1. Identification of the substance/preparation and of the company/undertaking

- **1.1 Product identifier**
  - Trade name: Vetus Stern drive oil 75W-90
  - Article number: 02.50.10

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **Sector of Use**
    - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
    - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
    - SU21 Consumer uses: Private households / general public / consumers
  - **Product category**
    - PC24 Lubricants, greases, release products
  - **Process category**
    - PROC2 Use in closed, continuous process with occasional controlled exposure
    - PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
    - PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
    - PROC20 Heat and pressure transfer fluids in dispersive, professional use but closed systems
    - PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
  - **Environmental release category**
    - ERC9a Wide dispersive indoor use of substances in closed systems
    - ERC9b Wide dispersive outdoor use of substances in closed systems
    - ERC4 Industrial use of processing aids in processes and products, not becoming part of articles
    - ERC7 Industrial use of substances in closed systems
  - **Application of the substance / the mixture**
    - Transmission oil
  - **1.3 Details of the supplier of the safety data sheet**
    - Manufacturer/Supplier: Vetus B.V.
      Fokkerstraat 571
      3125 BD Schiedam-Holland
    - Tel.: +31 (0)10 4377700
  - **Further information obtainable from:**
    - Product safety department - info@vetus.nl
  - **1.4 Emergency telephone number:**
    - +31 (0)10 4377700 (9 AM to 4 PM, Monday to Friday)

2. Hazards identification

- **2.1 Classification of the substance or mixture**
  - Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.
  - Information concerning particular hazards for human and environment: The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  - **Classification system:** The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **2.2 Label elements**
  - Labelling according to EU guidelines: Observe the general safety regulations when handling chemicals. The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
  - Special labelling of certain preparations: Contains Polysulfides, di-tert-Bu, Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched). May produce an allergic reaction. Safety data sheet available for professional user on request.
3. Composition/information on ingredients

3.2 Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 68037-01-4</td>
<td>1-decene, homopolymer, hydrogenated</td>
</tr>
<tr>
<td>NLP: 500-183-1</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119486452-34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>CAS: 64742-53-6</td>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
</tr>
<tr>
<td>EINECS: 265-156-6</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119480375-34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>CAS: 68937-98-2</td>
<td>Mixture Lubrication oils</td>
</tr>
<tr>
<td>EINECS: 273-103-3</td>
<td></td>
</tr>
<tr>
<td>Reg.nr.: 01-2119540515-43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>CAS: 64742-53-6</td>
<td>Olefin sulfide</td>
</tr>
<tr>
<td>EINECS: 273-103-3</td>
<td>Xi R38; Xi R43</td>
</tr>
<tr>
<td>Reg.nr.: 01-2119486452-34</td>
<td>R52/53</td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1, H317; Aquatic Chronic 3, H412</td>
</tr>
<tr>
<td>EC number: 931-384-6</td>
<td>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)</td>
</tr>
<tr>
<td>Reg.nr.: 01-2119493620-38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xn R22; Xi R41; Xi R43; N R51/53</td>
</tr>
<tr>
<td></td>
<td>Eye Dam. 1, H318; Aquatic Chronic 2, R411; Aquatic Chronic 4, R382; Skin Sens. 1, H317</td>
</tr>
</tbody>
</table>

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4. First-aid measures

- **4.1 Description of first aid measures**
  - **General information:** No special measures required.
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Generally the product does not irritate the skin.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** Do not induce vomiting; call for medical help immediately.

- **4.2 Most important symptoms and effects, both acute and delayed**
  - No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**
  - If swallowed or in case of vomiting, danger of entering the lungs.

5. Fire-fighting measures

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:** CO2, dry chemical, or foam. Water can be used to cool and protect exposed material.
  - **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **5.2 Special hazards arising from the substance or mixture**
  - Formation of toxic gases is possible during heating or in case of fire.

- **5.3 Advice for firefighters**
  - **Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

6. Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Wear protective clothing.

- **6.2 Environmental precautions**
  - Do not allow to enter sewers/ surface or ground water.

- **6.3 Methods and material for containment and cleaning up**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Remove from the water surface (e.g. skim or suck off).

- **6.4 Reference to other sections**
  - No dangerous substances are released.
  - See Section 7 for information on safe handling.
7. Handling and storage

- 7.1 Precautions for safe handling
  No special measures required.
  Avoid the formation of oil haze.

- Information about fire - and explosion protection:
  No special measures required.

