

SOAP OIL (SULPHONATED CASTOR OIL)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:
SOAP OIL — SULPHONATED CASTOR OIL
Turkey Red Oil; Sulphated Castor Oil
CAS: 8002-33-3

Other means of identification:
Not relevant

1.2 Recommended use of the chemical and restrictions on use:
Relevant uses: Anionic surfactant derived from castor oil, used as a wetting/softening agent in textile processing and dyeing (Turkey Red Oil), leather finishing, and as an emulsifier/lubricant additive in industrial formulations.
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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Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
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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), based on the well-established hazard profile of sulphonated/sulphated castor oil (CAS 8002-33-3), a mild anionic surfactant:

Skin Irrit. 2	Skin corrosion/irritation, Category 2, H315
Eye Irrit. 2	Eye irritation, Category 2, H319

2.2 GHS label elements, including precautionary statements:
GHS: Warning
Hazard statements:
Skin Irrit. 2: H315 – Causes skin irritation.
Eye Irrit. 2: H319 – Causes serious eye irritation.

Precautionary statements:
P264: Wash skin/hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs, get medical advice/attention.
P337+P313: If eye irritation persists, get medical advice/attention.
P501: Dispose of contents/container in accordance with local regulations on industrial waste.

2.3 Other hazards which do not result in classification:
Not relevant

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:
Chemical description: Sulphonated/sulphated Castor Oil, aqueous surfactant liquid
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration (%)
CAS: 8002-33-3	Sulphonated Castor Oil – Skin Irrit. 2: H315; Eye Irrit. 2: H319 – Warning	48 – 55 (as sulphated oil content)
CAS: 8001-79-4	Castor Oil (unreacted/residual) – Not classified	Max 10
CAS: 7732-18-5	Water – Not classified	Balance

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

3.2 Mixtures:
See composition table above – this product is an aqueous, castor-oil-derived anionic surfactant mixture.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:
Take off immediately all contaminated clothing. Self-protection of the first aider is advised.

By inhalation:
Remove to fresh air and keep at rest. Seek medical attention if irritation or discomfort persists.

By skin contact:
Wash immediately with plenty of water and soap. Remove contaminated clothing and wash before reuse.

By eye contact:
Flush immediately with plenty of water for at least 15 minutes, holding eyelids apart. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

By ingestion/aspiration:

Rinse mouth with water (only if the person is conscious). Do not induce vomiting. Seek medical attention if a large quantity has been swallowed or if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed:

Skin contact: mild irritation with prolonged/repeated contact – redness, itching. Eye contact: irritation, redness, watering. Ingestion: may cause mild gastrointestinal discomfort. Inhalation: not normally an inhalation hazard under intended use.

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

Symptomatic treatment as required. No specific antidote available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water spray, foam, dry chemical powder, carbon dioxide (CO₂) – select extinguishing media suited to the surrounding fire.
Unsuitable: None known

5.2 Specific hazards arising from the chemical:

Aqueous surfactant liquid – does not burn readily. Not classified as flammable. Combustion of the dried residue may generate irritant fumes (oxides of carbon and sulphur).

5.3 Special protective actions for fire-fighters:

Fight fire from a safe distance/protected location. Wear self-contained breathing apparatus and full protective clothing when involved in a fire. Cool fire-exposed containers with water spray.

Additional provisions:

Do not allow fire-fighting water/runoff to enter drains, surface water or ground water – contain and dispose of as contaminated waste.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Wear suitable protective equipment (see Section 8) to prevent contamination of skin, eyes and personal clothing. Note that spilled material is slippery underfoot.

For emergency responders:

Wear protective equipment described in Section 8. Keep unprotected persons away.

6.2 Environmental precautions:

Keep away from drains, surface water and ground water. Retain and dispose of contaminated washing/rinse water as waste; avoid uncontrolled discharge to the environment.

