

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

### 1.1 Product identifier

|              |                                  |
|--------------|----------------------------------|
| Product name | ON Immersion Cooling Fluid DC 15 |
| UFI:         | E6R2-80FU-4001-1038              |
| Product code | 470747-DE01                      |
| SDS #        | 470747                           |
| Product type | Liquid.                          |

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

|                                  |                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Use of the substance/<br>mixture | Thermal Management Fluid<br>For specific application advice see appropriate Technical Data Sheet or consult our company representative. |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

### 1.3 Details of the supplier of the safety data sheet

|                |                                                                                 |
|----------------|---------------------------------------------------------------------------------|
| Supplier       | Castrol Holdings Europe B.V.,<br>d'Arcyweg 76, 3198NA<br>Europoort<br>Rotterdam |
|                | Castrol Denmark A/S<br>Kampmannsgade 2<br>1604 København<br>Denmark             |
|                | +45 70 80 70 54                                                                 |
| E-mail address | MSDSadvice@bp.com                                                               |

### 1.4 Emergency telephone number

|                               |                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------|
| EMERGENCY<br>TELEPHONE NUMBER | Carechem: +44 (0) 1235 239 670 (24/7)                                                      |
| Latvia Poison Center          | Call 112 when poisoning incidents occur and request Poison Information - around the clock. |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| Product definition                                                         | Mixture |
| <u>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]</u> |         |
| Asp. Tox. 1, H304                                                          |         |

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

### 2.2 Label elements

|      |                     |
|------|---------------------|
| UFI: | E6R2-80FU-4001-1038 |
|------|---------------------|

#### Hazard pictograms



|                   |                                                      |
|-------------------|------------------------------------------------------|
| Signal word       | Danger                                               |
| Hazard statements | H304 - May be fatal if swallowed and enters airways. |

#### Precautionary statements

|            |                                                                                                          |
|------------|----------------------------------------------------------------------------------------------------------|
| Prevention | Not applicable.                                                                                          |
| Response   | P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. |
| Storage    | Not applicable.                                                                                          |

|                        |                                  |               |             |          |          |
|------------------------|----------------------------------|---------------|-------------|----------|----------|
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| Version                | 1                                | Date of issue | 5 June 2025 | Format   | Latvia   |
| Date of previous issue | No previous validation.          |               |             | Language | ENGLISH  |
|                        |                                  |               |             |          | (Latvia) |

**SECTION 2: Hazards identification**

|                                                                                                                                           |                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal</b>                                                                                                                           | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| <b>Hazardous ingredients</b>                                                                                                              | Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based                                                     |
| <b>Supplemental label elements</b>                                                                                                        | Not applicable.                                                                                                          |
| <b><u>EU Regulation (EC) No. 1907/2006 (REACH)</u></b>                                                                                    |                                                                                                                          |
| <b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b> | Not applicable.                                                                                                          |
| <b><u>Special packaging requirements</u></b>                                                                                              |                                                                                                                          |
| <b>Containers to be fitted with child-resistant fastenings</b>                                                                            | Not applicable.                                                                                                          |
| <b>Tactile warning of danger</b>                                                                                                          | Not applicable.                                                                                                          |

**2.3 Other hazards**

|                                                                                                          |                                                                                                            |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Results of PBT and vPvB assessment</b>                                                                | Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII. |
| <b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b> | This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                      |
| <b>Other hazards which do not result in classification</b>                                               | Defatting to the skin.<br>Contact with hot product may cause burns.                                        |

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

**Product definition** Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

| Product/ingredient name                                              | Identifiers                                                                             | %   | Classification    | Specific Conc. Limits, M-factors and ATEs | Type    |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----|-------------------|-------------------------------------------|---------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | REACH #:<br>01-2119474878-16<br>EC: 276-737-9<br>CAS: 72623-86-0<br>Index: 649-482-00-X | ≥90 | Asp. Tox. 1, H304 | -                                         | [1] [2] |

**See Section 16 for the full text of the H statements declared above.**

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

**SECTION 4: First aid measures****4.1 Description of first aid measures**

|                                   |                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye contact</b>                | Hot product - Flood with water to dissipate heat. In the event of any product remaining, do not try to remove it other than by continued irrigation with water. Obtain medical attention immediately.<br>Cold product - Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists. |
| <b>Skin contact</b>               | Hot Product - Flood skin with cold water to dissipate heat, cover with clean cotton or gauze, obtain medical advice immediately.<br>Cold Product - Wash contaminated skin with soap and water. Remove contaminated clothing and wash underlying skin as soon as reasonably practicable.                                                                                          |
| <b>Inhalation</b>                 | If inhaled, remove to fresh air. Get medical attention if symptoms occur.                                                                                                                                                                                                                                                                                                        |
| <b>Ingestion</b>                  | Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.                                                                                                            |
| <b>Protection of first-aiders</b> | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.                                                                                                                                                                                                         |

