

SAFETY DATA SHEET

Prepared in accordance with Regulation No 1907/2006 (REACH) as amended

BASE OILS SN-100, SN-150, SN-500, SN-650

Made on: 14.01.2019

Updated on: -

Version: 1.0 CLP

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

1.1. Product identifier

Trade name: **BASE OILS SN-100, SN-150, SN-500, SN-650**

Name: Distillates (petroleum), hydrotreated heavy paraffinic

CAS no.: 64742-54-7

EC no.: 265-157-1

Index no.: 649-467-00-8

REACH registration no.: 01-2119484627-25-006

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

Relevant identified uses: Base oils are used for the production of lubricating oils, oil products, lubricants, plasticizers, car chemistry products, anti-caking products for spraying artificial fertilizers, as emulsifier for water-asphalt dispersion in the construction industry

Uses advised against: other uses are not recommended

1.3. Details of the supplier of the safety data sheet

Manufacturer: **Polski Koncern Naftowy ORLEN S.A.**

Address: 09-411 Płock, ul. Chemików 7

Phone/Fax +48 (24) 365 00 00; fax: +48 24 365 40 40

No.:

E-mail: reach@orlen.pl

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

Address: 31-323 Kraków, ul. Opolska 114

Phone/Fax +48 12 66 555 00 / +48 12 66 555 01

No.: Quality-related information: phone +48 24 201 03 67 or +48 13 438 44 15

E-mail: msds@orlenoil.pl

1.4. Emergency telephone number:

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

National Help Center for the Transport of Hazardous Materials - SPOT: +48 (24) 365 70 32 and (24) 365 70 33

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

	Classification	According to Regulation (EC)
risks		No. 1272/2008 (CLP):
resulting from physicochemical properties:		Not classified as hazardous
for humans:		Not classified as hazardous
for environment:		Not classified as hazardous

2.2. Label elements

Pictogram: None

Signal word: None

Hazard statements: None

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Precautionary statements: None

2.3. Other hazards

The substance does not meet PBT or vPvB criteria as per Annex XIII. Flammable product, high ignition temperature. Exposure to high concentrations of vapours or mists of oil may cause irritation of respiratory tract mucous membranes and eyes. Prolonged or repeated direct contact may cause skin irritation. In the event of a release of large amounts of oils, they can pose a risk to aquatic organisms due to their limited biodegradability.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances:

Substance name/ REACH registration number	CAS No/ EC No	% wt.	Index number	Classification according to EC Regulation No.1272/2008 (CLP)
Distillates (petroleum), hydrotreated heavy paraffinic; Unspecified base oils 01-2119484627-25-XXXX	265-157-1/ 64742-54-7	<100	649-467-00-8	Not classified as hazardous

A complex mixture of hydrocarbons obtained by hydrotreatment of crude oil fraction in the presence of a catalyst. Contains mostly C20 to C50 hydrocarbons. It contains a relatively great amount of saturated hydrocarbons.

Base oils applied **are not classified as carcinogenic**. DMSO extract content (according to IP 346) <3%. Based on its viscosity product does not pose aspiration hazard.

3.1. Mixtures: - not applicable

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

Remove the victim (move/carry) from the exposure area to fresh air and keep warm and quiet. Place an unconscious person in the recovery position, loosen tight parts of clothes; control and maintain patency of the airways. Give oxygen in the case of breathing disorders; if not breathing, use artificial ventilation. In the case of loss of consciousness, respiratory disorders or persisting symptoms obtain medical aid immediately.

Skin contact:

Immediately remove contaminated/soaked clothes and shoes. Thoroughly wash contaminated skin with soapy water or mild detergent, and then rinse with water. Consult a doctor if irritation symptoms appear and persist. NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources.

Eye contact:

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

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

Ingestion:

Obtain medical aid immediately. DO NOT induce vomiting – increased aspiration risk. In the case when spontaneous vomiting occurs, keep the victim leaning forward, with her/his face directed to the ground. If the victim is conscious, let her/him drink 200 ml of liquid paraffin. Do not give milk, fat or alcohol.

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

Refer also to section 11 of the SDS.

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 label / packaging to medical personnel providing assistance. Persons providing assistance in an area of unknown concentration of vapor / mist should be equipped with appropriate respiratory protection
Indications for a doctor: symptomatic treatment.

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.

