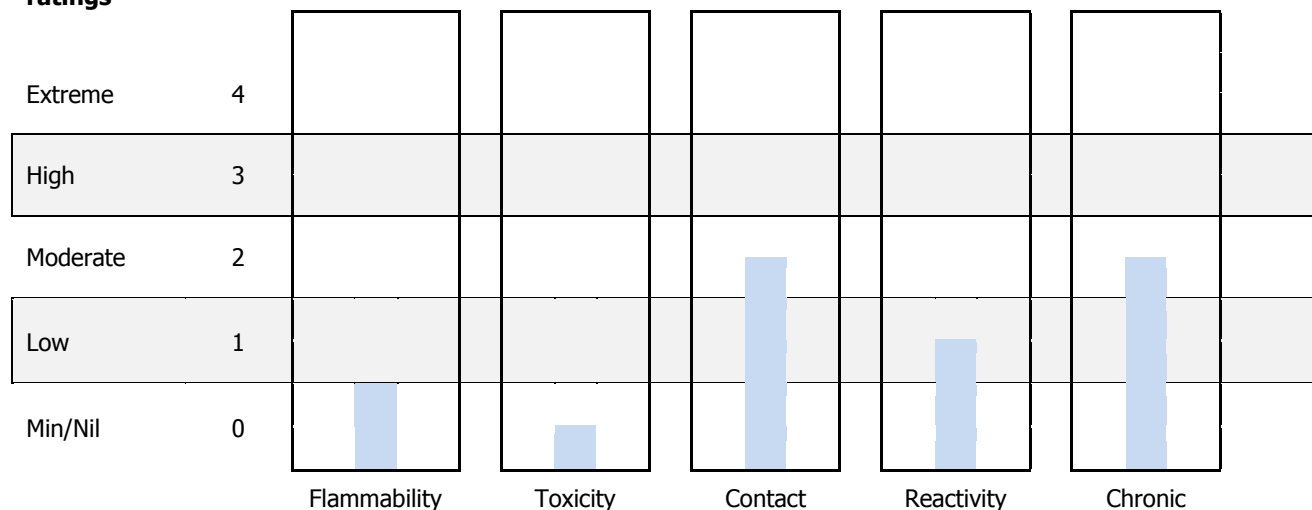


Material Safety Data Sheet

1. Identification of the substance or mixture and of the supplier:

Product name:	AR & BR Linseed oil ACR Linseed oil Boiled Linseed oil	
Product identifier/synonyms:	Linseed oil, raw Linseed oil, alkali-refined Linseed oil, acid-refined	CAS# 8001-26-1 EC# 232-278-6
Product description:	Extractives of flaxseed, linseed triglyceride oil	
Intended use:	Surface coatings, varnishes, timber treatment	
Manufacturer:	Industrial Oleochemical Products, (Pty) Ltd., 323 Chamberlain Road, Jacobs, 4052, KZN, South Africa Tel: +27-(0)31-4618680, Fax:: +27-(0)31-461-3743	
Emergency telephone number:	031-461-8721 (Monday-Friday 08.00 to 16.30hr) 031-461-8680 (after normal working hours) 082-852-5383 (medical emergencies)	

Hazard ratings



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2. Hazard identification:

This substance is not classified according to South African National Standard SANS 10234:2007, Globally Harmonized System of classification and labelling of chemicals (GHS).

This substance is not classified in the Annex I of Directive 67/548/EEC according to ESIS (European Chemical Substances Information System).

Flammability:

Hazard category	Criteria	Hazard communication elements		
0	Flash point (COC) 222°C	No pictogram required	No signal word required	No warning statement required
No precautionary statements required				

3. Composition/information on ingredients:

Substance/preparation:		Substance			
Ingredient name:	CAS no.	EC no.	%	Exposure limits	
Linseed oil	8001-26-1	232-278-6	100	TLV (US) none assigned	TWA (US) none assigned
Cobalt drier (boiled linseed oil)	61789-51-3		<0.2		
Manganese drier (boiled linseed oil)	13434-24-7		<0.2		

4. First aid measures:

Inhalation: hot vapours	Remove patient from exposure into fresh air. Keep person warm and at rest. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in a recovery position and get medical attention immediately.
Ingestion:	NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Wash out mouth with water. Remove dentures, if any. 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, due to risk of aspiration.
Skin contact:	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes before reuse.
Eye contact:	Remove contact lenses, if any. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Obtain medical attention if irritation persists.