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## SECTION 4: First aid measures

### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

#### Potential acute health effects

|              |                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------|
| Inhalation   | Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure. |
| Ingestion    | Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.            |
| Skin contact | Defatting to the skin. May cause skin dryness and irritation.                                    |
| Eye contact  | No known significant effects or critical hazards.                                                |

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|              |                                                                                                                |
|--------------|----------------------------------------------------------------------------------------------------------------|
| Inhalation   | Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. |
| Ingestion    | Ingestion of large quantities may cause nausea and diarrhoea.                                                  |
| Skin contact | Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.                     |
| Eye contact  | Potential risk of transient stinging or redness if accidental eye contact occurs.                              |

### 4.3 Indication of any immediate medical attention and special treatment needed

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes to physician | Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias. |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

|                                |                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media   | In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.                            |
| Unsuitable extinguishing media | Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product. |

### 5.2 Special hazards arising from the substance or mixture

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazards from the substance or mixture | <p>During use heat transfer oils may be thermally degraded leading to the formation of volatile hydrocarbons with flash points considerably lower than the original product. It is therefore essential that the system is not drained while hot unless an inert gas system is used to displace flammable gaseous residues. Adequate ventilation is essential during draining operations as hot oil will fume.</p> <p>The temperature at which spent product is drained is a compromise between the need to have the oil sufficiently hot to facilitate drainage, the need to avoid fuming and the dangers of fire from degraded oil with a low flash point. It is recommended therefore that spent oil is drained at a temperature of less than 100°C. During system filling and venting, care should be taken to ensure that hot oil is not pumped through the expansion tank. A failure to prevent this could, under certain conditions, lead to the creation of a flammable atmosphere in the expansion tank. As the expansion tank is being filled it is essential that the gases and vapours formed should be free to vent to an open atmosphere where they can quickly disperse. Oil soaked lagging may spontaneously ignite and should be replaced by fresh lagging as soon as possible. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use. In a fire or if heated, a pressure increase will occur and the container may burst.</p> |
| Hazardous combustion products         | Combustion products may include the following:<br>carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 5.3 Advice for firefighters

|                                                |                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Special precautions for fire-fighters          | No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.                                                                                                                                                             |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

#### For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

#### Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

See Section 1 for emergency contact information.  
See Section 5 for firefighting measures.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 12 for environmental precautions.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous.

#### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers.

#### Not suitable

Prolonged exposure to elevated temperature. Avoid significant changes in temperature to prevent humidity ingress.

### 7.3 Specific end use(s)

#### Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name                                              | Exposure limit values                                                                                                                         |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | <b>Ministers Cabinet Regulations Nr.325 - AER (Latvia). [Naftas minerāleļļas]</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/2007 |

|                                                       |                                  |                         |
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**SECTION 8: Exposure controls/personal protection**

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

**Recommended monitoring procedures**

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Biological exposure indices****Product/ingredient name****Exposure indices****Derived No Effect Level**

No DNELs/DMELs available.

**Predicted No Effect Concentration**

No PNECs available

**8.2 Exposure controls****Appropriate engineering controls**

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

**Individual protection measures****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn. In case of insufficient ventilation, wear suitable respiratory equipment.

Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used. Use filter type P or comparable standard.

Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing apparatus will be required.

A combination filter for particles, organic gases and vapours (boiling point >65°C) may be required if mist or fume is present as well as vapour. Use filter type AP or comparable standard. Approved air-supplied breathing apparatus must be worn where there is a risk of exceeding the exposure limit of carbon monoxide

Approved air-supplied breathing apparatus must be worn where there is a risk of exposure to hazardous combustion and thermal decomposition products.

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

**Eye/face protection**

Hot material: to prevent thermal burns wear a helmet, full face visor and heat resistant neck flap / apron.

Cold material: wear safety glasses with side shields.

