

Section 1. Identification

1.1. Product Identifier

Product form	: Mixture
Trade name	: Woodsol F
Common name(s)/synonyms	: Waxsol F, MO15, Medium Oil 15, Waxy Oil, LSO
Product type	: Viscous Liquid'
Chemical nature	: Mixture of Hydrocarbons (C10-C50)
CAS-No	: 68476-33-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended on Use : Low Sulphur Fuel for boilers, industrial furnaces and other combustion equipment.

1.3. Restrictions on use of substance or mixture.

This product should not be used in applications other than those recommended without first seeking the advice of the supplier.

1.4. Supplier's details

Company	: Rolfes Chemicals Pty Ltd
Address	: Cnr Brammer and Strachan Street : Germiston : South Africa
Telephone	: 011 873 0157
Email	: Info@rolfesza.com
Emergency telephone number	: +27 (0) 17 610 4444 / 0800 112 890

Section 2. Hazards identification

2.1. Classification of a substance or a mixture

Classification according to the United Nations GHS

Flammability liquids	: Category 3 & 4
Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation: vapour)	: Not classified
Serious eye damage/eye irritation	: Not classified
Specific target organ toxicity	
– single exposure	: Not classified
– Repeated exposure	
Hazardous to the aquatic environment – Acute hazard	: Not classified
Full text of H statements	: See section 16

2.2. Label Elements

Labelling according to SANS 10234: 2007 (GHS) label elements

Hazard pictograms (GHS-UN) :



Signal word (GHS-UN) : DANGER

Hazard statements (GHS-UN) :

- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H320 - Causes eye irritation.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.
- H336 - May cause drowsiness or dizziness.
- H350 - Possible carcinogen.
- H373 - Prolonged/ repeated exposure may cause damage to organs

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-UN):

Prevention:

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from heat, sparks, open flames and hot surfaces – no smoking.

P240 - Ground/Bond container or receiving equipment.

P260 - Do not breathe dust/ fumes/ gas/ mist/ vapours/ spray.

P262 - Do not allow contact with eyes, skin or clothing.

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P281 - Use personal protective equipment (PPE) as required.

P285 – In the case of inadequate ventilation, wear respiratory protection.

Response:

P301+P315 - If swallowed, immediately get medical advice/attention.

P302+P362 – If on skin, take off contaminated clothing and wash before re-use.

P303+P314+P350 - If on skin or hair, gently wash with plenty of soap and water; get medical advice if you feel unwell.

P304+P340 - If inhaled, move to fresh air and keep at rest in a position comfortable for breathing.

P305+P338+P351 - If in eyes, rinse cautiously with water for several minutes, remove contact lenses if present and if easy to do.

Disposal:

P501 - Dispose of waste product to landfill site (see Section 13).

Storage:

P50 - Store in accordance with national regulations and standards (SANS 10031, SANS 10089, SANS 10005:2005, SANS 10234:2008, SANS 11014:2010).

2.3. Other hazards which do not result in classification.

No additional data available

Section 3: Composition /Information on Ingredients

3.1. Mixture

Description : Complex mixture of liquid hydrocarbons: contains iso- and normal paraffins, olefins and aromatics. Sulphur content ranges to a maximum of 2% by volume.

Substance identification codes: See section 11

Chemical name	Product identifier	Weight (% W/W)	Classification according to the United Nations GHS
Residual Fuel Oil	CAS-No.: 68476-33-5	100	Flammable liquids, Category 3 & 4

3.2. Substance

Not applicable

Note:

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this se

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Call a poison centre or a doctor if you feel unwell.

First-aid measures after inhalation : Move exposed person to fresh air. If not breathing or if breathing is irregular or if respiratory arrest occurs, provide oxygen by trained personnel. Maintain an open airway and loosen tight clothing. Get medical attention if symptoms occur.