- 7.2 Conditions for safe storage, including any incompatibilities
  Storage:
  - Requirements to be met by storerooms and receptacles:
    Store only in the original receptacle.
  - Information about storage in one common storage facility:
    Not required.
  - Further information about storage conditions:
    Store in cool, dry conditions in well sealed receptacles.
  - 7.3 Specific end use(s)
    No further relevant information available.

8. Exposure controls/personal protection

- Additional information about design of technical facilities:
  No further data; see item 7.

- 8.1 Control parameters
  Ingredients with limit values that require monitoring at the workplace:
  Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH STEL of 10 mg per cubic meter.

- Additional information:
  The lists valid during the making were used as basis.

- 8.2 Exposure controls
  Personal protective equipment:
  - General protective and hygienic measures:
    Wash hands before breaks and at the end of work.
  - Respiratory protection:
    Not required.
  - Protection of hands:
    Wear gloves for the protection against chemicals according to EN 374.
    Oil resistant gloves
    Nitrile rubber, NBR
    PVC gloves
    Neoprene gloves
  - Penetration time of glove material
    For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognise that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:
  Goggles recommended during refilling

- Body protection:
  Protective work clothing

9. Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:
  Liquid
- Form:
Trade name: Vetus Stern drive oil 75W-90

**Colour:** Blue

**Odour:** Characteristic

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Change in condition</td>
<td></td>
</tr>
<tr>
<td>· Melting point/Melting range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>· Boiling point/Boiling range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>· Drip point</td>
<td></td>
</tr>
<tr>
<td>· Pour point</td>
<td>-45 °C (ASTM D97)</td>
</tr>
<tr>
<td>· Flash point</td>
<td>&gt; 110 °C</td>
</tr>
<tr>
<td>· Flammability (solid, gaseous)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Self-igniting</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>· Danger of explosion</td>
<td></td>
</tr>
<tr>
<td>· Explosion limits</td>
<td></td>
</tr>
<tr>
<td>· Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Density at 20 °C</td>
<td>0.876 g/cm³</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with water</td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Viscosity</td>
<td>83.0 mm²/s (ASTM D445)</td>
</tr>
<tr>
<td>· Solvent content</td>
<td>Organic solvents: 0.0 %</td>
</tr>
</tbody>
</table>

9.2 Other information

No further relevant information available.

10. Stability and reactivity

· 10.1 Reactivity
· 10.2 Chemical stability
· Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.
· 10.3 Possibility of hazardous reactions
· 10.4 Conditions to avoid
· 10.5 Incompatible materials: No further relevant information available.
· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

11. Toxicological information

· 11.1 Information on toxicological effects
· Acute toxicity:
· Primary irritant effect:
· on the skin: No irritant effect.
· on the eye: No irritating effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information: The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

For respiratory and skin sensitisation: Not expected to be a sensitiser.

· Sensitisation
· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.

12. Ecological information

· 12.1 Toxicity
· Aquatic toxicity: No further relevant information available.
· 12.2 Persistence and degradability
· Other information: The product is difficulty biodegradable.
· 12.3 Bioaccumulative potential

No further relevant information available.
13. Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

14. Transport information

- 14.1 UN-Number
  - ADR, ADN, IMDG, IATA: Void
- 14.2 UN proper shipping name
  - ADR, ADN, IMDG, IATA: Void
- 14.3 Transport hazard class(es)
  - ADR, ADN, IMDG, IATA
    - Class: Void
- 14.4 Packing group
  - ADR, IMDG, IATA: Void
- 14.5 Environmental hazards:
  - Marine pollutant: No
- 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.
- UN "Model Regulation": -

15. Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - National regulations:
    - Waterhazard class:
      - Water hazard class 1 (Self-assessment): slightly hazardous for water.
- 15.2 Chemical safety assessment:
  - A Chemical Safety Assessment has not been carried out.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  - H302 Harmful if swallowed.
  - H304 May be fatal if swallowed and enters airways.
  - H317 May cause an allergic skin reaction.
  - H318 Causes serious eye damage.
  - H411 Toxic to aquatic life with long lasting effects.
  - H412 Harmful to aquatic life with long lasting effects.
  - R22 Harmful if swallowed.
  - R38 Irritating to skin.
  - R41 Risk of serious damage to eyes.
  - R43 May cause sensitisation by skin contact.
  - R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Department issuing MSDS:** Product safety department.
- **Contact:** Product safety department.
- **Abbreviations and acronyms:**
  
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organization
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)

- **Sources:**
  
  - 67/548/EEC
  - 99/44/EEC
  - EC/453-2010