**Skin protection**

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SECTION 8: Exposure controls/personal protection

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Hot material: to prevent thermal burns wear heat resistant and impervious gauntlets/gloves.  
Cold material: Wear chemical resistant gloves. Recommended: nitrile gloves.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.  
Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.  
If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.  
It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.  
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body

Use of protective clothing is good industrial practice.  
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.  
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

**SECTION 8: Exposure controls/personal protection****Thermal hazards**

Wear impervious and heat resistant coveralls covering the full body and limbs. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

**Refer to standards:**

Respiratory protection: EN 529  
 Gloves: EN 420, EN 374  
 Eye protection: EN 166  
 Filtering half-mask: EN 149  
 Filtering half-mask with valve: EN 405  
 Half-mask: EN 140 plus filter  
 Full-face mask: EN 136 plus filter  
 Particulate filters: EN 143  
 Gas/combined filters: EN 14387

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Physical state**

Liquid.

**Colour**

Colourless.

**Odour**

Not available.

**Odour threshold**

Not available.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

Not available.

**Flammability**

Not available.

**Lower and upper explosion limit**

Not available.

**Flash point**

Closed cup: 154°C (309.2°F) [Pensky-Martens ASTM D 93]  
 Open cup: 167°C (332.6°F) [Cleveland DIN EN ISO 2592]

**Auto-ignition temperature**

Not applicable.

**Decomposition temperature**

Not available.

**pH**

Not applicable.

**Kinematic viscosity**

Kinematic: 7.5 mm<sup>2</sup>/s (7.5 cSt) at 40°C  
 Kinematic: 2.16 mm<sup>2</sup>/s (2.16 cSt) at 100°C (ASTM D 445)

**Solubility**

| Media | Result      |
|-------|-------------|
| water | Not soluble |

**Partition coefficient n-octanol/water (log value)**

Not applicable.

**Vapour pressure**

| Ingredient name                                                      | Vapour Pressure at 20°C |       |             | Vapour pressure at 50°C |     |        |
|----------------------------------------------------------------------|-------------------------|-------|-------------|-------------------------|-----|--------|
|                                                                      | mm Hg                   | kPa   | Method      | mm Hg                   | kPa | Method |
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | <0.07501                | <0.01 | ASTM D 5191 |                         |     |        |

**Density and/or Relative density**<1000 kg/m<sup>3</sup> (<1 g/cm<sup>3</sup>) at 15°C**Relative vapour density**

Not available.

**Particle characteristics****Median particle size**

Not applicable.

**9.2 Other information****Evaporation rate**

Not available.

**Explosive properties**

Not available.

**Oxidising properties**

Not available.

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**SECTION 9: Physical and chemical properties****Pour point**

-48 °C

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

**10.2 Chemical stability**

The product is stable.

**10.3 Possibility of hazardous reactions**Under normal conditions of storage and use, hazardous reactions will not occur.  
Under normal conditions of storage and use, hazardous polymerisation will not occur.**10.4 Conditions to avoid**

Avoid all possible sources of ignition (spark or flame).

**10.5 Incompatible materials**

Reactive or incompatible with the following materials: oxidising materials.

**10.6 Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

| Product/ingredient name                                              | Result / Route                     | Test authority / Number | Species | Dose        | Exposure | Remarks                                   |
|----------------------------------------------------------------------|------------------------------------|-------------------------|---------|-------------|----------|-------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | LC50 Inhalation<br>Dusts and mists | OECD 403                | Rat     | >5 mg/l     | 4 hours  | Based on studies with similar substances. |
|                                                                      | LD50 Dermal                        | OECD 402                | Rat     | >2000 mg/kg | -        | Based on studies with similar substances. |
|                                                                      | LD50 Oral                          | OECD 401                | Rat     | >5000 mg/kg | -        | Based on studies with similar substances. |

**Acute toxicity estimates**

Not available.

**Irritation/Corrosion**

| Product/ingredient name                                              | Test authority / Test number | Species | Route / Result                     | Test concentration | Remarks                                   |
|----------------------------------------------------------------------|------------------------------|---------|------------------------------------|--------------------|-------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | OECD 405                     | Rabbit  | Eyes - Non-irritating to the eyes. | -                  | Based on studies with similar substances. |
|                                                                      | OECD 404                     | Rabbit  | Skin - Non-irritant to skin.       | -                  | Based on studies with similar substances. |

**Sensitiser**

| Product/ingredient name                                              | Route | Test authority / Test number | Species    | Result          | Remarks                                   |
|----------------------------------------------------------------------|-------|------------------------------|------------|-----------------|-------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | skin  | OECD 406                     | Guinea pig | Not sensitising | Based on studies with similar substances. |

**GERM CELL MUTAGENICITY****Product name** ON Immersion Cooling Fluid DC 15**Product code** 470747-DE01**Page:** 8/13**Version** 1 **Date of issue** 5 June 2025**Format** Latvia**Language** ENGLISH**Date of previous issue** No previous validation.

