

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
 For Domestic Use Only.
 Issue Date: 1-Nov-2007
 XC9477SD

CHEMWATCH 10701
 Version No:3
 CD 2008/2 Page 1 of 6

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

BOILED LINSEED OIL

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

OTHER NAMES

groco, "polymerised linseed oil", "linseed oil, polymerized", "linseed oil, heatbodied", "linseed oil, homopolymer", "flaxseed oil", "stand oil", linum, polylin, "bodied raw linseed oil", "boiled linseed oil", "pure linseed oil", "alkali refined acid refined linseed oil", "non break N.B.", "NB linseed", "heat thickened linseed oil", "pblo (pale boiled linseed oil)", "White Ref 1215", "drying oil"

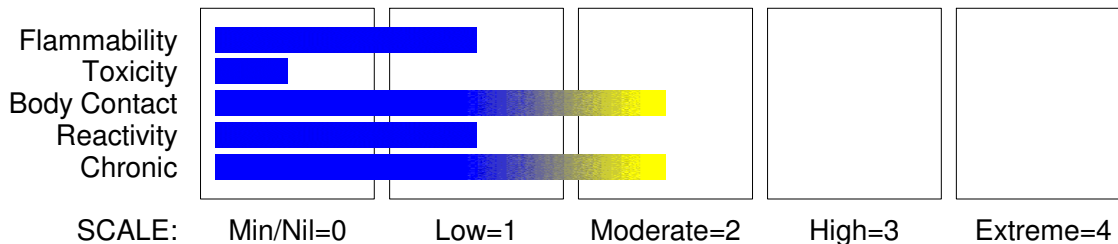
PRODUCT USE

Drying oils are characterized by high levels of fatty acids One common measure of the siccative (drying) property of oils is iodine number. Oils with an iodine number greater than 130 are considered drying, those with an iodine number of 115-130 are semi-drying oils and those with an iodine number of less than 115 are non-drying oils
 The "drying", "hardening", or, more properly, "curing" of oils is the result of an exothermic reaction in the form of autoxidation Oxygen attacks the hydrocarbon chain, touching off a series of addition reactions.
 Component of paints coatings varnishes, oil cloth, putty, printing inks, core oils, caulking, alkyd resins.

SUPPLIER

Company: Damar Industries Limited
 Address:
 Eastgate Business Park
 800 Te Ngae Road
 Rotorua
 New Zealand
 Telephone: +64 7 345 6007
 Emergency Tel: 0800 CHEMCALL
 Emergency Tel: 0800 24362255
 Fax: +64 7 345 6019

CHEMWATCH HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Skin Corrosion/Irritation Category 3

EMERGENCY OVERVIEW

HAZARD

WARNING
 Determined by Chemwatch using GHS/HSNO criteria:

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 1-Nov-2007
XC9477SD

CHEMWATCH 10701
Version No:3
CD 2008/2 Page 2 of 6
Section 2 - HAZARDS IDENTIFICATION

6.3B
Causes mild skin irritation

PRECAUTIONARY STATEMENTS

Response

If skin irritation occurs: Get medical advice/ attention.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
linseed oil	8001-26-1	100
consists of triglyceride esters of unsaturated fatty acids, as		
linoleic		
linolenic		
oleic		
and		
stearic		
free fatty acid content varies with grade; raw linseed oil with 2- 4% fatty acid		
alkali refined linseed oil <0.5% fatty acid		
phytoestrogens (high levels)		

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

- If this product comes in contact with eyes:
- Wash out immediately with water.
 - If irritation continues, seek medical attention.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
 - Flush skin and hair with running water (and soap if available).

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
- Combustion products include: carbon dioxide (CO₂), acrolein, other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

continued...

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 1-Nov-2007
XC9477SD

CHEMWATCH 10701
Version No:3
CD 2008/2 Page 3 of 6
Section 5 - FIRE FIGHTING MEASURES

CARE: Water in contact with hot oil may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc.
Reacts violently with chlorine.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Slippery when spilt.

- Remove all ignition sources.
- Clean up all spills immediately.

MAJOR SPILLS

Slippery when spilt.

CARE: Absorbent materials wetted with occluded oil must be moistened with water as they may auto-oxidize, become self heating and ignite.

Some oils slowly oxidise when spread in a film and oil on cloths, mops, absorbents may autoxidise and generate heat, smoulder, ignite and burn. In the workplace oily rags should be collected and immersed in water.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

DO NOT allow clothing wet with material to stay in contact with skin.

