# Distillates (petroleum), hydrotreated heavy naphthenic Product Stewardship Summary

CAS number:

64742-52-5

Chemical formula:

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

## What are Distillates (petroleum), hydrotreated heavy naphthenic?

They are high quality naphthenic base oils with a low pour point and good solvency properties. They have been extensively hydrotreated resulting in low aromatic, clear, bright and less coloured mineral oil with excellent stability.

## How are Distillates (petroleum), hydrotreated heavy naphthenic used?

Distillates (petroleum), hydrotreated heavy naphthenic base oil are intended for use as blending components in speciality lubricants, greases, metalworking oils and functional fluids.

## Health, Safety and Environmental considerations

Distillates (petroleum), hydrotreated heavy naphthenic have a flashpoint above 200 °C and an initial boiling point of above 280 °C. They are not flammable according to UN GHS criteria, but will burn. They are neither self-reactive, nor self-heating and do 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.

Distillates (petroleum), hydrotreated heavy naphthenic are 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 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 $mg/m^3$ 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.

Distillates (petroleum), hydrotreated heavy naphthenic have a high kinematic viscosity are therefore not considered an aspiration hazard.

Following extensive studies on the mutagenic potential of hydrotreated heavy naphthenic base oils they are not considered to be germ cell mutagens. 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 they are not classified for health hazards following UN GHS criteria[1)].

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 and led to the conclusion that these base oils are practically non-toxic.

Distillates (petroleum), hydrotreated heavy naphthenic are UVCB substances (see explanation under "Chemical formula"). Based on the available compositional information, measured and predicted data it can be concluded that the major constituents of Distillates (petroleum), hydrotreated heavy naphthenic are readily or 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, Distillates (petroleum), hydrotreated heavy naphthenic are not classified for environmental hazards.

Distillates (petroleum), hydrotreated heavy naphthenic are liquid under normal conditions and if entering soil they 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 Distillates (petroleum), hydrotreated heavy naphthenic

Distillates (petroleum), hydrotreated heavy naphthenic are mainly transported by road or rail.

The temperature during storage and transportation should not exceed 50°C.

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.

## 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 64742-52-5:

- LVI 60
- HHNR 170
- Gravex 925
- Gravex 946
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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.