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**SECTION 11: Toxicological information**

| Product/ingredient name                                              | Test authority / Test number                            | Cell | Type                 | Result                                | Remarks  |                                           |
|----------------------------------------------------------------------|---------------------------------------------------------|------|----------------------|---------------------------------------|----------|-------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | OECD 471 Bacterial Reverse Mutation Test                | -    | Experiment: In vitro | Subject: Bacteria                     | Negative | Based on studies with similar substances. |
|                                                                      | OECD 473 In vitro Mammalian Chromosomal Aberration Test | -    | Experiment: In vitro | Subject: Mammal - species unspecified | Negative | Based on studies with similar substances. |
|                                                                      | OECD 476 In vitro Mammalian Cell Gene Mutation Test     | -    | Experiment: In vitro | Subject: Unspecified                  | Negative | Based on studies with similar substances. |
|                                                                      | OECD 474 Mammalian Erythrocyte Micronucleus Test        | -    | Experiment: In vivo  | Subject: Mammal - species unspecified | Negative | Based on studies with similar substances. |

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Aspiration hazard**

| Product/ingredient name                                              | Result                         |
|----------------------------------------------------------------------|--------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | ASPIRATION HAZARD - Category 1 |

**Conclusion/Summary**May be fatal if swallowed and enters airways. Classification on basis substance is a hydrocarbon and has a kinematic viscosity of 20.5 mm<sup>2</sup>/s or less, measured at 40°C.**Conclusion/Summary**

Not available.

**Information on likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

|                     |                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure. |
| <b>Ingestion</b>    | Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.            |
| <b>Skin contact</b> | Defatting to the skin. May cause skin dryness and irritation.                                    |
| <b>Eye contact</b>  | No known significant effects or critical hazards.                                                |

**Symptoms related to the physical, chemical and toxicological characteristics**

|                     |                                                                                  |
|---------------------|----------------------------------------------------------------------------------|
| <b>Inhalation</b>   | No specific data.                                                                |
| <b>Ingestion</b>    | Adverse symptoms may include the following:<br>nausea or vomiting                |
| <b>Skin contact</b> | Adverse symptoms may include the following:<br>irritation<br>dryness<br>cracking |
| <b>Eye contact</b>  | No specific data.                                                                |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                     |                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. |
| <b>Ingestion</b>    | Ingestion of large quantities may cause nausea and diarrhoea.                                                  |
| <b>Skin contact</b> | Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.                     |
| <b>Eye contact</b>  | Potential risk of transient stinging or redness if accidental eye contact occurs.                              |

**Potential chronic health effects**

|                        |                                                   |
|------------------------|---------------------------------------------------|
| <b>General</b>         | No known significant effects or critical hazards. |
| <b>Carcinogenicity</b> | No known significant effects or critical hazards. |
| <b>Mutagenicity</b>    | No known significant effects or critical hazards. |

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SECTION 11: Toxicological information

**Developmental effects** No known significant effects or critical hazards.  
**Fertility effects** No known significant effects or critical hazards.

**11.2 Information on other hazards**  
**11.2.1 Endocrine disrupting properties**  
Not available.  
**11.2.2 Other information**  
Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name                                              | Test authority / Test number |     | Species | Type / Result                 | Exposure | Effects | Remarks                                   |
|----------------------------------------------------------------------|------------------------------|-----|---------|-------------------------------|----------|---------|-------------------------------------------|
| Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | OECD                         | 202 | Daphnia | Acute EL50 >1000 mg/l         | 48 hours | -       | Based on studies with similar substances. |
|                                                                      | OECD                         | 201 | Algae   | Acute ErL50 100 mg/l          | 72 hours | -       | Based on studies with similar substances. |
|                                                                      | OECD                         | 203 | Fish    | Acute LL50 >100 mg/l          | 96 hours | -       | Based on studies with similar substances. |
|                                                                      | OECD                         | 201 | Algae   | Chronic NOELR 100 mg/l        | 72 hours | -       | Based on studies with similar substances. |
|                                                                      | OECD                         | 211 | Daphnia | Chronic NOELR 10 to 1000 mg/l | 21 days  | -       | Based on studies with similar substances. |

**Environmental hazards** Not classified as dangerous

**12.2 Persistence and degradability**  
Expected to be biodegradable.

**12.3 Bioaccumulative potential**  
This product is not expected to bioaccumulate through food chains in the environment.

**12.4 Mobility in soil**  
**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.  
**Mobility** Liquid. insoluble in water.