6.3 Methods and materials for containment and cleaning up:

Contain the spill. Absorb with an inert absorbent material or flush with plenty of water to a contained/treated effluent system if permitted. Collect with a clean shovel, place in suitable closed containers, and remove for disposal.

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:

Provide adequate ventilation. Avoid contact with skin and eyes. Handle open containers with care – spilled material is slippery.

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

Not applicable – product is an aqueous, non-flammable solution. Keep containers tightly closed.

C. Technical recommendations on general occupational hygiene:

Do not eat, drink or smoke in work areas. Wash hands and exposed skin before breaks and after work.

D. Technical recommendations to prevent environmental risks:

Prevent release to drains, surface water and groundwater. See subsection 6.2.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Recommended storage temperature	15 – 35°C, protect from freezing and prolonged heat
Container	Keep tightly closed, in original packaging

B. General conditions for storage:

Store away from strong oxidising agents and strong acids/alkalis. Protect from prolonged exposure to light and air, which can accelerate oxidative darkening/odour development. For additional information see subsection 10.5.

7.3 Specific end use(s):

No additional information available beyond the uses listed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Sulphonated Castor Oil (CAS 8002-33-3): no occupational exposure limit established under the Factories Act, 1948 or other Indian regulations.

8.2 Appropriate engineering controls:

Provide sufficient general/local ventilation as a collective protection measure, in addition to individual PPE as needed.

B. Respiratory protection:

Not normally required in well-ventilated areas; use a suitable respirator if mist or spray is generated in poorly ventilated spaces.

C. Specific protection for the hands:

Wear suitable chemical-resistant gloves (e.g. nitrile or natural rubber).

D. Eye and face protection:

Use chemical safety goggles with side protection; wear a face shield where splashing may occur.

E. Bodily protection:

Wear suitable protective clothing and chemical-resistant footwear/apron for prolonged or repeated contact.

F. Additional emergency measures:

Emergency shower and eyewash stations should be available near the work area.

Environmental exposure controls:

Avoid environmental spillage of both the product and its container. See subsection 6.2.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Liquid
Appearance	Oily viscous liquid

Color	Reddish-brown to dark brown
Odor	Characteristic, mild fatty/oily odour
Odour threshold	Not available
Volatility	
Boiling point at atmospheric pressure	> 100°C (aqueous surfactant)
Vapour pressure	Approx. that of water at same temperature
Evaporation rate	Not applicable
Product Description	
Density / Relative density at 20°C	Approx. 1.00 – 1.05 g/cm³
Sulphate/active content	Sulphate (SO ₃) content approx. 5 – 8%
pH (10% aqueous solution)	6.0 – 8.0
Vapour density	Not applicable
Partition coefficient n-octanol/water (log KOW)	Not available
Solubility in water	Dispersible/emulsifiable
Melting point/freezing point	Not available
Flammability	
Flash Point	Not applicable (aqueous solution)
Flammability (solid, gas)	Non-flammable in solution
Autoignition temperature	Not available
Lower / Upper flammability limit	Not available

* Values are typical/literature values for sulphonated castor oil (Turkey Red Oil) of this class; batch certificates of analysis are available on request.

9.2 Other information:

Explosive properties	Not relevant
Oxidising properties	Not relevant
Dynamic viscosity	Viscous oily liquid

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:**
No particular reactivity hazard under normal conditions of storage and use. Reacts with strong oxidising agents and strong acids (may hydrolyse, releasing free castor oil and sulphuric acid).
- 10.2 Chemical stability:**
Stable under normal conditions of storage and handling; may hydrolyse slowly under strongly acidic conditions or prolonged high temperature, reducing surfactant activity.
- 10.3 Possibility of hazardous reactions:**
Hazardous polymerisation will not occur.
- 10.4 Conditions to avoid:**

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Avoid prolonged exposure (oxidation/rancidity)	Avoid prolonged exposure to high temperature (hydrolysis)	Avoid prolonged exposure	Not critical

