

In accordance with Regulation (EU) No 1907/2006 with amendments

ORLEN OIL TRAFO EN

Compilation date: 13.05.2009 Revision: 26.09.2014 Version: 3.0 Page 1 of 10

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: ORLEN OIL TRAFO EN

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

Identified uses: Insulating oil

<u>Uses advised against</u>: other uses are not recommended.

1.3. Details of the supplier of the safety data sheet

Supplier: **ORLEN OIL Sp. z o.o.**

Address: 31-323 Kraków, ul. Opolska 100, Poland Telephone No/Fax No: +48 12 66 555 00 / +48 12 66 555 01

Quality-related information: tel. +48 13 43 84 415

E-Mail: msds@orlenoil.pl

1.4. Emergency telephone number

+48 13 43 84 415 (available from Monday till Friday during office hours: 7 am - 3 pm)

In case of emergency call 112 (Emergency number), 998 (Fire Brigade), 999 (Ambulance Service)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification	According to Regulation (EC) No 1272/2008 (CLP)+ self classification:	According to Directive 67/548/EEC:
for physical-chemical properties:	Not classified	Not classified
for health hazards:	Aspiration hazard: Asp. Tox. 1 (H304 May be fatal if swallowed and enters airways).	Not classified
for environmental hazards:	Not classified	Not classified

2.2. Label elements



Hazard pictogram(s): GHS08

Signal word(s): **Danger** Hazard statement(s):

H304 May be fatal if swallowed and enters airways.

Precautionary statement(s):

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331 Do NOT induce vomiting.

P501 Dispose of contents/container to a certified disposal contractor

2.3. Other hazards

The substance does not meet the PBT and vPvB criteria set out in Annex XIII to the REACH Regulation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



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3.1. Substances - not applicable

3.2. Mixture - mixture of base oils

Hazardous ingredients, concentration in mixtures:

Substance name/ REACH	CAS No/ EC	Index number	<u>% wt.</u>	Classification	Classification
registration number	<u>No</u>			according to Council Directive No.67/548/EEC	according to EC Directive No.1272/2008 (CLP)
Distillates(petroleum), hydrotreated light naphthenic REACH no: 01-2119480375-34	265-156-6/ 64742-53-6	649-466-00-2	60-80	Not classified	Asp. Tox. 1; H304
Distillates(petroleum), hydrotreated light paraffinic REACH no: 01-2119487077-29	265-158-7: 64742-55-8	649-468-00-3	20-40	Not classified	Asp. Tox. 1; H304
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil- based REACH no: 01-2119474889-13	276-738-4/ 72623-87-1	649-438-00-5	0-30	Not classified	Asp. Tox. 1; H304
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil- based REACH no: 01-2119474878-16	276-737-9/ 72623-86-0	649-482-00-X	0-30	Not classified	Asp. Tox. 1; H304
Distillates (petroleum), solvent-refined light naphthenic REACH no: 01-2119480374-36	265-098-1/ 64741-97-5	649-458-00-9	0-5	Not classified	Asp. Tox. 1; H304
Distillates (petroleum), solvent-refined heavy naphthenic REACH no: 01- 2119483621-38	265-097-6/ 64741-96-4	649-457-00-3	0-5	Not classified	Asp. Tox. 1; H304

Based on H and L Notes, substance **is not classified as carcinogenic**. DMSO extract content is less than 3% (as measured by IP 346).

SECTION 4. FIRST AID MEASURES



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4.1. Description of first aid measures

Inhalation:

Remove the victim (move/carry) from the exposure area to fresh air; keep warm and quiet. Place an unconscious person in the recovery position, loosen tight parts of clothes; control and maintain patency of the airways. Administer oxygen in case of breathing disorders; if not breathing, give artificial respiration. In case of syncope, breathing disorders or when feeling unwell get medical aid immediately.

Contact with skin:

Immediately remove contaminated/soaked clothes and shoes. Wash contaminated skin thoroughly with soap and water or mild detergent, and then rinse with water. When irritation symptoms appear and persist, consult a doctor.