**12.5 Results of PBT and vPvB assessment**  
Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

**12.6 Endocrine disrupting properties** Not available.

|                                                       |                                  |                         |
|-------------------------------------------------------|----------------------------------|-------------------------|
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**SECTION 12: Ecological information****12.7 Other adverse effects** No known significant effects or critical hazards.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product****Methods of disposal** Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.**Hazardous waste** Yes.**European waste catalogue (EWC)**

| Waste code | Waste designation              |
|------------|--------------------------------|
| 13 08 99*  | wastes not otherwise specified |

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

**Packaging****Methods of disposal** Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.**Special precautions** This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.**References** Commission 2014/955/EU  
Directive 2008/98/EC**SECTION 14: Transport information**

|                                        | ADR/RID        | ADN            | IMDG           | IATA           |
|----------------------------------------|----------------|----------------|----------------|----------------|
| <b>14.1 UN number or ID number</b>     | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| <b>14.2 UN proper shipping name</b>    | -              | -              | -              | -              |
| <b>14.3 Transport hazard class(es)</b> | -              | -              | -              | -              |
| <b>14.4 Packing group</b>              | -              | -              | -              | -              |
| <b>14.5 Environmental hazards</b>      | No.            | No.            | No.            | No.            |
| <b>Additional information</b>          | -              | -              | -              | -              |

**14.6 Special precautions for user** Not available.**14.7 Maritime transport in bulk according to IMO instruments** Not available.**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

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**SECTION 15: Regulatory information****Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

| Product/ingredient name          | %      | Designation [Usage] |
|----------------------------------|--------|---------------------|
| ON Immersion Cooling Fluid DC 15 | 95-100 | 3                   |

**Labelling** Not applicable.

**Other regulations**

**REACH Status** The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

**United States inventory (TSCA 8b)** All components are active or exempted.

**Australia inventory (AIC)** All components are listed or exempted.

**Canada inventory** All components are listed or exempted.

**China inventory (IECSC)** All components are listed or exempted.

**Japan inventory (CSCL)** All components are listed or exempted.

**Korea inventory (KECI)** All components are listed or exempted.

**Philippines inventory (PICCS)** All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI)** All components are listed or exempted.

**Explosive precursors** Not applicable.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**EU - Water framework directive - Priority substances**

None of the components are listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture. A Chemical Safety Assessment has not been carried out for the mixture itself.

**SECTION 16: Other information**

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Abbreviations and acronyms</b> | <p>ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway</p> <p>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>ATE = Acute Toxicity Estimate</p> <p>BCF = Bioconcentration Factor</p> <p>CAS = Chemical Abstracts Service</p> <p>CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]</p> <p>CSA = Chemical Safety Assessment</p> <p>CSR = Chemical Safety Report</p> <p>DMEL = Derived Minimal Effect Level</p> <p>DNEL = Derived No Effect Level</p> <p>EINECS = European Inventory of Existing Commercial chemical Substances</p> <p>ES = Exposure Scenario</p> <p>EUH statement = CLP-specific Hazard statement</p> <p>EWC = European Waste Catalogue</p> <p>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>IATA = International Air Transport Association</p> <p>IBC = Intermediate Bulk Container</p> <p>IMDG = International Maritime Dangerous Goods</p> <p>LogPow = logarithm of the octanol/water partition coefficient</p> <p>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)</p> |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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**SECTION 16: Other information**

OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SADT = Self-Accelerating Decomposition Temperature  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TWA = Time weighted average  
UN = United Nations  
UVCB = Complex hydrocarbon substance  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative  
Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4 / RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification    | Justification      |
|-------------------|--------------------|
| Asp. Tox. 1, H304 | Calculation method |

|                                               |                                                                                                                                                                     |                                               |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Full text of abbreviated H statements</b>  | H304                                                                                                                                                                | May be fatal if swallowed and enters airways. |
| <b>Full text of classifications [CLP/GHS]</b> | Asp. Tox. 1                                                                                                                                                         | ASPIRATION HAZARD - Category 1                |
| <b>Exposure Scenario information</b>          | Aspiration hazard : Relevant safety measures have been included into the applicable sections of this safety data sheet, in place of appending an exposure scenario. |                                               |
| <b>History</b>                                |                                                                                                                                                                     |                                               |
| <b>Date of issue/ Date of revision</b>        | 05/06/2025.                                                                                                                                                         |                                               |
| <b>Date of previous issue</b>                 | No previous validation.                                                                                                                                             |                                               |
| <b>Prepared by</b>                            | Product Stewardship                                                                                                                                                 |                                               |

Indicates information that has changed from previously issued version.

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