- 10.5 Incompatible materials:**
Strong oxidising agents, strong acids and strong alkalis.
- 10.6 Hazardous decomposition products:**
None under normal use and storage conditions. Thermal decomposition may release oxides of carbon and sulphur.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects:**
In case of exposure that is repetitive, prolonged, or at concentrations higher than recommended, adverse health effects may result depending on the means of exposure:
- A. Ingestion (acute effect):**
Low acute oral toxicity, typical of the sulphated fatty oil surfactant class. May cause mild gastrointestinal discomfort.
- B. Inhalation (acute effect):**
Low toxicity by inhalation under normal use; mist may cause mild irritation of the nose and throat.
- C. Contact with skin and eyes (acute effect):**
Causes skin irritation. Causes serious eye irritation.
- D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):**
Not classified as a germ cell mutagen, carcinogen, or reproductive toxicant based on available data.
- E. Sensitizing effects:**
Not classified as a respiratory or skin sensitiser based on available data.
- F. Specific target organ toxicity (STOT) – single/repeated exposure:**
Not classified based on available data.
- H. Aspiration hazard:**
Not classified based on available data.

Product-specific toxicological information (literature values for sulphated castor oil):

Exposure route	Effect rate / concentration	ATE value
Acute Oral (rat)	LD50	> 2000 mg/kg
Acute Dermal (rabbit)	LD50	> 2000 mg/kg
Acute Inhalation	LC50	Not established for this grade

SECTION 12: ECOLOGICAL INFORMATION

Not expected to be highly hazardous to the aquatic environment based on available data for this substance class.

12.1 Toxicity:

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Acute Toxicity	Species	Genus
LC50: > 10 mg/L (96h) – literature range for sulphated/sulphonated vegetable oil surfactants	Freshwater fish	Fish
EC50: > 10 mg/L (48h) – literature range	Daphnia	Crustacean

12.2 Persistence and degradability:

Readily biodegradable – derived from a natural triglyceride oil.

12.3 Bioaccumulative potential:

Low bioaccumulation potential expected; not established quantitatively for this specific grade.

12.4 Mobility in soil:

Dispersible/emulsifiable in water; no further quantitative data available.

12.5 Results of PBT and vPvB assessment:

Not identified as PBT or vPvB – readily biodegradable, naturally derived surfactant.

12.6 Other adverse effects:

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Do not empty into drains; avoid uncontrolled release to the environment. Not classified as hazardous waste at typical use dilutions; confirm classification under local/state Pollution Control Board rules before disposal. Dispose of via a licensed waste disposal contractor in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and applicable local, state and central regulations. Contaminated packaging should be emptied as completely as possible and may then be handled in the same way as the product; uncleaned packaging should be disposed of as hazardous/industrial waste.

SECTION 14: TRANSPORT INFORMATION

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

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not a regulated material
14.3 Transport hazard class(es)	Non-hazardous for transport
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

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

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not a regulated material
14.3 Transport hazard class(es)	Non-hazardous for transport
14.4 Packing group	Non-applicable
14.5 Marine pollutant	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

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

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

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. Traditionally known as Turkey Red Oil, one of the first synthetic detergents historically used in textile dyeing; listed in international chemical inventories such as TSCA, DSL and EINECS.

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)
Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

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:

H315: Causes skin irritation.
H319: Causes serious eye irritation.

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.

Principal bibliographical sources:

Well-established public GHS classification and literature toxicological/ecotoxicological data for sulphonated/sulphated castor oil (CAS 8002-33-3); no product-specific third-party source PDF was used for this document.

Abbreviations and acronyms:

GHS: Globally Harmonized System of Classification and Labelling of Chemicals | ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ATE: Acute Toxicity Estimate | CMR: Carcinogenic, Mutagenic or toxic for Reproduction | STOT: Specific Target Organ Toxicity | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log Pow: Octanol-water partition coefficient | PBT: Persistent, Bioaccumulative and Toxic | vPvB: Very Persistent and very Bioaccumulative

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