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5. Fire fighting measures:


Extinguishing media:	Water fog, foam, carbon dioxide, powder
Unsuitable extinguishing media:	Do not use water jet
Special fire-fighting protective equipment:	A self-contained breathing apparatus and suitable protective clothing must be worn in fire conditions with full face piece operated in positive pressure mode
Fire and explosion hazards:	Combustible, but not readily ignited
Combustion products:	Thermal decomposition may produce fumes of carbon monoxide if burning
Explosion data Sensitivity to mechanical impact: Sensitivity to static discharge:	No data available. However, experience suggests that the substance does not exhibit explosive properties. Not to be expected Not to be expected

6. Accidental release measures:



Personal precautions:	For small spills, good working practice suggests that safety goggles, and impervious gloves should be worn to protect eyes and skin. Respiratory protection should not be necessary if adequate ventilation is maintained where hot vapours of this substance are present. For large spills, no special personal protective equipment above that required for small spills is required.
Environmental precautions:	Avoid dispersal of spilt liquid and run-off and contact with soil, waterways, drains and sewers. Material is virtually insoluble in water and floats on water. No data is available for this substance to define it as an environmental hazard.
Clean up methods:	For small spills, add absorbent (soil may be used in the absence of any other materials). Scoop up material and place in a sealable container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Add absorbent (soil may be used in the absence of any other materials). Scoop up material and place in a sealable container for disposal. Do not absorb on to sawdust or other combustible materials. Wash the spillage area with water and detergent. The appropriate regulatory body must be alerted to spillages of uncontrolled discharges into watercourses.

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7. Handling and storage:

Handling:	<p>Ensure the use of personal protective equipment (see Section 8) Handle and open container with care.</p> <p>Keep away from heat and sources of ignition. The material is combustible but not classified as flammable. Wash thoroughly after handling.</p> <p>Do not eat and drink or smoke while handling this material.</p>	
Storage:	<p>Store in original containers and keep containers tightly closed until ready for use. Store in a cool, dry, well-ventilated place. Note that storage under cool conditions may cause separation of natural waxes which may render the product slightly hazy</p>	
Incompatible materials:	<p>Do not store linseed oil products in contact with powdered materials or as oily rags, since spontaneous combustion may occur under certain conditions.</p>	

8. Exposure controls/personal protection:

Occupational exposure limit values:					
Chemical name	Type of limit	Limit value		Short-term exposure	
Linseed oil	TLV (US)	No workplace exposure limit assigned	-	No workplace exposure limit assigned	-
Engineering measures:	No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels.				
Eye protection:	Good working practice suggest that safety goggles be used				
Skin protection:	Good working practice suggest that Impervious PVC gloves. overalls/dust coat be used				
Respiratory protection:	Respiratory protection is not required if good ventilation is maintained.				

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9. Physical and chemical properties:

Appearance:	Clear amber to brown oily liquid @ 25°C
Odour:	Characteristic, mild
Odour threshold:	No data
pH:	Not applicable
Melting/freezing point:	-20°C
Initial boiling point/range:	>250°C (decomposes)
Flash point:	222°C (closed cup)
Evaporation rate:	>1 (butyl acetate =1)
Flammability:	No data available
Flammable limits:	No data available. Explosive behaviour is not to be expected
Vapour pressure:	<0.1 hPa (20°C)
Vapour density:	No data available, suggested to be negligible
Relative density:	0.93-0.96 (25°C)
Solubility:	Insoluble in water. Soluble in many organic solvents
Partition coefficient n-octanol/water:	No information available
Autoignition temp:	No information available
Decomposition temp:	>300°C
Viscosity:	1-1000 mPa.s (25°C)