Contact with eyes:

Flush contaminated eyes with running water, remove contact lenses (if present) and continue flushing for approx. 15 minutes. When flushing, keep the eyelids wide open and keep moving the eyeballs. When symptoms appear and persist, consult a doctor.

NOTE: Do not use too strong stream of water which may damage the cornea.

Ingestion:

Get medical aid immediately. DO NOT induce vomiting – increased risk of aspiration. When spontaneous vomiting occurs, keep the victim leaned forward, with her/his face directed to the ground. If the victim is conscious, let her/him drink approx. 200 ml of liquid paraffin. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Eye irritation, tearing, redness. Skin redness, drying, irritation and degreasing. Irritation of the respiratory tract. Prolonged or frequent exposure may causa dizziness, nausea i lung damage.

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

Do not induce vomiting and do not give anything by mouth to an unconscious person. Show the safety data sheet or the label/container to the medical staff.

Information to a doctor: treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media: carbon dioxide, dry powder, foam; water spray or water fog. **Unsuitable Extinguishing Media:** water jet. Danger: burning liquid can spread over water surface.

5.2. Special hazards arising from the substance or mixture

Smokes containing carbon oxides and other unidentified thermal decomposition products of higher hydrocarbons are formed during product burning. Avoid breathing products that are released during fire - they may be hazardous for health.

5.3. Advice for firefighters

Proceed in accordance with procedures applicable for extinguishing fire of chemicals – flammable liquids, insoluble in water. In case of fire of large amount of the product, remove all bystanders not participating in action; alert emergency personnel and the Fire Brigade. People participating in the fire-extinguishing action should be properly trained, equipped with a full protective clothing and a self-containing breathing apparatus. If possible cool down the containers exposed to fire or high temperature with water spray from a safe distance and remove remove to a safe place. Prevent fire fighting wastewater from entering sewage and water reservoirs. Dispose of fire fighting wastewater and residues in compliance with current legislation.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Limit the access of bystanders to the area of risk until proper cleaning operations are finished. In case of large spillage isolate the area of risk. The stuff should be properly trained.

Avoid contact with eyes, skin and clothes. Avoid breathing vapours. Work in well ventilated area. Use adequate



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personal protective equipment as required in Section 8 of the safety data sheet.

NOTE: Spilled oils can make surface slippery.

6.2. Environmental precautions

If possible and safe, stop or limit product release. Limit large spillage by embanking the area. Prevent from entering sewers, rivers or other bodies of water and soil. Notify respective authorities (Occupational Safety and Health Administration, emergency brigades, Environment Protection Authority and Local Administration).

6.3. Methods and material for containment and cleaning up

Cover up small spillage with non-flammable, neutral absorbent material (eg. earth, sand, vermiculite, silica, universal absorber etc.) and than collect to a properly labelled, closed waste container. Large spillages should be pumped. Dispose of waste in compliance with current legislation.

6.4. Reference to other sections

Refer to Sections 8 and 13 of the safety data sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Poisoning prevention: Avoid vapour/mist formation in concentration that exceeds the accepted occupational exposure limits. Work in well ventilated area. Avoid contact with the eyes, skin and clothes. Avoid breathing vapours and mist. Keep unused containers tightly closed.

General occupational hygiene shall be provided: do not eat, drink or smoke in work areas, wash hands with water after work or break. Immediately change and wash contaminated cloathing before reuse. Use adequate personal protective equipment as required in Section 8 of the safety data sheet.

Fire and explosion prevention: Do not use open fire, do not smoke, eliminate other sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed and properly labelled containers, in a cool, well ventilated area. Store away from heat sources, protect from direct sunlight. Protect against contamination and water accumulation. Do not smoke, use fire or other sources of ignition. Keep away from strong oxidisers.