5.2. Special hazards arising from the substance or mixture

Flammable liquid of high ignition point. In the fire environment smokes containing carbon oxides and other unidentified thermal decomposition products of higher hydrocarbons are formed. Avoid breathing products being released in the fire environment - they may be hazardous for health.

5.3. Advice for fire fighters

Proceed in accordance with procedures applicable for extinguishing chemical fire. In the case of fire involving great amounts of the product, remove all bystanders not participating in action; call emergency brigades and the Fire Brigade.

Cool the containers exposed to fire or high temperature with water spray from a safe distance, if possible and remove them from the endangered area.

Prevent the wastewater after fire extinguishing from penetrating sewage and water tanks. Remove wastewater and residue after firefighting in accordance with valid regulations.

People participating in the fire-extinguishing action should be properly trained, equipped with a full protective clothing and a self-containing breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use individual protection measures – see section 8 of the Safety Data Sheet.

Limit the access of bystanders to the endangered area until proper cleaning operations are finished. In the case of great leakage isolate the endangered area. Ensure that breakdown and its results are eliminated by a properly trained staff only.

Avoid contact with the eyes, skin and clothes. Do not inhale vapours or mist. If release occurred in closed area, ensure adequate ventilation/ airing.

NOTE: Spilled oils can make surfaces slippery. Remove ignition sources, extinguish open fire, do not smoke.

6.2. Environmental precautions

If it is possible and safe, stop or limit product release. Limit spreading of the great leakages by embanking the area. Prevent the product from penetrating drains, waters or soil. Notify respective authorities (occupational safety and hygiene, emergency brigades, environmental brigades and organs of administration).

6.3. Methods and material for containment and cleaning up

Cover up small spillage with non-flammable, neutral absorbent material (sand, soil, diatomic earth, vermiculite) and collect in an appropriate, closed, labelled waste bin. Clean the contaminated area with water with detergent, and then rinse with water. Pump off large amounts of liquid. Dispose of according to the applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilisation in order to remove the product/absorbent material contaminated with the product. Use the services of professional waste transport/ utilization companies.

6.4. Reference to other sections

See also sections 8 and 13 of the Safety Data Sheet.

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SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide effective ventilation. Avoid contact with the eyes, skin and clothes. Avoid vapour and fog inhalation. Keep unused containers tightly closed.

Essential hygiene rules should be observed: do not eat, drink or smoke during work, wash hands with soapy water after work/after break in work. Do not use contaminated clothing; Immediately remove contaminated clothing and wash before reuse. NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources. Use individual protection measures in accordance with the information contained in section 8 of the Safety Data Sheet.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly sealed and properly labelled containers, in a cool, well ventilated place with a non-absorbing ground. The product may be stored in storage tanks in accordance with applicable regulations. Store far from heat sources, protect from direct sunlight. Protect against contamination and water accumulation. Keep away from strong oxidisers. Storage temperature: -20 – 40°C.

7.3. Specific end use(s)

None.

SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

8.1. Control parameters

The substance has no occupational exposure limit values established on the Community level.

Legal basis: Commission Directive 2006/15/EC, 2000/39/EC, 2009/161/EC, 2017/164/EU.

Please check also national legislation.

8.2. Exposure controls

Recommended methods of exposure assessment in the air:

- PN-Z-04008-7:2002 – "Air purity protection -- Sampling methods -- Principles of air sampling in work place and interpretation of results"
- PN-Z-04108-6:2006 „Air purity protection -- Determination of mineral oil (liquid phase aerosol) in work places by absorption spectrometry method in ultra-violet ”.
- PN-Z-04108-5:2006 „Air purity protection -- Tests for content of oils -- Determination of mineral oil (liquid phase of aerosol) in work places by absorption spectrometry method in infra-red"

Appropriate engineering controls:

General ventilation and / or local exhaust to maintain the concentration of the harmful agent in the air below the established concentration limits. Local exhaust is preferred, since it enables emission control at source and prevents spreading throughout the working area.

Eye/ face protection:

Use tightly fitting protective glasses (goggles). It is recommended to equip a working place with an eyewash station with water to rinse the eyes.

Skin protection:

In case of prolonged contact wear impermeable, oil resistant gloves (e.g. perbutane, viton, butyl rubber). The selection of the glove material should be made taking into account the breakthrough time (recommended: minimum 30 minutes), permeation rate (recommended: minimum level 2) and degradation. It is recommended to regularly change gloves and replace them immediately, if there are any signs of wear, damage (tearing, perforation) or changes in appearance (color, elasticity, shape). Wear an apron or protective clothing made of coated, product-resistant materials; oil-resistant and non-slip protective footwear.

