1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Name of product
Pionier 2071 P

Manufacturer/distributor
Tudapetrol KG
Am Sandtorkai 64, D /-20457 Hamburg
Phone 040-43218-10, Fax 040-43218-400
E-Mail daniela.heber@hansen-rosenthal.de

Advice
Abt. Produktsicherheit: Dipl. Ing. Daniela Heber
Phone 040-78110820
Fax 040-78110844

Emergency advice
GIZ Nord
Phone 0551-19240

Recommended intended purpose(s)
White oil - component

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization
Medicinal white oil

3. HAZARDS IDENTIFICATION

Special hazards information for humans and environment
The product is not dangerous/is not a dangerous preparation and therefore free of labelling.

4. FIRST AID MEASURES

General information
Remove contaminated soaked clothing immediately.

In case of inhalation
In the event of symptoms refer for medical treatment.

In case of skin contact
In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

In case of eye contact
In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

In case of ingestion
Do not induce vomiting.
Call for a doctor immediately.

Physician's information / possible dangers
In case of swallowing or vomiting of the melted product there is danger of penetration into the lungs.

Treatment (Advice to doctor)
Treat symptoms.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Foam
Dry powder
Carbon dioxide
sand
Water spray jet
water mist

Extinguishing media which must not be used for safety reasons
Full water jet
Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases
Soot and other organic products.
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Sulphur dioxide (SO2)

Special protective equipment for fire-fighters
Use breathing apparatus with independent air supply (isolated).

Additional information
Cool endangered containers with water spray jet.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use breathing apparatus if exposed to vapours/aerosol with filter Typ A2, A2/P2 or ABEK.
Use personal protective clothing.

Environmental precautions
Do not discharge into the drains/surface waters/groundwater.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the subsoil/soil.

Methods for cleaning up
Danger of slipping in case of leaking product.
Take up with absorbent material (e.g. oil binder).
After taking up the material dispose according to regulation.

7. HANDLING AND STORAGE

Advice on safe handling
Avoid formation of oil dust.

Advice on protection against fire and explosion
Do not smoke.

Requirements for storage rooms and vessels
Only use containers that are approved specifically for the substance/product.

Advice on storage compatibility
Do not store together with oxidizing agents.

Further information on storage conditions
To be store under control of light and temperature conditions.

Storage group 10
Fire class B

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional advice
USA (ACGIH recommended) : TLV value for oil mist: 5 mg/m3.

Respiratory protection
Respiratory equipment in case of nebulosity or aerosol: Use a mask with a filter type A2, A2/P2 or ABEK.

Hand protection
Use safety gloves of following materials:: NBR (nitrile) / neopren / viton (permeationslevel 5 - 6), Cat. II according to norm EN 388

Eye protection
safety goggles with side protection, in case of increased risk add protective face shield

Skin protection
Oil-resistant and hardly inflammable protective clothing.

General protective measures
Do not inhale vapours.
Avoid contact with eyes and skin
It is recommended to use safety clothing, safety gloves and safety googles/safe screen.
Hygiene measures
Clean skin thoroughly after working.
Cloths contaminated with product should not be kept in trouser pockets.
At work do not eat, drink, smoke or take drugs.
Keep away from food and drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Species/Method/Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in physical state</td>
<td>ca. -9 °C DIN ISO 3016</td>
</tr>
<tr>
<td>state gas</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>ca. 266 °C DIN ISO 2592</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>ca. 0,45 Vol-%</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>ca. 4,5 Vol-%</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 0,1 hPa calculated</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 0,867 g/ml 15 °C DIN 51757</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>insoluble</td>
</tr>
<tr>
<td>Viscosity 1 kinematic</td>
<td>ca. 70 mm2/s 40 °C DIN 51562</td>
</tr>
</tbody>
</table>

Additional information
The data are subject to usual tolerances.

10. STABILITY AND REACTIVITY

Conditions to avoid
No hazardous reactions known.

Materials to avoid
Reactions with strong oxidising agents.

Hazardous decomposition products
No hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity/Irritability/Sensitization

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Validation</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD 50 acute oral</td>
<td>&gt; 5000 mg/kg</td>
<td>rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD 50 acute dermal</td>
<td>&gt; 3000 mg/kg</td>
<td>rabbit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability skin</td>
<td>non-irritant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability eye</td>
<td>non-irritant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitization skin</td>
<td>non-sensitising</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitization respiratory system</td>
<td>non-sensitising</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Experiences made from practice
Inhalation of thermic decomposition products such as vapour, mist or smoke can affect health. Frequent contact specially if dried out may cause skin and eye irritations.

Additional information
In case of appropriate handling and consideration of the usual precautions for th use of mineral oils no particular dangers are known for this product.

12. ECOLOGICAL INFORMATION

Data on elimination (persistence and degradability)

<table>
<thead>
<tr>
<th>Elimination rate</th>
<th>Method of analysis</th>
<th>Method</th>
<th>Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physico-chemical</td>
<td>The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>degradability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological</td>
<td>not readily degradable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>degradability</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General regulation
Do not discharge product unmonitored into the environment.

13. DISPOSAL CONSIDERATIONS

Waste code No.
13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC on hazardous waste.

Recommendations for the product
The disposal code is just a recommendation. Contact your local experts to obtain information about use or disposal of the material involved.

The indication about disposal refers to the product and its residues. If the product is mixed with other materials or preparations an individual evaluation should be necessary.

Recommendations for packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleaning may be taken for reuse.

14. TRANSPORT INFORMATION

Land and inland navigation transport ADR/RID
No hazardous material as defined by the prescriptions.

15. REGULATORY INFORMATION

Remarks for classification
The product does not require a hazard warning label in accordance with EC directives/German regulations on dangerous substances.

National regulations

Decree for case of interference/remarks

Accident regulation, appendix I: not specified

Water hazard class
1 VvVwS of (german regulation) 17.5.1999

16. OTHER INFORMATION

Further information
Above information corresponds to our present knowledge and experience. It is not a guarantee that no errors or incomplete data may be contained.
Sources of key data used
DGMK-Bericht 400-1 , 400-2 , 400-7 Concawe-Report " Health aspects of lubricants " 1/1983