7.3. Specific end use(s)

Insulating oil.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Mineral oils (liquid phase of aerosol) TLV-TWA: 5 mg/m₃, TLV-STEL: 10 mg/m₃, TLV-C: –

Directive of the Minister of Work and Social Policy dated November 29th, 2002 on the maximum occupational levels of factors hazardous to health at the workplace (Dz.U. No. 217, item 1833 with amendments

Product/ingredient name	Туре	Exposure	Value	Population	Disorders
Distillates (petroleum), hydrotreated light naphthenic	DNEL	Prolonged inhalation	5,4 mg/m ³	Workers	local
Distillates(petroleum), hydrotreated light paraffinic	DNEL	Prolonged inhalation	5,4 mg/m ³	Workers	local
Distillates (petroleum), solvent- refined light naphthenic	DNEL	Prolonged inhalation	5,4 mg/m ³	Workers	local
Distillates (petroleum), solvent- refined heavy naphthenic	DNEL	Prolonged inhalation	5,4 mg/m ³	Workers	local

8.2. Exposure controls

Appropriate engineering controls:

General ventilation and/or local fume hood in order to keep concentration of the substance below the exposure limits. Local fume hood is preferred, as it enables emission control at source and prevents spreading throughout



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the working area.

Eye/face protection:

Use tight safety glasses (goggles) in the case of prolonged exposure or when splashing the liquid to the eye is possible. It is recommended to equip the workplace with a water shower for eyes flushing.

Skin protection:

Wear impermeable, oil resistant gloves (e.g. perbutane, viton, butyl rubber). Material for gloves should be selected with consideration to the breakthrough time, permeability rate and degradation. It is recommended to change gloves regularly and replace them immediately if any signs of wear or damage (tearing, puncture) or changes in appearance (colour, flexibility, shape) occur. Wear protective apron or protective cloathing.

Respiratory protection:

Not required under normal conditions of use. In the case of concentration exceeding the acceptable limits or inadequate ventilation use the approved respirator equipped with a suitable filter or filter-absorber. If mask does not provide adequate protection for activities in the limited space / insufficient oxygen content in the air / high uncontrolled emission / any other circumstances, use self-contained breathing apparatus.

Thermal hazards:

Not applicable.

Environmental exposure controls:

Prevent from entering sewers, rivers or other bodies of water and soil.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance

b) Odour

c) Odour threshold

d) pH

e) Melting point/freezing point

f) Initial boiling point and boiling range

g) Flash point

h) Evaporation rate

i) Flammability (solid, gas)

j) Upper/lower flammability or explosive limits

k) Vapour pressure

I) Vapour density

m) Relative density

n) Solubility(ies)

o) Partition coefficient: n-octanol/water

p) Auto-ignition temperature

q) Decomposition temperature

r) Viscosity

s) Explosive properties

t) Oxidising properties

: Liquid; light yellow

: Characteristic for oils, mild

: Not available

: Not applicable

: -48°C

 $: > 250^{\circ}C$

: > 140°C (closed cup Pensky-Martens)

: Not available

: Not available

: Not availabe

: 100 Pa at 100°C

: Not available

: 0,87 g/cm³ at 15°C

: Not soluble in water

: Not available

: >270°C

: Not available

: kinematic viscosity approx. 10 mm²/s at 40°C

: Not available

: Not available

9.2. Other information

Surface tension : \geq 40 mN/m

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive.

10.2. Chemical stability



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Substance is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions

Not known.

10.4. Conditions to avoid

High temperature, flame and other sources of ignition.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Not known. Hazardous combustion products are included in Section 5 of the safety data sheet.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ ingredient name	Result	Object	Dosage	Exposure
Distillates (petroleum), hydrotreated light naphthenic	LC50 Inhalation dust and vapour	Rat	>5,53 mg/l	4 hours
Distillates(petroleum), hydrotreated ight paraffinic	LD50 Dermal	Rabbit	>2000 mg/kg	-
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based				
Lubricating oils (petroleum), hydrotreated	LD50 Oral	Rat	>5000 mg/kg	-
Lubricating oils (petroleum), C15-30,	LD50 Dermal	Rabbit	>2000 mg/kg	-
hydrotreated neutral oil-based	LD50 Oral	Rat	>5000 mg/kg	
Distillates (petroleum), solvent-refined	LC50 Inhalation dust and	Rat	>5,53 mg/l	4 hours
light naphthenic	vapour			
Distillates (petroleum), solvent-refined	LD50 Dermal	Rabbit	>2000 mg/kg	
heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	

Skin corrosion/irritation:

Not irritant.