Respiratory protection:

Not required under normal conditions of use. If the concentrations exceed the admissible exposure values or the ventilation is inadequate, use an approved respirator with an appropriate filter or a filtering and absorbing equipment. In case of working in confined space, insufficient oxygen content in the air, high uncontrolled

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emissions or other circumstances, when the mask does not give sufficient protection, use a breathing apparatus with independent air supply.

Thermal hazards:

Not applicable

Environmental exposure controls:

It should be considered to take precautions to protect the area around the storage tanks.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	: Clear liquid/ colour: colourless/pale yellow to dark brown
b) Odour	: Faint, characteristic
c) Odour threshold	: Not applicable
d) pH	: Not applicable
e) Melting/solidification temperature	: SN 100: max. -15°C SN 150: max. -12°C SN 500: max. -9°C SN 650: max. -9°C
f) Initial boiling temperature and melting temperature range	: 350 - 580 °C
g) Flash point	: SN 100: min. 190°C SN 150: min. 210°C SN 500: min. 220°C SN 650: min. 240°C
h) Evaporation rate	: Not determined
i) Flammability (solid, gas)	: Not applicable
j) Upper/lower flammability limit or upper/lower explosion limit	: flammability of oil mist at a concentration of approx. 45 g/cm ³
k) Vapour pressure	: <0.1 hPa w 20°C
l) Vapour density	: Not determined
m) Relative density	: SN 100: 0.860 g/cm ³ w 15°C SN 150: 0.870 g/cm ³ w 15°C SN 500: 0.889 g/cm ³ w 15°C SN 650: 0.894 g/cm ³ w 15°C
n) Solubility	: Insoluble in water, soluble in hydrocarbons
o) Partition coefficient n-octanol/ water	: log Kow 3.9-6 (estimated)
p) Auto-ignition point	: Not determined
q) Decomposition temperature	: Not determined
r) Kinematic viscosity	: SN 100: 3,8-4,3mm ² /s (100 °C), min. 20,5mm ² /s (40 °C) SN 150: 5,0-5,5mm ² /s (100 °C), 28,8-33,5 32mm ² /s(40 °C) SN 500: 10,5-12mm ² /s (100 °C), min. 80mm ² /s (40 °C) SN 650: 13 -16,2mm ² /s (100 °C), min. 135mm ² /s (40 °C)
s) Explosive properties	: Not applicable
t) Oxidizing properties	: Not applicable

9.2. Other information

None

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

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The product is not reactive.

10.2. Chemical stability

The product is stable under normal conditions, at ambient temperature and under normal pressure.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

High temperature, open flame and other ignition sources.

10.5. Incompatible materials

Strong oxidisers

10.6. Hazardous decomposition products

Not known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Classification criteria have not been met based on the available data.

LD50: > 5000 mg/kg (oral, rat)

LC50: >5 mg/l (inhalation, rat, 4h)

LD50: >5,000 mg/kg (skin, rabbit)

In normal conditions, due to its high boiling point and low vapour pressure, the product poses hazard by little inhalation. It may occur in the case of exposure to vapour released from heated product or mists. Intoxication by ingestion is unlikely due to organoleptic properties.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met. Prolonged contact with the product may cause skin irritation

Serious eye damage/irritation:

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

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.

Reproductive toxicity:

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

STOT – single exposure:

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

Accidental ingestion may cause stomach upset (nausea, vomiting, abdominal pain); irritation of the gastrointestinal tract. High concentrations of vapours/mist may cause moderate irritation of the respiratory tract mucosa (sore throat, cough), headache, dizziness and nausea; at prolonged exposure breathing disturbances, central nervous system disorders, disturbances in the coordination of movements, disorientation, drowsiness, loss of consciousness.

