



SAFETY DATA SHEET OLEORESIN, BLACK PEPPER REVISION 3, DATE 13 MAY 20

1. IDENTIFICATION

Product Name	Oleoresin, Black Pepper
Other Names	Pepper Black O.R 401/602; Piper nigrum, extract
Uses	Food flavouring; pharmaceuticals.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Pepper (piper), P. nigrum, extract
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

Flammable Liquids - Category 3

Skin Corrosion/Irritation - Category 2

Sensitisation (Skin) - Category 1

Aspiration Hazard - Category 1

Long-term Hazard To The Aquatic Environment - Category 1

Pictograms**Signal Word**

Danger

Hazard Statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P280 Wear protective gloves/eye protection/face protection.

P261 Avoid breathing mist/vapours/spray.

P273 Avoid release to the environment.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting and all other equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P272 Contaminated work clothing should not be allowed out of the workplace.

Response

P370 + P378 In case of fire: Use carbon dioxide (CO₂), dry chemical, foam or water fog for extinction.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P331 Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

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

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Oleoresin, black pepper	Unspecified	84929-41-9	<=100 %
Contains: Piperine	C17H19NO3	94-62-2	36 - 51 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Never give anything by mouth to an unconscious person.
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 (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. If skin irritation or rash 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. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of identity and nature of product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out. Avoid getting water inside containers.
Flammability Conditions	HIGHLY FLAMMABLE: Low flashpoint – Will be easily ignited by heat, sparks or flames at ambient temperatures.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use water jets. *Caution: Use of water spray when fighting fire may be inefficient.
Fire and Explosion Hazard	Risk of violent reaction or explosion: Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Containers may explode when heated. Many liquids are lighter than water. Many vapours are heavier than air and will collect in low or confined areas. Vapours from runoff may create an explosion hazard.
Hazardous Products of Combustion	Fire may produce irritating, toxic or corrosive gases, including Carbon monoxide and other unidentified organic compounds.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways; Vapours from runoff may create an explosion hazard.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and gas-tight suits should be worn. SCBA and structural firefighting uniform provide limited protection.
Flash Point	>=52 °C

Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	3Y

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources - All equipment used in handling the product must be earthed. Do not touch or walk through spilled material - Slippery when spilt. Avoid accidents, clean up immediately. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Absorb spill with earth, sand or other non-combustible material – Use clean, non-sparking tools to collect material and place it in suitable containers for later disposal (see SECTION 13).
Containment	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.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Large spill: Immediately contact Police or Fire Brigade; Consider initial downwind evacuation of areas within at least 300 m.
Personal Precautionary Measures	Wear protective gloves/eye protection/face protection (see SECTION 8). Large spill: SCBA and gas-tight suits should be worn when dealing with damaged or leaking containers and where there is no risk of ignition. SCBA and structural firefighting uniform provide limited protection where there is a risk of ignition.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/aerosols and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/eye protection/face protection (see SECTION 8). Flammable liquid & vapour: Keep away from heat and sources of ignition - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use - check regularly for leaks. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
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: In case of inadequate ventilation, wear respiratory protection. Recommended: Organic vapour/particulate filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical safety goggles.

- Hand protection: Wear protective gloves. Recommended: Chemically resistant gloves.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.

Special Hazards Precautions

No information available.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Viscous liquid
Odour	Terpinaceous, warm, spicy
Colour	Olive green
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Soluble in alcohol with sediments
Specific Gravity	No Data Available
Flash Point	>=52 °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 information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion.
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	HIGHLY FLAMMABLE: Low flashpoint – Will be easily ignited by heat, sparks or flames at ambient temperatures.
Reactions That Release Gases or Vapours	Carbon monoxide and other unidentified organic compounds may be formed upon combustion.
Release of Invisible Flammable Vapours and Gases	Vapours will form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	Does not undergo any dangerous reactions under normal conditions.
Chemical Stability	Stable under normal operating conditions.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with oxidising agents.
Hazardous Decomposition Products	Carbon monoxide and other unidentified organic compounds may be formed upon combustion.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none">- Acute toxicity: Ingestion may cause queasiness, stomach aches.- Skin corrosion/irritation: Causes skin irritation, stinging.- Eye damage/irritation: May cause eye irritation, reddening.- Respiratory/skin sensitisation: May cause an allergic skin reaction.- Germ cell mutagenicity: No information available.- Carcinogenicity: No information available.- Reproductive toxicity: No information available.- STOT (single exposure): Inhalation may cause choking, drowsiness, respiratory disruptions.- STOT (repeated exposure): No information available.- Aspiration toxicity: May be fatal if swallowed and enters airways.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Very toxic to aquatic life with long lasting effects - Avoid release to the environment.
Bioaccumulation Potential	No information available.
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	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1169
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1169
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1169
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	127 Flammable Liquids (Polar / Water-Miscible)

UN Number	1169
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1169
Hazchem	3Y
Pack Group	III
Special Provision	No Data Available
EMS	F-E, S-D
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	EXTRACTS, AROMATIC, LIQUID
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1169
Hazchem	3Y
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	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	Not Assessed
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National/Regional Inventories

Australia (AIC)	Listed
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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	OLEBPP1000, OLEBPP1005, OLEBPP1100, OLEBPP2010, OLEBPP2020, OLEBPP2100, OLEBPP2110, OLEBPP2200, OLEBPP2300, OLEBPP2400, OLEBPP5000, OLEBPP5100
Revision	3
Revision Date	13 May 2020
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>AICS Australian Inventory of Chemical Substances</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm² Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>deg C (°C) Degrees Celcius</p> <p>EPA (New Zealand) Environmental Protection Authority of New Zealand</p> <p>deg F (°F) Degrees Fahrenheit</p> <p>g Grams</p> <p>g/cm³ Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluable in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m³ Kilograms per Cubic Metre</p> <p>lb Pound</p> <p>LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50%</p>

(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

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