

LINSEED OIL

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

LINSEED OIL
Flaxseed oil; Linum usitatissimum seed oil
CAS: 8001-26-1

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Raw material for paints, varnishes, printing inks, linoleum, putty, wood finishes, alkyd resins and as a drying-oil component in coatings. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
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1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Skin Sens. 1	Skin sensitisation, Category 1, H317
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Raw linseed oil itself generally does not meet classification criteria; however, oxidised/autoxidised linseed oil (as may form on prolonged storage or air exposure) is recognised to have skin-sensitising potential and is classified Skin Sens. 1 per established commercial SDS data for this product category.

2.2 GHS label elements, including precautionary statements:

GHS: Warning

Hazard statements:

Skin Sens. 1: H317 – May cause an allergic skin reaction.

Precautionary statements:

P261: Avoid breathing mist/vapours.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P363: Wash contaminated clothing before reuse.
P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

Oil-soaked rags, fibrous packing or absorbents are prone to spontaneous self-heating/auto-oxidation and present a significant latent fire risk if not handled/disposed of correctly (see Section 7) – this is a well-recognised hazard of drying oils such as linseed oil.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Vegetable drying oil – glyceryl triester rich in linolenic, linoleic and oleic acids, obtained by pressing/extraction of flax (linseed) seeds.
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 8001-26-1	Linseed Oil – Skin Sens. 1: H317 – Warning	≥ 99%

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance if allergic skin reaction or other symptoms occur, showing the SDS of this product.

By inhalation:

Not a normal route of exposure. If mist/vapour is inhaled during heating/spraying, remove to fresh air and keep at rest.

By skin contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water. If a rash, redness or allergic reaction develops, seek medical advice/attention.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical advice if irritation persists.

By ingestion/aspiration:

Rinse mouth with water. Do not induce vomiting. Seek medical attention if discomfort persists or large quantities are ingested.

4.2 Most important symptoms/effects, acute and delayed:

May cause an allergic skin reaction (sensitisation) on repeated or prolonged contact, particularly with aged/oxidised material. See Sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Treat allergic skin reactions symptomatically; avoid further exposure once sensitised.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water fog/spray, foam (AFFF), dry chemical powder (ABC), carbon dioxide (BC)
Unsuitable: High-pressure water jet (may splash and spread burning oil)

5.2 Specific hazards arising from the chemical:

Combustible liquid. As a drying oil, linseed oil undergoes exothermic oxidative polymerisation in air; oil-soaked rags/absorbents/fibrous materials can self-heat and ignite spontaneously without any external ignition source – a well-documented hazard for this product.

5.3 Special protective actions for fire-fighters:

Evacuate non-essential personnel. Use self-contained breathing apparatus (SCBA) and full protective clothing in enclosed/confined fire situations. Cool exposed containers with water spray.

Additional provisions:

Contain fire-fighting water run-off to prevent environmental contamination.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Avoid slipping on spilled product and avoid skin contact. Use appropriate PPE (Section 8).

For emergency responders:

Wear suitable protective equipment. Prevent material from entering drains/watercourses.

6.2 Environmental precautions:

Prevent entry into drains, sewers and watercourses. Bund/contain large spills. Notify the relevant authority in case of significant release to the environment.

6.3 Methods and materials for containment and cleaning up:

Contain spill, absorb with inert absorbent material (sand, earth, vermiculite). Immediately place oil-soaked absorbents/rags in a closed metal container submerged in water, or spread flat to dissipate heat, to prevent spontaneous combustion. Dispose of promptly.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. General precautions for safe use:

Avoid repeated/prolonged skin contact due to sensitisation potential. Use with adequate ventilation when heated or sprayed.

B. Technical recommendations for the prevention of fires and explosions:

Important: immediately dispose of oil-soaked rags, waste cloths, fibrous absorbents and packing material in sealed metal containers, or launder/soak in water, as these can self-heat and catch fire spontaneously without warning. Keep away from open flame/ignition sources.

C. Technical recommendations on general occupational hygiene:

Wash hands and exposed skin after handling. Do not eat or drink while handling the product.

D. Technical recommendations to prevent environmental risks:

Prevent spillage from entering drains or watercourses. Store in banded areas where large volumes are held.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	5°C
Maximum Temp.	30°C
Maximum time	12 Months (in original sealed, nitrogen-blanketed containers where supplied)

B. General conditions for storage:

Store in tightly closed containers away from direct sunlight, oxidisers and heat sources. Avoid storing soaked rags/absorbents on site – dispose of immediately per 7.1.B.

7.3 Specific end use(s):

Industrial raw material for paints, varnishes and coatings manufacture; see Section 1.2. Except for the instructions already specified, no special recommendations are required.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

No specific occupational exposure limit (OEL) has been established for Linseed Oil under the Factories Act, 1948 (as amended).

Identification	Occupational Exposure Limit Type	Value
Linseed Oil CAS: 8001-26-1	Not established	Typical value – refer to current specification sheet

8.2 Appropriate engineering controls:

General ventilation is normally adequate. Use local exhaust ventilation where mist/vapour is generated (heating, spraying operations).

B. Respiratory protection:

Not normally required under ambient conditions. Use an organic vapour/mist respirator for heated or spraying operations.

C. Specific protection for the hands:

Chemical-resistant gloves (nitrile or neoprene) recommended to minimise skin contact given sensitisation potential.

D. Eye and face protection:

Safety glasses/goggles recommended where splashing is possible.