Rags wet / soaked with unsaturated hydrocarbons / drying oils may auto-oxidise; generate heat and, in-time, smoulder and ignite.

This is especially the case where oil-soaked materials are folded, bunched, compressed, or piled together - this allows the heat to accumulate or even accelerate the reaction

Oily cleaning rags should be collected regularly and immersed in water, or spread to dry in safe-place away from direct sunlight or stored, immersed, in solvents in suitably closed containers.

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY

Contact with high pressure oxygen may cause ignition / combustion.

Vegetable oils and some animal fats undergo undesirable deterioration reactions in the presence of oxygen from the air becoming rancid accompanying off-flavours and smells.

The mechanism of autoxidation of vegetable oils is classically regarded as following a number of stages being:

- a usually slow initiation phase
- a usually rapid propagation.
- Avoid reaction with oxidising agents.

Materials soaked with plant/ vegetable derived (and rarely, animal) oils may undergo spontaneous combustion.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.

continued...

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 1-Nov-2007
XC9477SD

CHEMWATCH 10701
Version No:3
CD 2008/2 Page 4 of 6

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- linseed oil: CAS:8001-26-1 CAS:67746-08-1 CAS:66071-03-2

PERSONAL PROTECTION



RESPIRATOR

Type A-P Filter of sufficient capacity

EYE

- Safety glasses with side shields.
- Chemical goggles.

HANDS/FEET

Wear chemical protective gloves, eg. PVC.

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,

OTHER

- Overalls.
- P.V.C. apron.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator.

Care: Atmospheres in bulk storages and even apparently empty tanks may be hazardous by oxygen depletion. Atmosphere must be checked before entry.

Requirements of State Authorities concerning conditions for tank entry must be met. Particularly with regard to training of crews for tank entry; work permits; sampling of atmosphere; provision of rescue harness and protective gear as needed.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Pale yellow to amber clear liquid, floats on water. Characteristic odour. Mixes with most organic solvents. Available in several grades and purity:

alkali refined oil	palest colour	lowest free fatty acid content
raw oil	brown amber colour	higher free fatty acid content

Thin liquid films oxidise in air and convert to dry solid films. Prolonged heat treatment at high temperatures produces thickened oil; known as stand oil, bodied oil, polymerised oil, linseed stand oil. Boiled oils are heat thickened oils containing metal additives as driers. Linseed oil contains high levels of phytoestrogens.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

Molecular Weight: Not applicable
Melting Range (°C): - 19
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable
Volatile Component (%vol): <0.5
Relative Vapour Density (air=1): Not available
Lower Explosive Limit (%): Not available

Boiling Range (°C): >340
Specific Gravity (water=1): 0.93
pH (as supplied): Not applicable
Vapour Pressure (kPa): Very low
Evaporation Rate: Not available
Flash Point (°C): 222
Upper Explosive Limit (%): Not available

continued...

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 1-Nov-2007
XC9477SD

CHEMWATCH 10701
Version No:3
CD 2008/2 Page 5 of 6

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Autoignition Temp (°C): 343
State: Liquid

Decomposition Temp (°C): Not available
Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

May produce skin discomfort*.
* (limited evidence).

CHRONIC HEALTH EFFECTS

Cumulative effects may result following exposure*.
* (limited evidence).

TOXICITY AND IRRITATION

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
 Otherwise ensure that:
- licenced contractors dispose of the product and its container.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

linseed oil (CAS: 8001-26-1) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Veterinary Medicines
New Zealand Inventory of Chemicals (NZIoC)
OECD Representative List of High Production Volume (HPV) Chemicals

continued...

BOILED LINSEED OIL

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 1-Nov-2007
XC9477SD

CHEMWATCH 10701
Version No:3
CD 2008/2 Page 6 of 6
Section 15 - REGULATORY INFORMATION

linseed oil (CAS: 67746-08-1) is found on the following regulatory lists;
New Zealand Inventory of Chemicals (NZIoC)

linseed oil (CAS: 66071-03-2) is found on the following regulatory lists;
New Zealand Inventory of Chemicals (NZIoC)
Specific advice on controls required for materials used in New Zealand can be found at
<http://www.ermanz.govt.nz/search/registers.html>

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE
0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
linseed oil	8001- 26- 1, 67746- 08- 1, 66071- 03- 2

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 1-Nov-2007
Print Date: 31-Oct-2008