- First-aid measures after skin Contact** : Remove contaminated clothing and shoes. Flush contaminated skin with water and soap. Seek medical attention if discomfort persists. Wash clothes before re-use.
- First-aid measures after eye contact** : Flush eyes thoroughly with water and remove contact lenses, if any. Seek medical attention if discomfort persists.
- First-aid measures after ingestion** : Wash out mouth with water and remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop water intake if the exposed person feels sick, as vomiting may be dangerous. Vomiting should not be induced unless directed by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place in recovery position and seek medical attention immediately. Maintain an open airway and loosen tight clothing.
- Symptoms and effects** : Exposure may cause acute irritation to skin, eyes and/or respiratory tract. Prolonged exposure may cause headaches, dizziness and/or loss of coordination.
- Protection of First-aiders** : No action should be taken involving any personal risk or without suitable training.
- Note to doctors or physicians** : No specific treatment. Treat symptomatically. Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

4.2. Most important symptoms/effects, acute and delayed

- Symptoms/effects : May cause drowsiness or dizziness.
- Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking.
- Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed.

Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Flammability

Oil residue is combustible as hydrocarbons are present.

5.2. Extinguishing Media

Large Fires : Water spray, fog or fire-fighting foam. Water may be ineffective for fighting the fire but may be used to cool exposed tank/container walls.

Small Fires : Dry chemical, fire fighting foam, CO₂ or other gaseous agents suitable for a class B fire.

5.3. Special Exposure Hazards:

Risk of explosion due to increased pressure if product containers or tanks become heated due to fire. Promptly isolate the scene if there is any incidence of fire.

5.4. Hazardous Products of Combustion

Carbon dioxide, carbon monoxide, non-combusted hydrocarbons (smoke).

5.5. Special personal protective equipment (PPE)

Appropriate protective equipment and self-contained breathing apparatus (SCBA) for both organic vapours and aerosols should be worn.

5.6. Special Fire Fighting Procedures

- Sealed containers that are exposed to fire should be cooled with water.
- Do not use direct water jets on the burning products as this may cause steam explosions and the spread of the fire.
- Simultaneous use of foam and water on the same surface is to be avoided as water may destroy the foam.

Section 6: Accidental release measures

Personal precautions : Operators should use full PPE (Refer to Section 8). No action shall be taken involving any personal risk or without suitable training. Exposed area to be evacuated immediately and adequate ventilation to be provided. Remove ignition sources and isolate exposed area as sealed containers may be prone to pressurised explosions.

Procedure if material is released or spilled: Report spills/releases as required to appropriate authorities.

- Environmental precautions** : Shut off leaks if possible. Prevent run-off entry into sewers, water courses, soil, basements or confined areas. Ensure run-off is dealt with appropriately, according to approved environmental management plans. All material should be stored in drums on a hard surface to avoid contamination with soil. Disposal of contaminated materials as per Section 13.
- Methods for cleaning up** : Personnel cleaning up material should wear appropriate PPE (goggles, breathing apparatus, gloves and boots). Once source of leak is detected and controlled, the flow of oil must be controlled to avoid further contamination of soil and waterways. Inert absorbent material should be used to soak up oil spills. The material should be placed in a designated, labelled waste area on a hard concreted surface and disposed of as hazardous waste: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Secondary disaster prevention** : Place floating booms on affected waterways downstream of spill. Create temporary containment areas using earth or other available material.
- Reference to other** : Refer to section 8 and 13

Section 7. Handling and storage

7.1. Precautions for safe handling

- Safe handling** : Wear PPE to avoid contact with skin, eyes and respiratory tract. Wash face, hands and forearms thoroughly after handling. Keep clear from sources of ignition. Ensure electrical continuity of all relevant equipment by proper bonding as electrostatic charges can potentially be generated during pumping and tank-filling operations. Recycle all waste where possible.
- Hygiene measures** : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Safe storage conditions** : Storage conditions should comply with SANS Code 10131:2004 (above-ground storage tanks for petroleum products) and SANS Code 10089:2003 (storage and distribution of petroleum products in aboveground bulk installations), or other applicable international standard. If stored in storage tanks, tank should not be entered without breathing apparatus unless the tank has been well ventilated and gas checked. Ensure that all local and international regulations involving storage and handling facilities are followed at all times. Store away from ignition sources. Use appropriate, labelled containers intended for this material. Synthetic materials

such as plastics and fibreglass may be unsuitable for containers or container linings depending on the intended use and the material specifications.

