SAFETY DATA SHEET

Synfluid® PAO 6 cSt


SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1

Product information

Product Name: Synfluid® PAO 6 cSt
Material: 1111741, 1111740, 1111734, 1079874, 1079931, 1079667

EC-No. Registration number

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Legal Entity</th>
<th>Registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Decene Homopolymer Hydrogenated</td>
<td>68037-01-4</td>
<td>500-183-1</td>
<td>Chevron Phillips Chemical Company LP</td>
<td>01-2119486452-34-0000</td>
</tr>
<tr>
<td>1-Decene Homopolymer Hydrogenated</td>
<td>68037-01-4</td>
<td>500-183-1</td>
<td>Chevron Phillips Chemicals International NV</td>
<td>01-2119486452-34-0006</td>
</tr>
</tbody>
</table>

1.2

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

Relevant Identified Uses Supported: Manufacture
Use as an intermediate
Formulation
Use in coatings – industrial
Use in coatings – professional
Use in Coatings - Consumer
Lubricants - Industrial
Lubricants - Professional
Lubricants - Consumer
Metal working fluids / rolling oils - Industrial
Metal working fluids / rolling oils – Professional
Functional Fluids - Industrial
Functional Fluids - Professional
Use in Coatings - Consumer
Use in polymer production – industrial
Agrochemical uses
Other consumer uses

1.3

Details of the supplier of the safety data sheet

Company: Chevron Phillips Chemical Company LP

SDS Number: 100000010952 1/13
1.4 Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
REGULATION (EC) No 1272/2008

Not a hazardous substance or mixture.

2.2 Labeling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture

Synonyms: Polyalphaolefin PAO

Molecular formula: UVCB

SDS Number: 100000010952
Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Decene Homopolymer</td>
<td>68037-01-4</td>
<td>500-183-1</td>
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<td>100</td>
</tr>
<tr>
<td>Hydrogenated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contains no hazardous ingredients according to GHS.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice:
No hazards which require special first aid measures.

If inhaled:
If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact:
Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed:
Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5: Firefighting measures

Flash point: 238 °C (460 °F) Method: Cleveland Open Cup

Autoignition temperature: 354 °C (669 °F)

5.1 Extinguishing media

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting:
Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.

5.3 Advice for firefighters

Special protective equipment for fire-fighters:
Wear self-contained breathing apparatus for firefighting if necessary.

Further information:
Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
### SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

<table>
<thead>
<tr>
<th>Personal precautions</th>
<th>Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.</th>
</tr>
</thead>
</table>

6.2 **Environmental precautions**

<table>
<thead>
<tr>
<th>Environmental precautions</th>
<th>No special environmental precautions required.</th>
</tr>
</thead>
</table>

6.3 **Methods and materials for containment and cleaning up**

<table>
<thead>
<tr>
<th>Methods for cleaning up</th>
<th>Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.</th>
</tr>
</thead>
</table>

6.4 **Reference to other sections**

<table>
<thead>
<tr>
<th>Reference to other sections</th>
<th>For personal protection see section 8. For disposal considerations see section 13.</th>
</tr>
</thead>
</table>

### SECTION 7: Handling and storage

7.1 **Precautions for safe handling**

<table>
<thead>
<tr>
<th>Handling</th>
<th>Advice on safe handling</th>
<th>For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Advice on protection against fire and explosion</td>
<td>Normal measures for preventive fire protection.</td>
</tr>
</tbody>
</table>

7.2 **Conditions for safe storage, including any incompatibilities**

<table>
<thead>
<tr>
<th>Storage</th>
<th>Requirements for storage areas and containers</th>
<th>Electrical installations / working materials must comply with the technological safety standards.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Advice on common storage</td>
<td>No materials to be especially mentioned.</td>
</tr>
</tbody>
</table>

### SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

<table>
<thead>
<tr>
<th>Ingredients with workplace control parameters</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
8.2 Exposure controls
Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Full-Face Air-Purifying Respirator for Organic Vapors, Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Wear as appropriate: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work place. Lightweight protective clothing.

Hygiene measures : General industrial hygiene practice.

A quantitative risk assessment is not required for the environment.
A quantitative risk assessment is not required for human health.

9.1
### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Clear, Colorless</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Odorless</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>238 °C (460 °F)</td>
</tr>
<tr>
<td>Method</td>
<td>Cleveland Open Cup</td>
</tr>
<tr>
<td><strong>Lower explosion limit</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Upper explosion limit</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>no</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>354 °C (669 °F)</td>
</tr>
<tr>
<td><strong>Molecular formula</strong></td>
<td>UVCB</td>
</tr>
<tr>
<td><strong>Molecular weight</strong></td>
<td>Varies</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Melting point/range</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Boiling point/boiling range</strong></td>
<td>419 °C (786 °F)</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>0.70 MMHG at 149 °C (300 °F)</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>0.83 at 15.6 °C (60.1 °F)</td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>Soluble in hydrocarbon solvents; insoluble in water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Viscosity, kinematic</strong></td>
<td>30,5 cSt at 40 °C (104 °F)</td>
</tr>
<tr>
<td><strong>Relative vapor density</strong></td>
<td>10 (Air = 1.0)</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

10.1 Reactivity: Stable at normal ambient temperature and pressure.

10.2
Synfluid® PAO 6 cSt

Chemical stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Hazardous reactions: Further information: Stable under recommended storage conditions., No hazards to be specially mentioned.

10.4 Conditions to avoid: No data available.

10.5 Materials to avoid: No data available.

10.6 Other data: No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

1-Decene Homopolymer Hydrogenated: LD50 Oral: > 5,000 mg/kg Species: Rat

Acute inhalation toxicity

1-Decene Homopolymer Hydrogenated: LC50: > 5.2 mg/l Exposure time: 4 h Species: Rat Test atmosphere: dust/mist

Acute dermal toxicity

1-Decene Homopolymer Hydrogenated: LD50: > 2,000 mg/kg Species: Rabbit

Skin irritation

1-Decene Homopolymer Hydrogenated: No skin irritation

Eye irritation

1-Decene Homopolymer Hydrogenated: No eye irritation

Sensitization

1-Decene Homopolymer Hydrogenated: Did not cause sensitization on laboratory animals.

Repeated dose toxicity

SDS Number:100000010952 7/13
1-Decene Homopolymer Hydrogenated

Species: Rat
Application Route: Oral
Dose: 0, 8000, 20000, 50000 ppm
Exposure time: 28 day
Number of exposures: daily
NOEL: 6.245 mg/kg
Method: OECD Test Guideline 407

Species: Rat
Application Route: oral gavage
Dose: 0, 1000, 7000, 50000 ppm
Exposure time: 13 weeks
Number of exposures: daily
NOEL: 4.159.4 mg/kg
Method: OCED Guideline 408

Carcinogenicity

1-Decene Homopolymer Hydrogenated

Remarks: This information is not available.

Reproductive toxicity

1-Decene Homopolymer Hydrogenated

Species: Rat
Sex: male and female
Application Route: oral gavage
Dose: 0, 100, 500, 1000 mg/kg
Number of exposures: daily
Test period: 10 weeks
Method: OECD Test Guideline 415
NOAEL Parent: 1.000 mg/kg

Aspiration toxicity

1-Decene Homopolymer Hydrogenated

No aspiration toxicity classification.

CMR effects

1-Decene Homopolymer Hydrogenated

Carcinogenicity: Not classifiable as a human carcinogen.
Mutagenicity: Animal testing did not show any mutagenic effects.
Teratogenicity: Not available
Reproductive toxicity: No toxicity to reproduction

Synfluid® PAO 6 cSt

Further information

No data available.

SECTION 12: Ecological information

12.1

Toxicity

Ecotoxicity effects

Toxicity to fish

LC50: > 750 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

**Toxicity to daphnia and other aquatic invertebrates**

1-Decene Homopolymer Hydrogenated : EL50: > 1.000 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202

**Toxicity to algae** : EC50: > 1.000 mg/l Exposure time: 96 h Species: Selenastrum capricornutum (algae)

**12.2 Persistence and degradability**

Biodegradability

1-Decene Homopolymer Hydrogenated : This material is not expected to be readily biodegradable. Expected to be inherently biodegradable.

**12.3 Bioaccumulative potential**

Elimination information (persistence and degradability)

Bioaccumulation

1-Decene Homopolymer Hydrogenated : This material is not expected to bioaccumulate.

**12.4 Mobility in soil**

Mobility : No data available

**12.5 Results of PBT and vPvB assessment**

Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Additional ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

**SECTION 13: Disposal considerations**

**13.1**

SDS Number: 100000010952
Waste treatment methods
The information in this SDS pertains only to the product as shipped.
Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

A quantitative risk assessment is not required for the environment.
A quantitative risk assessment is not required for human health.

SECTION 14: Transport information

14.1 - 14.7 Transport information
The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).
Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.). Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.
TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

15.2 Chemical Safety Assessment
Components: 1-Decene Homopolymer  A Chemical Safety Assessment has been carried out for this hydrogenated substance.

Major Accident Hazard Legislation: 96/82/EC Update: Not applicable

Notification status
Europe REACH: This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).
Switzerland CH INV: On the inventory, or in compliance with the inventory
United States of America (USA) TSCA: On or in compliance with the active portion of the TSCA inventory
Canada DSL: All components of this product are on the Canadian DSL
Australia AICS: On the inventory, or in compliance with the inventory
New Zealand NZIoC: On the inventory, or in compliance with the inventory Notification number: HSR002606
Japan ENCS: On the inventory, or in compliance with the inventory
Korea KECI: All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was included on CPChem’s notifications or if the Importer of Record themselves notified the substances.

Philippines PICCS: On the inventory, or in compliance with the inventory
China IECSC: On the inventory, or in compliance with the inventory
Taiwan TCSI: On the inventory, or in compliance with the inventory
SECTION 16: Other information

NFPA Classification

Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0

Further information

Legacy SDS Number: 3333

NSF H1, HX-1 Registered, meets USDA 1998 H1 Guidelines

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
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<td>Effective Concentration 50%</td>
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<td>NOEC</td>
<td>No Observed Effect Concentration</td>
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<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
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<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
</tbody>
</table>

SDS Number: 100000010952
<table>
<thead>
<tr>
<th>ENCS</th>
<th>Japan, Inventory of Existing and New Chemical Substances</th>
<th>TSCA</th>
<th>Toxic Substance Control Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
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<td></td>
</tr>
</tbody>
</table>