10. Stability and reactivity:

Stability:	Stable under normal ambient and anticipated storage and handling conditions. No stabilizers are added or deemed necessary.
Conditions to avoid:	Excessive heating.
Hazardous reactions:	None known.
Materials to avoid:	Strong oxidizing/reducing agents.
Hazardous decomposition products:	Thermal decomposition will evolve irritant vapours, carbon monoxide and carbon dioxide.
Hazardous polymerization:	Will not occur

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11. Toxicological information:

Acute toxicity:

Hazard category	Criteria	Hazard communication elements		
Oral Not assigned	LD ₅₀ oral No data available	No symbol required	No signal word required	No warning phrase required
No precautionary statements required				
Dermal Not assigned	LD ₅₀ dermal no data available	No symbol required	No signal word required	No warning phrase required
No precautionary statements required				
Inhalation Not assigned	LC ₅₀ inhalation no data available	No symbol required	No signal word required	No warning phrase required
No precautionary statements required				

Skin corrosion/irritation:

Hazard category	Criteria	Hazard communication elements		
Irritation 3 (mild irritant)	Animal test data indicate that the substance causes reversible skin damage	No symbol required	Warning	Causes mild skin irritation
P332+P313	If skin irritation occurs, get medical advice/attention			

Serious eye damage/eye irritation:

Hazard category	Criteria	Hazard communication elements		
Eye 2B (mild irritant)	Animal(rabbit) experience or test data indicate that the substance causes reversible eye damage	No symbol required	Warning	Causes eye irritation
P264 P305+P351+P338 P337+P313	Wash eyes thoroughly after handling IF IN EYES, rinse cautiously with water for several minutes, remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention			

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Respiratory sensitizer:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Skin sensitizer:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Germ cell mutagenicity:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Carcinogenicity:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Toxic to reproduction:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Specific target organ toxicity: single exposure				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Specific target organ toxicity: repeated exposure				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				

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Specific target organ toxicity: repeated exposure				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Aspiration hazard:				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				

12. Ecological information:				
Aquatic toxicity (acute)				
Hazard category	Criteria	Hazard communication elements		
Not classified	96hr LC ₅₀ (fish) ≤ 100 mg/L	No symbol required	No signal word required	No hazard statement required
No precautionary statements				
Aquatic toxicity (chronic)				
Hazard category	Criteria	Hazard communication elements		
No information is available	No information is available	No symbol	No information	No information
No precautionary statements				
Persistence and degradability:	Type	Concentration	Degradation	
	No information is available	-	The substance is expected to be substantially biodegradable	
Bioaccumulative potential:	No information is available			
Mobility in soil:	No information is available			

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13. Disposal considerations:

Methods of disposal:

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material or runoff and contact with soil, waterways, drains, and sewers. Disposal of product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging:

Empty containers retain product residue. Do not distribute, make available or reuse empty container except for storage and shipment of original product. Remove all product residue from container before disposal according to local regulations.

Hazardous waste:

This material is not considered harmful to the aquatic environment.

14. Transport information:

Special precautions for user:

This product is not classified as hazardous goods according to SANAS 10228:2003

UN number	U.N. Proper shipping name	Transport hazard class	Packaging group	Environmental hazards	Special precautions
Not assigned	Not assigned	Not regulated	Not regulated	Not regulated	None required

15. Regulatory information:

EU regulations:

Not classified (Directive 67/548/EEC).

International regulations:**United States (TSCA):**

Listed TSCA 8(b): linseed oil

Canada (DSL):

Listed CEPA DSL: linseed oil

Australia AICS):

No information available

WGK:

1

16. Other information:

This data sheet was prepared in accordance with the Globally Harmonized System of classification and labeling of chemicals (SANS 10234:2007)

Date of preparation:

26 September 2011

Date of next review:

08/7/2014

Version:

04 (no changes just a review)

Compiled by:

S. Bande (Laboratory Manager)

Material Safety Data Sheet

Notice to reader:

To the best of our knowledge of this substance and on current EC and international regulations, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries or agents assumes liability whatsoever for the accuracy or completeness of the information contained herein.

References:

European Chemical Substances Information System (ESIS)