Packaging and Transport : Conventional liquid bulk handling techniques should be used when packaging and transporting the materials. Packaging and transportation procedures should comply with SANS Code 10229: 2010 (Transport of dangerous goods — Packaging and large packaging for road and rail transport) and SANS Code 10228:2006 (The Identification and Classification of Dangerous Goods for Transport) respectively, or other applicable international standard.

Section 8. Exposure controls/personal protection

8.1. Control parameters: National Occupational Exposure Limits

Ingredient Name	CAS-No	Source	Type	Value	Notes
Residual Fuel Oil (mineral oil mist)	68476-33-5	ACGIH OSHA	TLV ¹ PEL ²	5mg/m ³ 5mg/m ³	Data from USA legislation (OSHA) as no limits defined in South African OHSA.
1TLV	Threshold Limit Value				
² PEL	Permissible Exposure Limit				
NOTE*	Limits are shown for guidance only. Applicable regulations must be followed at all times.				

8.2. Engineering measures

Biological Limits : No biological limit determined.

Control measures : The type of controls and the level of personal protection will vary depending on exposure conditions. Control measures must be selected based on a risk assessment of local circumstances. Sealed systems should be used as far as possible. Use local, intrinsically safe exhaust ventilation if there is a risk of inhalation of vapours, aerosols or mist.

8.3. Individual protection measures, such as personal protective equipment (PPE)

- Respiratory protection** : Wear suitable respiratory equipment where ventilation is insufficient.
- Eye protection** : Safety eyewear with side protection to avoid splashes.
- Skin and body protection** : Wear protective overalls and chemical resistant shoes or boots.
- Hand protection** : Oil resistant protective gloves (nitrile rubber gloves).
- General precautions** : Clean protective equipment should be used daily. Workers should be provided with shower facilities and should wash their hands before eating or drinking. Overalls and other protective clothing should be laundered at regular intervals and not be taken home.

8.3. Personal protective equipment symbol (s)



Section 9. Physical and chemical properties

Information on basic physical and chemical properties.

Appearance:	Brown to black viscous liquid
Size:	Not applicable
Odour:	Hydrocarbon odour
pH:	Not applicable (oil only)
Solubility in water:	Very low solubility in water
Melting/freezing point:	Not applicable
Boiling point/range:	>150 °C
Flash point:	>38 °C at 101,325 kPa
Evaporation rate:	Data not available
Flammability (solid, gas):	Data not available
Flammability limit:	Upper limit: 5% (V/V) Max.
Auto ignition temperature (flammability):	>250 °C

Decomposition temperature:	Data not available
Exposure properties:	Not known
Lower explosion limit (LEL):	0.5% (V/V) Min.
Upper explosion limit (UEL):	5% (V/V) Max
Vapour pressure:	< 0.1kPa at 40°C
Density:	At 20 °C: 0.88 – 0.98 kg/l (ASTM D-445)
Partition coefficient: n-octanol/water:	Not applicable
Viscosity:	90-380 mm ² @ 50°C
Incompatibility:	Ignition sources, oxidising agents, high temperatures, sulphuric acid, nitric acid, caustics, aliphatic amines and amides.
Oxidizing properties:	Not applicable

Section 10. Stability and reactivity

10.1. Reactivity: Conditions/materials to avoid

Not reactive¹

Conditions to avoid : During storage and handling avoid excess heat generation, sparks and flames.

Materials to avoid : Ignition sources, oxidising agents, sulphuric acid, nitric acid, caustics, aliphatic amines and amides.

Possibility of Hazardous: Hazardous polymerisation does not occur.

Reactions

Incompatible materials : Strong oxidising agents, sulphuric acid, nitric acid, caustics, aliphatic amines and amides.

Hazardous decomposition products: Burning of this product gives rise to a complex mixture of gases and airborne particles including metallic oxides, sulphur oxides and oxides of carbon.

