

# White mineral oil (petroleum)

## Product Stewardship Summary

CAS number:

8042-47-5

Chemical formula:

Not applicable, most petroleum industry substances are Substances of Unknown or Variable composition, Complex reaction products or Biological materials (UVCB).

### What is White mineral oil (petroleum)?

It is a highly raffinated mineral oil, which almost exclusively consists of saturated hydrocarbons.

### How is White mineral oil (petroleum) used?

It is used in medicinal or cosmetic applications or food processing and fulfils stringent purity requirements of different pharmacopoeias.

### Health, Safety and Environmental considerations

White mineral oil (petroleum) has a flashpoint above 180 °C and an initial boiling point of above 280 °C. It is not flammable according to UN GHS criteria, but will burn. It is neither self-reactive, nor self-heating and does not undergo exothermic decomposition when heated.

Due to potential reactions with oxidizing materials such base oils should be stored separately. The recommended storage temperature should not exceed 50 °C.

White mineral oil (petroleum) is of low toxicity when inhaled, swallowed or in contact with skin in laboratory animals. No irritation of skin or eyes has been observed and there is no evidence of allergic skin reaction or respiratory sensitization from animal studies. However, slight irritation of the skin, dryness or cracking after repeated dermal exposure may occur. If skin is not properly cleaned, pores may be clogged and result in oil acne or folliculitis. Inhalation of oil vapours or mists may cause respiratory irritation. Therefore, an occupational exposure limit (OEL) for oil mists at the workplace of 5 mg/m<sup>3</sup> based on the recommendation of the American Congress of Governmental Hygienists (ACGIH) should not be exceeded. Appropriate personal protection equipment as well as procedures for safe handling and risk management controls as described in the current Shell Lubricant Safety Data Sheet should be applied.

This material has a typical kinematic viscosity of above 30 mm<sup>2</sup>/s (at 40 °C) and is therefore not considered an aspiration hazard

It can be concluded from extensive studies on the mutagenic potential of White mineral oil

(petroleum) that it is not considered to be a germ cell mutagen. They are also not expected to be carcinogenic following the investigation of long-term dermal exposure of laboratory animals. There is no evidence of developmental and reproductive toxicity in this type of lubricant base oils.

Based on the above this material is not classified for health effects according to UN GHS criteria<sup>1)</sup>.

The product is poorly soluble in water and will float on water. Therefore, tests on short- and long-term aquatic toxicity with fish, invertebrates and algae were carried out on water accommodated fractions. The large amount of available chronic aquatic toxicity data indicates that the saturated and aromatic hydrocarbon components of lubricant base oils are not sufficiently soluble to produce toxic effects to aquatic organisms and led to the conclusion that these base oils are non-toxic.

White mineral oil (petroleum) is a UVCB substance (see explanation under "Chemical formula"). Based on the available compositional information, measured and predicted data it can be concluded that the major constituents are inherently biodegradable and have a low bio-accumulation potential. However, the presence of minor constituents with a certain environmental persistence or a bio-accumulation potential cannot be excluded.

Following UN GHS criteria, White mineral oil (petroleum) is not classified for environmental hazards.

This material is liquid under normal conditions at room temperature and if enters soil it will quickly adsorb to soil particles, be of low mobility and not contaminate ground water.

The health, safety and environmental considerations above are not applicable for used oil, as this may contain more hazardous substances present as a consequence of different applications of this base oil, for which specific additives or other substances may have been introduced.

### Storing and transporting White mineral oil (petroleum)

White mineral oil (petroleum) is mainly transported in tank cars via road, sometimes also by rail.

The temperature during storage and transportation is ambient.

Precautionary measures against static discharges must be undertaken during loading and unloading and all operators must wear personal protective equipment.

Storage tanks should be made from mild steel; High density polyethylene is the appropriate material for container linings or plastic containers.

### Risk Characterization Summary

Risks associated with exposure to these products have been evaluated for the following

“chain-of-commerce” activities: manufacture, storage, product transfer, transportation, and customers / markets. They are manufactured, stored and transported to customers in closed systems. Product is considered to pose low risk in all applications due to the non-hazardous nature of the product.

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This product stewardship summary is intended to give general information about the chemical or categories of chemicals addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the chemical’s applicable [Safety Data Sheet](#), which should be consulted before use of the chemical. This product stewardship summary does not supplant or replace required regulatory and/or legal communication documents.

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#### Shell Process Oils linked to CAS number 8042-47-5:

- Ondina 15
- Ondina 22
- Ondina 32
- Ondina 68
- Ondina 100
- Ondina 919
- Ondina 927
- Ondina 929
- Ondina 933
- Ondina 934
- Ondina 941



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#### Shell Lubricants

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1) The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 ‘Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method’, Institute of Petroleum, London.