

1. IDENTIFICATION

Product Name	Ethoxylated nonylphenol 15EO
Other Names	Nonylphenol polyethylene glycol ether; Polyethylene glycol, nonylphenyl ether
Uses	Surfactant.
Chemical Family	No Data Available
Chemical Formula	(C ₂ H ₄ O) _n C ₁₅ H ₂₄ O
Chemical Name	Poly(oxy-1,2-ethanediy), .alpha.-(nonylphenyl)-.omega.-hydroxy-
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 NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Acute Hazard To The Aquatic Environment - Category 2
Long-term Hazard To The Aquatic Environment - Category 2
Acute Toxicity (Oral) - Category 4
Serious Eye Damage/Irritation - Category 2A
Skin Corrosion/Irritation - Category 2

Pictograms



Signal Word Warning

Hazard Statements

H411	Toxic to aquatic life with long lasting effects.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary Statements

Prevention	P280	Wear protective gloves/eye protection/face protection.
	P273	Avoid release to the environment.
Response	P270	Do not eat, drink or smoke when using this product.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
	P391	Collect spillage.
	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
	P330	Rinse mouth.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
Disposal	P362	Take off contaminated clothing and wash before reuse.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	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	6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
	6.3B	Substances that are mildly irritating to the skin
	6.4A	Substances that are irritating to the eye
Environmental Hazards	9.1B	Substances that are ecotoxic in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Polyethylene glycol, nonylphenyl ether	(C ₂ H ₄ O) _n C ₁₅ H ₂₄ O	9016-45-9	>99 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Eye	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Advice to Doctor	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Flammability Conditions	Product is a combustible liquid.
Extinguishing Media	Use an extinguishing agent suitable for the surrounding fire.
Hazardous Products of Combustion	Decomposition products may include carbon dioxide and carbon monoxide.
Special Fire Fighting Instructions	This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Personal Protective Equipment	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Flash Point	>149 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	•3Z

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Clean Up Procedures	Small Spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Large Spill: Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Containment	Stop leak if safe to do so.
Environmental Precautionary Measures	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Store in original container protected from direct sunlight. Keep away from food and drink. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. This product is classified as a 'C2' Combustible Liquid for the purpose of storage and handling in accordance with the requirements of AS1940.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC).
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
Personal Protection Equipment	RESPIRATOR: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator (AS1715/1716). EYES: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts (AS1336/1337). HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary (AS2161). CLOTHING: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product (AS3765/2210).

Work Hygienic Practices

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Paste (Liquid > 21 deg C)
Odour	No Data Available
Colour	Off-white
pH	6.0 - 8.0 Conc. (% w/w): 1%
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	21 °C
Freezing Point	No Data Available
Solubility	Soluble in cold water
Specific Gravity	1.05
Flash Point	>149 °C
Auto Ignition Temp	No Data Available
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	The product is stable. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid	Avoid extreme heat
Materials to Avoid	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous Polymerisation	No Data Available

11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: Nonylphenol, ethoxylated: LD50 Oral Rat 4000 mg/kg Chronic toxicity: Nonylphenol, ethoxylated: Chronic NOEL: Oral Rat 40 mg/kg 90 days
Eyelrritant	No known significant effects or critical hazards.
Ingestion	May be harmful if swallowed.
Inhalation	No known significant effects or critical hazards.
SkinIrritant	No known significant effects or critical hazards.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity of Nonylphenol ethoxylates is due to their physical surfactant effects. They interact with protein structure, affecting enzymatic function and membrane permeability and thereby cause toxicity to the organism. - Acute toxicity, Fish: EC50, <i>Lepomis macrochirus</i> (Bluegill): 1.3 mg/l (96 h) [Experimental, NICNAS]. - Acute toxicity, Algae: EC50, <i>Scenedesmus opoliensis</i> (Green algae): 37.4 mg/l (5 d) [Experimental, NICNAS]. - Chronic toxicity, Invertebrates: NOEC, <i>Daphnia magna</i> (Water flea): 1.0 mg/l (6 d) [Experimental, NICNAS]. - Chronic toxicity, Algae: NOEC, <i>Pseudokirchneriella subcapitata</i> (Green algae): 8.0 mg/l (96 h) [Experimental, NICNAS].
Persistence/Degradability	Nonylphenol ethoxylates are expected to undergo degradation in the environment. The amount of parent Nonylphenol ethoxylates released to the environment is expected to be limited as they are eliminated through degradation and removal in STPs. Many studies report the wide occurrence of Nonylphenol ethoxylate degradants in the environment.
Mobility	Nonylphenol ethoxylates are not expected to undergo long-range transport based on their low volatility and biodegradability in the environment. Nonylphenol ethoxylates are readily sorbed to soil and sediment, which is expected to limit their potential to undergo long-range transport in the environment. Although soluble in water, Nonylphenol ethoxylates have a relatively short primary half-life in water.
Environmental Fate	Nonylphenol ethoxylates are susceptible to rapid primary biodegradation, which results in more recalcitrant degradants, some of which are highly toxic to aquatic organisms and have the ability to interfere with the normal functioning of endocrine systems. The degradants are expected to have a common toxic mode of action, and hence the additive effects of the degradants observed in Australian STP effluents should be considered.
Bioaccumulation Potential	Nonyphenol ethoxylates have low to moderate bioaccumulation potential in aquatic organisms. Nonylphenol ethoxylates are surfactants and most surfactants tend to be retained on epithelial surfaces, rather than cross cellular membranes and bioaccumulate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	No Data Available
Hazchem	•3Z
Pack Group	No Data Available
Special Provision	AU01

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)

UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-F
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethoxylated nonylphenol 15EO)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	3Z
Pack Group	III
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)
---------------------------------------	---

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	HSR003054
----------------------	-----------

National/Regional Inventories

Australia (AICS)	Listed
-------------------------	--------

Canada (DSL)	Not Determined
---------------------	----------------

Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
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	SUFNOF1000, SUFNOF1500
Revision	3
Revision Date	02 Jul 2014
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</p>

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

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