E. Bodily protection:

Chemical-resistant apron/overalls for bulk handling. Launder contaminated clothing promptly; do not allow oil-soaked clothing to accumulate (fire risk).

F. Additional emergency measures:

Eyewash station and washing facilities should be available in the work area.

Environmental exposure controls:

Avoid release to the environment. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Liquid

Appearance	Oily liquid
Color	Yellow to amber
Odor	Mild, characteristic (oily)
Odour threshold	Not established
Volatility	
Boiling point at atmospheric pressure	> 300°C (decomposes)
Vapour pressure at 20°C	Negligible
Evaporation rate at 20°C	Negligible
Product Description	
Density / Relative density at 20°C	0.925 – 0.935 g/cm³
Dynamic / Kinematic viscosity at 25°C	Typical value – refer to current specification sheet
Concentration	Non-applicable (single substance)
pH	Not relevant (water-insoluble oil)
Vapour density at 20°C	Not relevant
Partition coefficient n-octanol/water	> 4 (estimated, triglyceride ester)
Solubility in water at 20°C	Insoluble; soluble in ether, chloroform, carbon disulfide
Decomposition temperature	Not established
Melting point/freezing point	-18 to -27°C (typical)
Flammability	
Flash Point	> 220°C (Cleveland Open Cup, typical)
Flammability (solid, gas)	Non-applicable (liquid)
Autoignition temperature	> 340°C (typical for drying oils)
Lower / Upper flammability limit	Not established
Particle Characteristics	
Median equivalent diameter	Non-applicable (liquid)

Values are typical for commercial-grade Linseed Oil – refer to current specification sheet for batch-specific figures.

9.2 Other information:

Explosive properties	Not relevant
Oxidising properties	Not an oxidiser; readily auto-oxidises/polymerises (drying oil)
Corrosive to metals	Not corrosive
Heat of combustion	Typical value – refer to current specification sheet
Iodine value	170 – 204 (typical, high due to unsaturation)
Saponification value	188 – 196 (typical)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Readily undergoes oxidative polymerisation ("drying") on exposure to air, with release of heat. May react with strong oxidising agents.

10.2 Chemical stability:

Stable in closed containers under recommended storage conditions. Unstable on exposure to air in thin films or on absorbent materials – see Section 5 and 7 regarding self-heating.

10.3 Possibility of hazardous reactions:

Spontaneous self-heating/combustion of oil-soaked porous materials (rags, sawdust, insulation) is a well-known hazardous reaction associated with drying oils such as linseed oil.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Avoid absorbent/porous material contact (self-heating)	Avoid unnecessary heating	Avoid prolonged direct exposure	Not applicable

10.5 Incompatible materials:

Strong Oxidisers	Porous/Fibrous Materials	Heat Sources
Avoid contact	Avoid uncontrolled soaking (spontaneous combustion risk)	Avoid prolonged exposure

10.6 Hazardous decomposition products:

Thermal decomposition/combustion may generate carbon monoxide, carbon dioxide and irritating aldehyde-type fumes (e.g. acrolein).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Linseed oil is of low acute toxicity; its principal recognised hazard is skin sensitisation on repeated/prolonged contact, particularly with aged or oxidised material.

A. Ingestion (acute effect):

Low acute oral toxicity. May have a mild laxative effect at high doses; large ingestion may cause gastrointestinal discomfort.

B. Inhalation (acute effect):

Not a normal route of exposure. Mist/vapour from heating may cause mild respiratory irritation.

C. Contact with skin and eyes (acute effect):

May cause mild irritation; repeated or prolonged contact may cause an allergic skin reaction (sensitisation) – see Section 2.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not listed.

E. Sensitizing effects:

Skin Sens. 1 (H317) – may cause an allergic skin reaction. Respiratory sensitisation classification criteria are not met based on available data.

F. Specific target organ toxicity (STOT) – single exposure:

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data.

H. Aspiration hazard:

Classification criteria are not met based on available data.

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Linseed Oil CAS: 8001-26-1	LD50 oral: > 20000 mg/kg	Rat
	LD50 dermal: > 2000 mg/kg	Rabbit

SECTION 12: ECOLOGICAL INFORMATION

Not expected to be hazardous to the aquatic environment under GHS criteria; readily biodegradable natural oil.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: > 1000 mg/L (96h) (Typical value – refer to current specification sheet)	Non-applicable	Fish

12.2 Persistence and degradability:

Readily biodegradable (natural triglyceride oil).

12.3 Bioaccumulative potential:

Low bioaccumulation potential expected; not established.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not established	Not relevant	Low mobility (viscous oil)	Low mobility

12.5 Results of PBT and vPvB assessment:

Does not meet PBT/vPvB criteria.

12.6 Other adverse effects:

May cause physical fouling (coating) of aquatic organisms/birds in case of large spills.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Collect for recycling/reprocessing where possible, or dispose of via a licensed waste disposal contractor in accordance with national and local regulations. Soak contaminated absorbents in water before disposal to prevent spontaneous combustion. Do not discharge to drains or watercourses.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Non-applicable – not classified as dangerous goods in finished packaged form
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9; oil-soaked absorbent material may be subject to special transport provisions
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Non-applicable in bulk packaged liquid form
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Non-applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

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

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

H317: May cause an allergic skin reaction.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product – in particular on the self-heating hazard of oil-soaked absorbent materials.

Principal bibliographical sources:

The United Nations Economic Commission for Europe (UNECE); publicly available GHS classification references for natural drying oils.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET