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

1.1. Product identifier

DW-Therm HT (heat transfer fluid)

CAS No: 63674-30-6
EC No: 400-370-7

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

Use of the substance/mixture
Heat transfer fluid for industrial use with the Unistat in a hydraulically sealed system

1.3. Details of the supplier of the safety data sheet

Company name: DWS Dr. Wilharm Synthesetechnik
Street: Trentiner Ring 30
Place: D-86356 Neusaess
Telephone: 0821 4504230
Telefax: 0821 45042317
e-mail: info@dws-synthese.de
Contact person: Dr. Thomas Wilharm
Internet: www.dws-synthese.de

1.4. Emergency telephone number:

GIZ-Nord, Göttingen, Germany +49 551 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation
Signal word: Warning
Pictograms:

Hazard statements
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
P273 Avoid release to the environment.
P391 Collect spillage.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Warning
Pictograms:

2.3. Other hazards
No information available.
SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin</td>
<td>99 %</td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

<table>
<thead>
<tr>
<th>CAS No</th>
<th>EC No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin</td>
<td>99 %</td>
</tr>
</tbody>
</table>

dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation
Provide fresh air.

After contact with skin
Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes
Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion
Rinse mouth immediately and drink 1 glass of water.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture
Non-flammable.

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus. Move victim out of danger zone. None High power water jet.

Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General advice
The danger areas must be delimited and identified using relevant warning and safety signs.

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
Other information
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion
A static inert gas blanket can used on the expansion vessel(s) of the Unistat. Above a working temperature of 170°C an inert gas blanket must be used.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep container tightly closed.

Hints on joint storage
No special measures are necessary.

7.3. Specific end use(s)
Heat transfer fluid for industrial use with the Unistat in a hydraulically sealed system

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Protective and hygiene measures
Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

Eye/face protection
Wear eye/face protection.

Hand protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection
Use of protective clothing.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.
9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: orange

Test method
pH-Value: not determined

Changes in the physical state
Melting point/freezing point: -34 °C DIN 51583
Boiling point or initial boiling point and boiling range:
Flash point: 194 °C ASTM D 93

Flammability
Solid/liquid: not applicable
Gas: not applicable

Explosive properties
The product is not: Explosive.
Lower explosion limits: 0,39 vol. %
Upper explosion limits: 4,59 vol. %
Auto-ignition temperature: 385 °C ASTM E 659

Self-ignition temperature
Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties
Not oxidising.
Vapour pressure: not determined
Density: not determined
Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents
not determined
Partition coefficient n-octanol/water: not determined
Viscosity / kinematic: 30,8 mm²/s DIN 51562 (at 25 °C)
Relative vapour density: not determined
Evaporation rate: not determined

9.2. Other information
Solid content: not determined

SECTION 10: Stability and reactivity

10.2. Chemical stability
Product is stable under standard conditions.

10.3. Possibility of hazardous reactions
## 10.4. Conditions to avoid
Decomposition could be take place by higher temperatures.

## 10.5. Incompatible materials
HNBR seals are not resistant.

## 10.6. Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other substances.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in GB CLP Regulation

**Acute toxicity**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>oral</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>Rabbit</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.1. Toxicity
Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>&gt;0,07</td>
<td>96h</td>
<td>Pseudokirchneriella subcapitata</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability
Not easily bio-degradable (according to OECD-criteria).

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Value</th>
<th>d</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin</td>
<td>OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C</td>
<td>6 %</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OECD 302B / ISO 9888 / EEC 88/302 annex V, C.9</td>
<td>&gt;40 %</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential
On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment cannot be ruled out.

**Partition coefficient n-octanol/water**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin</td>
<td>5 - 7</td>
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</tbody>
</table>

**BCF**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>BCF</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin</td>
<td>&gt;3000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.4. Mobility in soil
This material is believed to be relatively immobile in soil

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The product has not been tested.

12.6. Endocrine disrupting properties
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects
No information available.

Further information
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Disposal recommendations
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products
130308 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste insulating and heat transmission oils; synthetic insulating and heat transmission oils; hazardous waste

Contaminated packaging
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
Hazard label: 9

Classification code: M6
Special Provisions: 274 335 375 601
Limited quantity: 5 L
Excepted quantity: E1
Transport category: 3
Hazard No: 90
Tunnel restriction code: -

Inland waterways transport (ADN)
14.1. UN number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin)
Safety Data Sheet
according to UK REACH Regulation

<table>
<thead>
<tr>
<th>Revision date: 07.02.2023</th>
<th>Product code: 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page 7 of 9</td>
<td></td>
</tr>
</tbody>
</table>

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

**Hazard label:** 9

**Classification code:** M6

**Special Provisions:** 274 335 375 601

**Limited quantity:** 5 L

**Excepted quantity:** E1

**Marine transport (IMDG)**

<table>
<thead>
<tr>
<th>14.1. UN number:</th>
<th>UN 3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</td>
<td></td>
</tr>
<tr>
<td>14.3. Transport hazard class(es): 9</td>
<td></td>
</tr>
<tr>
<td>14.4. Packing group: III</td>
<td></td>
</tr>
</tbody>
</table>

**Hazard label:** 9

**Special Provisions:** 274, 335, 969

**Limited quantity:** 5 L

**Excepted quantity:** E1

**EmS:** F-A, S-F

**Air transport (ICAO-TI/IATA-DGR)**

<table>
<thead>
<tr>
<th>14.1. UN number:</th>
<th>UN 3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin)</td>
<td></td>
</tr>
<tr>
<td>14.3. Transport hazard class(es): 9</td>
<td></td>
</tr>
<tr>
<td>14.4. Packing group: III</td>
<td></td>
</tr>
</tbody>
</table>

**Hazard label:** 9

**Special Provisions:** A97 A158 A197

**Limited quantity Passenger:** 30 kg G

**Passenger LQ:** Y964

**Excepted quantity:** E1

**IATA-packing instructions - Passenger:** 964

**IATA-max. quantity - Passenger:** 450 L

**IATA-packing instructions - Cargo:** 964

**IATA-max. quantity - Cargo:** 450 L

**14.5. Environmental hazards**

**ENVIRONMENTALLY HAZARDOUS:** Yes

**Danger releasing substance:** (1,2,3,4-Tetrahydro(1-phenylethyl)-naphthalin)

**14.6. Special precautions for user**
14.7. Maritime transport in bulk according to IMO instruments
not applicable

SECTION 15: Regulatory information

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

EU regulatory information
Restrictions on use (REACH, annex XVII):
Entry 3
Information according to 2012/18/EU E1 Hazardous to the Aquatic Environment
(SEVESO III):

Additional information

National regulatory information
Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms
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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation)
Classificiation for mixtures and used evaluation method according to GB CLP Regulation

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 1; H400</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 1; H410</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.