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STOT-repeated exposure

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

Aspiration hazard:

Based on available data, the classification criteria are not met for a substance of viscosity ≥ 20.5 mm²/s at 40°C.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Aquatic environment:

NOEL: ≥ 10000 mg/l - acute toxicity test on fresh-water invertebrate; Daphnia magna, 48h

NOEL: 100 mg/l - chronic toxicity test on invertebrates; Daphnia magna, 21 days

NOEL: ≥ 100 mg/l - acute toxicity test on fresh-water algae; Pseudokirchinella subcapitata, 72h

NOEL: ≥ 100 mg/l - acute toxicity test on fresh-water fish; Pimephales promelas, 96h

NOEL: > 1000 mg/l - chronic toxicity test on fresh-water fish; Oncorhynchus mykiss, QSAR, 28 days

Sediment:

Toxicity test on sediment microorganisms: n/a (test scientifically unjustifiable)

Land environment:

Chronic toxicity test on invertebrates: n/a (test scientifically unjustifiable)

Toxicity test on plants: n/a (test scientifically unjustifiable)

Toxicity test on birds: n/a (test scientifically unjustifiable)

12.2. Persistence and degradability

Biodegradation potential: hardly biodegradable (31.13% in 28 days)

Hydrocarbons which penetrate into air photo-degrade rapidly by reaction with hydroxyl radicals when exposed to sunlight. The half-life is shorter than 1 day.

12.3. Bioaccumulative potential

Not applicable – UVCB substance.

Bioaccumulation factor (BCF) is not determined. Studies proved that for some petroleum products this factor is slight due to their poor solubility.

It is potentially considered that components of this group of product can bioaccumulate.

12.4. Mobility in soil

Adsorption/desorption test – not applicable – UVCB substance.

12.5. Results of PBT and vPvB assessment

PBT or vPvB criteria according to Annex XIII of REACH Regulation have not been met.

12.6. Other adverse effects

The product is classified as harmful to aquatic organisms. Hydrocarbons of which this product is composed have low tendency or no tendency to penetrate to the atmosphere. The product is insoluble in water and lighter than water. It accumulates on the water surface creating a layer impeding the exchange of oxygen. Hydrocarbons of higher molecular mass may be sedimented in water. The product is limitedly dispersed in soil; it may penetrate into soil and contaminate surface waters.

SECTION 13. HANDLING OF WASTES

13.1. Waste treatment methods

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Recommended waste code: **13 08 99*** Oil wastes not specified in other groups. Wastes not otherwise specified

NOTE: Since waste code is assigned based on the source of origin, the end user should define the obtained wastes and assign a proper code, taking into consideration specific conditions of use, in accordance with applicable regulations.

Do not dispose to sewer. Avoid contamination of surface and ground waters. Consider reuse. Waste product should be recovered or utilised at professional, approved furnaces or waste recycling/neutralization facilities, in accordance with applicable regulations.

Recovery / recycling / utilisation of package wastes should be performed according to the applicable regulations.

NOTE: Only completely emptied and cleaned packages may be returned for recycling. Use services of authorised companies.

Legal basis: Directive 2008/98/EC, 94/62/EC.

SECTION 14. TRANSPORT INFORMATION

The substance is not a subject 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 users	Not applicable
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

SECTION 15. REGULATORY INFORMATION

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the

Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance) as amended.

Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the

European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance).

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

European Parliament and Council **Directive 94/62/EC** of 20 December 1994 on packaging and packaging waste.

15.2. Chemical safety assessment

Not required.

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SECTION 16. OTHER INFORMATION

Abbreviations and acronyms 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, very Bioaccumulative (substance)
PBT	Persistent, bioaccumulative, and toxic (substance)
PNEC	Predicted No Effect Concentration
DN(M)EL	Derived No Effect Level
LD ₅₀	Dose that will kill 50% of the test animals
LC ₅₀	Concentration that will kill 50% of the test animals
EC _x	Concentration at which x% inhibition of growth or growth rate is observed
LOEC	Lowest Observed Effect Concentration
NOEL	No Observed Effect Concentration
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
ADR	Agreement on Dangerous Goods by Road
IMDG	International Maritime Transport of Dangerous Goods
IATA	International Air Transport Association
UVCB	Unknown substances, of Variable Composition, or of Biological Origin

References:

Legal regulations quoted in sections 2 – 15 of the Safety Data Sheet.
Chemical safety assessment report for the mixture ingredients.

The list of applicable H-phrases in Section 3

None

The full text of CLP classification:

none

Advice on training for employees:

Employees who use the product should be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

Additional information: Classification was made on basis of data for hazardous ingredients content by calculation method according to the guidelines of Regulation 1272/2008 / EC (CLP) with amendments.

This SDS is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. Information in the Safety Data Sheet relates to the above mentioned product and its specified uses only. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet.

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 for an inappropriate use of the product. In the case of special applications evaluate exposure and develop the appropriate procedure and training programs in order to ensure safety at work.