Serious eye damage/irritation:

Causes mild irritation.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met. Based on L Note, substance is not classified as carcinogenic (DMSO extract content is less than 3% as measured by IP 346).

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:



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Based on available data, the classification criteria are not met. Accidental ingestion may cause gastric disorders (nausea, vomiting, stomach pain); irritation of the gastrointestinal tract. High concentration of vapours/mist may cause moderate irritation of the respiratory tract mucosa (sore throat, cough), headache, dizziness and nausea; at prolonged exposure may appear breathing disorders, central nervous system disorders, disturbances in the coordination of movements, disorientation, drowsiness, loss of consciousness.

STOT-repeated exposure:

Based on available data, the classification criteria are not met. Repeated or prolonged exposure may cause drying, cracking or chronic inflammation of the skin. Prolonged exposure to vapours may cause neurotoxic disorders.

Aspiration hazard:

May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity Water:

Product/ ingredient name	Result	Object	Exposure
Distillates (petroleum), hydrotreated light naphthenic	Acute toxicity IC50 >100 mg/l	Algae	48 hours
Distillates(petroleum), hydrotreated light paraffinic	Acute toxicity LC50 >100 mg/l Acute toxicity IC50 >100 mg/l	Fish Algae	96 hours 48 hours
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Acute toxicity LC50 >100 mg/l Acute toxicity IC50 >100 mg/l	Fish Algae	96 hours 48 hours
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Acute toxicity LC50 >100 mg/l Acute toxicity IC50 >100 mg/l	Fish Fish	96 hours 96 hours
Distillates (petroleum), solvent-refined light naphthenic	Acute toxicity IC50 >100 mg/l	Algae	48 hours
Distillates (petroleum), solvent-refined heavy naphthenic	Acute toxicity LC50 >100 mg/l Acute toxicity EC50 >100 mg/l	Fish Fish	96 hours 96 hours

Conclusion / Summary: data on aquatic toxicity shows values for LC50 higher than 100 mg /l, what is considered as slightly toxic.

12.2. Persistence and degradability

Hardly biodegradable. Inherently biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation ability.

12.4. Mobility in soil

Studies on adsorption/desorption – not applicable

12.5. Results of PBT and vPvB assessment

The substance does not meet the PBT and vPvB criteria set out in Annex XIII to the REACH Regulation.

12.6. Other adverse effects

Product of very low volatility. Hydrocarbons of which this product is composed of have low tendency or no tendency to penetrate the atmosphere. It is practically insoluble in water and lighter than water. It accumulates on the water surface, forming a film that hinders oxygen exchange. Hydrocarbons of higher molecular mass may sediment in water. The product limitedly disperse in soil; it may penetrate into soil and contaminate ground waters.



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SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste code: 13 03 07 Mineral-based non-chlorinated insulating and heat transmission oils

Do not pour into sewer. Do not dispose of waste into a community landfill. Avoid contamination of surface and ground waters. Consider reuse. Waste product should be recovered or disposed at professional, approved furnaces or waste recycling/neutralization facilities, in compliance with current legislation.

Recovery / recycling / utilisation of package wastes should be performed in compliance with current legislation. NOTE: Only completely emptied and cleaned packages may be recycled. Use services of authorised companies.

The Act of 14 December 2012 on wastes (Dz.U. 2013, item 21)

The Act of 11 May 2001 on packages and package wastes (Dz.U. No. 63, item 638 with amendments)

Regulation of the Minister of Environment of 27 September 2001, on wastes catalogue (Dz. U. No.112, item 1206 with amendments)

SECTION 14. TRANSPORT INFORMATION

The substance is not subjected to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

14.1. UN number	Not applicable
14.2. UN proper shipping name	Not applicable
14.3. Transport hazard class(es)	Not applicable
14.4. Packing group	Not applicable
14.5. Environmental hazards	Not applicable
14.6. Special precautions for user	Not applicable
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable

SECTION 15. REGULATORY INFORMATION



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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Act of 25 February 2011 on chemicals and their mixtures (Journal of Laws of 2011 No. 63 item 322)

Regulation of the Minister of Health of 20 April 2012 on labelling packaging of dangerous substances and dangerous mixtures and some mixtures (Journal of Laws 12, item 445)

Regulation (EC) No. 1907/2006 of the European Parliament of 18 December 2006 on registration, evaluation and authorisation of chemicals (REACH) and establishing the European Chemicals Agency, amending Directive No.1999/45/WE and repealing regulation of the Council (EEC) No. 793/93 and regulation of the Commission (EC) No. 1488/94, as well as the Council Directive No.