Note: 10.1 assumes normal ambient and anticipated storage and handling conditions in respect of temperature and pressure.

10.2. Stability

Stable. Partially volatile at temperatures in excess of 70 °C

Section 11. Toxicological information

11.1. Information on toxicological effects.

Basis of Assessment: Based on tests of similar products and/or components

Acute toxicity

- Acute oral toxicity : Low: LD50 in rats > 5000 mg/kg
 Acute inhalation toxicity : Low: LD50 in rats > 5mg/l (practically non-toxic).
 Acute dermal toxicity : Low: LD50 in rabbits > 2000 mg/kg.

Residual Fuel Oil (68476-33-5)	
LD50 oral rat	>5000 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LD50 inhalation rat (mg/l)	> 5 mg/l

Skin corrosion/irritation : Moderate: Primary Irritation index 3.5 (rabbits). Prolonged or repeated contact with skin may cause severe irritation and burns.

Eye Irritation/damage : Moderate irritation. Contact with eyes may cause blurring, tearing and redness.

Respiratory or skin sensation : Not known to be a sensitiser.

Germ cell mutagenicity : Mutagenic due to presence of polycyclic aromatic compounds.

Carcinogenicity : Probable carcinogen; avoid repeated and prolonged inhalation of fumes and mist.

Reproductive toxicity : Repeated application to rats - Males (70 days); Females (14 days). Males: no adverse effects on mating/fertility were found. Females: no adverse effects on gonadal function, oestrous cycles or mating were found.

STOT-repeated exposure : May cause damage to organs or organ systems (Liver, Thymus, Blood).

STOT- single exposure : Not expected to be a hazard.

Aspiration hazard : Not considered an aspiration hazard.

Section 12. Ecological information

12.1. Toxicity

Residual Fuel Oil (68476-33-5)

Acute toxicity : Has acute toxicity to aquatic organisms (LL50: 10 - 100 mg/l),
(LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).

12.2. Persistence and degradability

Major components are inherently biodegradable. Persists under anaerobic conditions. The volatile components oxidise rapidly by photochemical reactions in air.

12.3. Bio-accumulative potential

Contains components which may have the potential to bioaccumulate. May cause tainting of fish and shellfish.

12.4. Mobility in soil and water

Water : May float or sink in water. Contains volatile components. Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day.

Soil : Limited mobility in soil; large quantities may penetrate soil and contaminate groundwater.

12.5. Other Effects

Films formed on water may inhibit oxygen transfer and cause damage to aquatic organisms.

Section 13: Disposal considerations

13.1. Disposal methods

Waste disposal : Recover and/or recycle if possible. The waste generator should determine the toxicity and physical properties of the waste material to ascertain the appropriate waste classification and acceptable recycling, recovery or disposal method; in compliance with applicable regulations.

Disposal of waste that cannot be recycled or recovered should be undertaken by a licensed waste contractor in accordance with relevant laws and regulations. Safe disposal certificates should be obtained.

Avoid dispersal of spilled material, run-off, and contact with soil, waterways, drains and sewers.

Contaminated packaging : No information available

13.2. Other regulations

This material and any waste emanating from its use must be disposed via an appropriate method in compliance with the applicable National, regional and local legislative/ authority requirements.

13.3. Flash Point

>38 °C at 101,325 kPa

Section 14. Transport information

14.1. UN number, transport hazard class (es), packing group, and shipping name.

ADR

Proper shipping name : Petroleum Products or Distillates not otherwise specified
UN number : 1268
Class : 3
Packing group : III
Labelling number : 3



Product Reportable Quantity :

CFR

Proper shipping name : Petroleum Products or Distillates not otherwise specified
UN number : 1268
Class : 3
Packing group : III
Labelling number : 3



Product Reportable Quantity :

IATA_C

Proper shipping name : Petroleum Products or Distillates not otherwise specified
UN number : 1268
Class : 3
Packing group : III
Labelling number : 3



Product Reportable Quantity :

