.
Melting point/freezing point	-89 °C
Boiling point or initial boiling point and boiling range	82 °C
Flammability	Highly Flammable
Lower and upper explosion limit/flammability limit	Flammable Limits - Lower: 2.00% Flammable Limits - Upper: 12%
Flash point	12 °C
Explosive properties	Not classified as explosive, but vapours may form explosive mixtures.
Auto-ignition temperature	398 °C
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water (log value)	Log P(oct) = 0.05. isopropanol
Vapor pressure	43 hPa at 20 °C
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 0.79
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
No data available.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Risk of ignition. Vapours may form explosive mixtures with air

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Contact with strong oxidising agents (e.g. nitrates, perchlorates, peroxides) increases risk of fire and explosion. Contact with phosgene forms isopropyl chloroformate and hydrogen chloride. Explosive thermal decomposition may occur in contact with iron salts. Mixture with hydrogen-palladium can ignite in air.

Conditions to avoid
Heat, flames, ignition sources, electrostatic discharge, sunlight and incompatibles.

Incompatible materials
Strong oxidising agents (e.g. chromium trioxide, nitric acid and nitrates, nitrogen oxides, nitrates, calcium hypochlorite, chlorine, sodium dichromate, hydrogen peroxide and other peroxides, permanganates and perchlorates), strong acids (e.g. nitric acid, sulfuric acid, fuming sulfuric acid, hypochlorous acid, oleum, perchloric acid), hydrogen peroxide-sulfuric acid combination, acid anhydrides, acetaldehyde, nitroform, organic nitro compounds, aldehydes, amines, alkali metals (e.g. sodium or potassium) or alkaline earth metals (e.g. magnesium or calcium), aluminium, crotonaldehyde or phosgene, potassium tert-butoxide, trinitromethane, iron and iron salts, hydrogen-palladium combination, ethylene oxide, hexamethylene diisocyanate and other isocyanates and tri-isobutyl aluminium.

Hazardous decomposition products
Irritant gases, which may include unburned alcohol and toxic constituents, oxides of carbon and peroxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute Toxicity - Oral: LD50 (rat): 5045 mg/kg.

Ingestion: Unlikely under normal occupational exposures, but swallowing a minor amount may cause minor throat irritation and vomiting. Ingestion of larger amounts (about 100 grams or more) may cause headache, dizziness, drowsiness, inebriation, unconsciousness, narcosis, gastrointestinal pain, cramps, nausea, vomiting and diarrhoea. Large amounts may cause respiratory paralysis, coma, unconsciousness and death. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. Aspiration can result in severe, life-threatening lung damage.

Inhalation: Mild irritation to the nose, throat and upper respiratory tract can occur at concentrations above 400 ppm. It can probably cause central nervous system (CNS) depression, based on animal information and comparison to related alcohols. Symptoms may include headache, nausea, vomiting, dizziness, drowsiness, staggering, ataxia, deep narcosis and incoordination. Higher concentrations may result in unconsciousness and death.

Skin corrosion/irritation
Degreasing effect on the skin, possibly followed by secondary inflammation. Brief contact is not irritating or mildly irritating to the skin, based on human and animal evidence. May be absorbed through the skin with possible systemic effects.

Serious eye damage/irritation
Moderate to severe eye irritant, based on animal evidence. Exposure of volunteers to vapours at approximately 400 ppm for 3 to 5 minutes produced mild irritation, while 800 ppm was considered objectionable. Direct eye contact with the liquid and splashes may cause severe eye irritation, pain, redness, possible corneal burns and eye damage.

Respiratory or skin sensitization
Not classified based on available information.

Germ cell mutagenicity

Germ cell mutagenicity: Not classified based on available information.

Mutagenicity: Not classified based on available information.

Carcinogenicity
Isopropanol [67-63-0] is evaluated in the IARC Monographs (Vol. 15, Suppl. 7, Vol. 71; 1999) as Group 3: Not classifiable as to carcinogenicity to humans.
See: http://monographs.iarc.fr/ENG/Monographs/vol71/mono71-45.pdf

Reproductive toxicity
There is no human information available. It is not possible to draw any conclusions from the available animal studies.

Specific target organ toxicity (STOT) - single exposure
May cause drowsiness or dizziness

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Aspiration hazard
Not classified based on available information.

Additional information
Chronic Effects: Repeated or prolonged skin contact can cause drying, cracking and dermatitis due to its defatting. Prolonged contact (e.g. clothing saturated with the product) can be irritating. Some animal isopropanol exposure studies have noted increased liver and kidney weights in exposed animals but no observable relevant pathology. With particular relevance to the liver, this weight change may be considered to be more of a metabolic response rather than a toxic effect of the alcohol. Occupational exposure to isopropanol has not been reported as causing long term effects.

SECTION 12: Ecological information

Toxicity
Ecological Information: The following information relates to isopropanol.

Acute Toxicity - Fish: LC50 (Pimephales promelas): 9640 mg/l /96 h.

Acute Toxicity - Algae: EC50 (Desmodesmus subspicatus): > 1000 mg/l /72 h.

Acute Toxicity - Bacteria: EC50 (Photobacterium phosphoreum) EC50: 22000 mg/l /15 min Microtox-Test.
Maximum permissible toxic concentration:
EC5 (Pseudomonas putida): 1050 mg/l /16 h.

Acute Toxicity - Other Organisms: Maximum permissible toxic concentration:
EC5 (Entosiphon sulcatum): 4930 mg/l /72 h.

Persistence and degradability
Abiotic degradation: Rapid degradation. (air)
Biologic degradation: Biological degradableness: 95 % /21 D of modified OECD Screening Test.
TOD: 2.40 g/g. BOD 49 % from TOD /5 d. COD 96 % from TOD.

Bioaccumulative potential
No bioaccumulation is to be expected (log P(o/w <1).

Mobility in soil

Distribution: log P(o/w): 0.05 (experimental).

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal
No bioaccumulation is to be expected (log P(o/w <1).

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 1993
Class: 3
Packing Group: II
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.

Hazchem emergency action code (EAC)
•3YE

IMDG
UN Number: 1993
Class: 3
Packing Group: II
EMS Number:
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.

IATA
UN Number: 1993
Class: 3
Packing Group: II
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer
ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the

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Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)