76/769/EEC and Commission Directive No. 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (correction Journal of Laws of 29 May 2007 as amended)

Regulation of the Commission (EC) No. 453/2010 of 20 May 2010 amending regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 on registration, evaluation and authorisation of chemicals (REACH) (Journal of Laws L 133 of 31 May 2010)

Regulation of the European Parliament and the Council (EC) No. 1272/2008 of 16 December 2008 on classification, labelling and packing substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No. 1907/2006 (Journal of Laws No. 353 of 31 December 2008 as amended)

Regulation of the Minister of Health of 10 August 2012 on criteria and methods of classifying substances and mixtures (Journal of Laws of 2012 No 0 item 1018)

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to life in the working environment (Journal of Laws of 2011, No. 33, item 166)

Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protection (Journal of Laws of 2005 No. 259, item 2173)

Regulation of the Minister of Health and Social Care of 30 May 1996 on medical examination of employees, scope of preventive health care and medical certificates issued for purposes stipulated in the Labour Code (Journal of Laws of 1996, No. 69, item 332; of 1997 No. 60, item 375; of 1998 No. 159, item 1057; of 2001 No. 37, item 451; No. 128, item 1405)

Regulation of the Minister of Health and Social Policy of 26 September 1997 on general occupational health and safety regulations (consolidated text, Journal of Laws of 2003 No. 169, item 1650; of 2007 No. 49, item 330; of 2008 No. 108, item 690)

Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal of Laws of 2005 No. 11, item 86; of 2008 No. 203, item 1275)

Act of 24 August 1991 on fire protection (consolidated text, appendix to the Journal of Laws of 2002 No. 147 item 1229; of 2003 No. 52, item 452; of 2004 No. 96, item 959; of 2005 No. 100, item 835 and 836; of 2006 No. 191, item 1410; of 2007 No. 89, item 590; of 2008 No. 163, item 1015; of 2009 No. 11, item 59)

European Agreement concerning the international carriage of dangerous goods by road (ADR), concluded in Geneva on 30 September 1957, as amended, effective as of the date of entry into force for the Polish Republic, proclaimed in the right way (Dz. U. of 2011. No 110, item 641):

Act of 19 August 2011 on the carriage of dangerous goods (Dz. U. of 2011, No 227, item 1367).

15.2. Chemical safety assessment

Chemical safety assessment is not required for the substance.

SECTION 16. OTHER INFORMATION

Changes made in the safety data sheet during revision:

Sections: 1 - 16.

Legend to abbreviations and acronyms used in the safety data sheet:

TLV-TWA Threshold Limit Value

TLV-STEL Threshold Limit Value, Short Term Exposure Limit

TLV-C Ceiling exposure limit

vPvB Very persistent and very bioaccumulative (substance)
PBT Persistent, bioaccumulative and toxic (substance)

PNEC Predicted No Effect Concentration



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Literature references and sources for data:

Regulations/legislations mentioned in sections 2 - 15 of safety data sheet. Manufacturer's information on substance properties.

List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements, which are not written out in full under Sections 2 to 15:

Advice on any training appropriate for workers to ensure protection of human health and the environment:

Workers that use the product should be trained and informed about health hazards, personal protection, accident preventive actions, rescue actions, etc.

MSDS is not a quality certificate for the product. Information provided herein serves only as guidelines for safe handling during transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. This information applies only to specific material designated and may not be suitable for such material used in combination with any other materials or in any other manner not described in this document. The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or inappropriate use of the product. In case of special use to ensure safe work, exposure should be re-estimated, appropriate procedure and training programs should be developed.