IMDG

Proper shipping name : Petroleum Products or Distillates not otherwise specified
UN number : 1268
Class : 3
Packing group : III
Labelling number : 3



Product Reportable Quantity :
Marine pollutant : Yes
Medical First Aid Guide (MFAG) table : No data available
Emergency Schedule (EmS) number : No data available
IMDG code page number : No data available

14.2. Environmental hazards

Dangerous to the environment	Yes
Marine pollutant	Yes
Other information	No supplementary information available

14.3. Special precautions for user

Refer to section 14.1

14.4. Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code

Refer to section 14.1

Section 15: Regulatory Information**15.1. Safety, health, and environmental regulations/legislation specific for the product**

Regulatory reference: SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

15.2. South African Safety, health, and environmental regulations/legislation and standards specific for the substance or mixture

Poisons Schedule Number: Not applicable

Storage and Handling: South African Occupational Health and Safety (Act 85 of 1993) as amended. SANS 10005:2005
SANS 10131:2004
SANS 10089-1:2008
SANS 10089-2:2007
National Environmental Management Act 1998 Section 28

Use: SANS 10005:2005

Disposal:	NEM: Waste Act 2008: GNR 635 National Norms & Standards for Assessment of Waste for Landfill Disposal and GNR 634 Waste Classification and Management Regulations South African National Road Traffic Act: GNR 273 SANS 10228:2006 - The Identification and Classification of Dangerous Goods for Transport.
Transport:	SANS 10234:2007 – Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Occupational:	Occupational Health and Safety Act (1993). Hazardous Chemical Substances Regulations, 1995. Occupational Exposure Limits – Recommended Limits (South Africa, 1995)
SDS Content:	Occupational Health and Safety Act (1993), General Amendment Regulation 930, June 2003. Occupational Health and Safety Act (1993), Hazardous Chemical Substances Regulation 1179, August 1995. SANS 10234, 2007: Global Harmonized System of Classification and Labelling of Chemicals (GHS). Standards South Africa, Edition 1.

15.3. Other regulations

Regulatory reference : Globally Harmonized System of Classification and Labelling of Chemicals (GHS) [GHS (Rev. 9) (2021)].

Section 16. Other information

Full text of H-Statements

- H224 Extremely flammable liquid and vapour.
- H225 Highly flammable liquid and vapour.
- H 226 Flammable Liquid and Vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H336 May cause drowsiness or dizziness.

- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- H301 Toxic if swallowed.
- H312 Harmful in contact with skin.
- H317 May cause an allergic skin reaction.
- H319 Causes severe eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Note: No significant changes have been made to this Safety Data Sheet since the previous date.

Abbreviations That May Have Been Used In This Document:

TLV - Threshold Limit Value	TWA - Time Weighted Average
LTEL - Long-term Exposure Limit	STEL - Short-term Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists	CAS - Chemical Abstract Service Number
IMO/IMDG - International Maritime Dangerous Goods Code	SDS – Safety Data Sheet
SANS – South African National Standards	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
STOT – Specific Target Organ Toxicity	OHS Act – Occupational Health and Safety Act
NFPA - National Fire Protection Association (USA)	ECHA - European Chemicals Agency

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Disclaimer

All reasonable efforts were exercised to compile this SDS in accordance with available information. The SDS provides information regarding the health, safety, and environmental hazards, at the date of issue, to facilitate the safe receipt, use and handling of the product in the workplace. Rolfes Chemicals cannot anticipate or control all conditions under which the product may be handled, used, and received in the workplace, it remains the obligation of each user, receiver, or handler to, prior to usage, review this SDS in the context within which the product will be received, handled, or used in the workplace. The user, handler, or receiver must ensure that the necessary mitigating measures are in place regarding health and safety. This does not substitute the need or requirement for any relevant risk assessment to be conducted. It further remains the responsibility of the receiver, handler, or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of the product. Although all reasonable efforts were exercised in the compilation of this SDS, Rolfes Chemicals does not expressly warrant the accuracy or assume any liability for the incompleteness of the information contained herein or any advice given. The product is sold, and risk passes in accordance with the specific terms and conditions of sale.

