Eni Dicrea ESX 100
Safety Data Sheet
According to Regulation (EU) No. 830/2015

Revision date: 10/10/2017
Supersedes: 08/04/2016

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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>Eni Dicrea ESX 100</td>
</tr>
<tr>
<td>Product code</td>
<td>7288</td>
</tr>
<tr>
<td>Type of product</td>
<td>Lubricants</td>
</tr>
<tr>
<td>Formula</td>
<td>1010-2017</td>
</tr>
<tr>
<td>Product group</td>
<td>Trade product</td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses

- Main use category: Industrial use, Professional use
- Industrial/Professional use spec: Wide dispersive use, Used in closed systems
- Use of the substance/mixture: Lubricant for compressors
- Do not use the product for any purposes that have not been advised by the manufacturer.
- Function or use category: Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ENI S.p.A.
P.le E. Mattei 1 - 00144 ROMA Italy
Tel (+39) 06 59821
www.eni.com

Contact:
Refining & Marketing
Via Laurentina 449 00142 ROMA Italy
Tel (+39) 06 59881 Fax (+39) 06 59885700

Competent person responsible for the Safety Data Sheet (Reg. EC nr. 1907/2006): SDSInfo@eni.com

1.4. Emergency telephone number

Emergency number: CNIT +39 0382 24444 (24h) (IT + EN)

Poison centre (UK):
National Poisons Information Service Edinburgh (24h)
(+44) 844 892 0111
0870 600 6266 (UK only)
(Source: UN-WHO)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]

Aquatic Chronic 3 H412
Adverse physicochemical, human health and environmental effects
Contact with eyes may cause temporary reddening and irritation. Prolonged or repeated skin contact may cause a slight transient irritation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

CLP Signal word : [None]
Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
P501 - Dispose of contents and container to according to national or local regulations.

Security closing plug for children : Not applicable
Tactile warning : Not applicable

Other:
General advice : (Not applicable - Classified as dangerous according to (EC) No 1272/2008)

2.3. Other hazards (not relevant for classification)

Physical/chemical : This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels.
Health : If the product is handled or used at high temperature, contact with hot product or vapours may cause burns, Any substance, in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as soon as possible, to get specialized medical treatment, Do not wait for symptoms to develop.

Environment : None
Contaminants : None
(air contaminants or other substances)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures
Composition/information on ingredients : Synthetic base oil
Mineral base oil, severely refined
Additives
Hazardous ingredients and/or with relevant occupational exposure limits : See table
Eni Dicrea ESX 100
Safety Data Sheet
According to Regulation (EU) No. 830/2015

Product code: 7288
Revision date: 10/10/2017
Version: 5.0

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-buty1-4-hydroxyphenyl)propionate</td>
<td>(CAS-No.) 125643-61-0</td>
<td>1 - 1,5</td>
<td>Aquatic Chronic 4, H413</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 406-040-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 607-530-00-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(REACH-no) 01-0000015551-76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenol, isopropylated, phosphate (3:1)</td>
<td>(CAS-No.) 68937-41-7</td>
<td>0,5 - 0,9</td>
<td>Repr. 2, H361fd</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 273-066-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(REACH-no) 01-2119535109-41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral base oil, severely refined</td>
<td></td>
<td>0,1 - 0,5</td>
<td>Not classified</td>
</tr>
<tr>
<td></td>
<td>(Component, For identification of the substance, see note [*] )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[*] Note: this product contains small amounts of severely refined mineral base oil (not classified as hazardous). The identity has not been specified by the original supplier.

This substance has a value < 3 % wt of DMSO extract, according to IP 346/92 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove to fresh air, keep the casualty warm and at rest. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If inflammation or irritation persists, seek medical advice.

First-aid measures after eye contact: Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, seek medical advice.

First-aid measures after ingestion: Get medical advice/attention if you feel unwell.

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

Symptoms / injuries (general indications): Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation: None under normal conditions at ambient temperatures.

Symptoms/effects after skin contact: Prolonged or repeated skin contact may cause a slight transient irritation.

Symptoms/effects after eye contact: Contact with eyes may cause temporary reddening and irritation.

Symptoms/effects after ingestion: Accidental ingestion of small quantities of the product may cause irritation, nausea and gastric disturbances. Taking into account the taste of the product, however, ingestion of dangerous quantities is very unlikely.

Symptoms/effects upon intravenous administration: No information available.

Chronic symptoms: None to be reported, according to the present classification criteria.

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

Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Small-size fires: carbon dioxide, dry chemicals, alcohol-resistant foam, sand or earth. Large fires: alcohol-resistant foam or water fog (mist). These means should be used by trained personnel only. Other extinguishing gases (according to regulations).

Unsuitable extinguishing media: Do not use water jets. They could cause splattering, and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.
5.2. Special hazards arising from the substance or mixture

**Fire hazard**: This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels.

**Explosion hazard**: The vapours are flammable and may form explosive mixtures with air.

**Combustion products**: Incomplete combustion will generate poisonous carbon monoxide, carbon dioxide and other toxic gases, Oxygenated compounds (aldehydes, etc.), POx.

5.3. Advice for firefighters

**Firefighting instructions**: Shut off source of product, if possible. Spilled product which is not burning should be covered with sand or foam. If possible, move containers and drums away from danger area. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.

**Special protective equipment for firefighters**:
- Personal protection equipment for firefighters (see also sect. 8). EN 443. EN 469. EN 659. In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Other information**: In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

**General measures**: Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flames). Avoid accidental sprays on hot surfaces or electrical contacts. Avoid direct contact with released material. Keep upwind.

6.1.1. For non-emergency personnel

**Protective equipment**: See Section 8.

**Emergency procedures**: Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

6.1.2. For emergency responders

**Protective equipment**: Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. If necessary heat resistant and insulated. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated. Work helmet. Respiratory protection: A half or full-face respirator with combined dust/organic vapour filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA’s should be used.

**Emergency procedures**: Notify local authorities according to relevant regulations.

6.2. Environmental precautions

Do not let the product accumulate in confined or underground spaces. Do not let the product flow into sewers or water courses, or in any way contaminate the environment. In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations. The site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

6.3. Methods and material for containment and cleaning up

**For containment**: Contain spilled liquid with sand, earth or other suitable absorbents (non-flammable). Recover free liquid and waste materials in suitable waterproof and oil-resistant containers. Clean contaminated area. Dispose of according to local regulations. If in water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.
Other information: Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air/water temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary.

6.4. Reference to other sections
For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed. Do not use compressed air for filling, discharging, or handling operations. Keep away from heat/sparks/open flames/hot surfaces. Use and store only outdoors or in a well-ventilated area. During transfer and mixing operations, ensure that all equipment is correctly grounded. Avoid the build-up of electric charges. Emptied containers can contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been drained and cleaned. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability.

Handling temperature: This product can be handled at ambient temperatures.

Hygiene measures: Avoid contact with skin. Do not breathe fume/mist/vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.

Incompatible materials: None in normal conditions.

Storage temperature: This product can be stored at ambient temperatures.

Storage area: Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Packages and containers: If the product is supplied in containers: Keep containers tightly closed and properly labelled. Keep only in the original container or in a suitable container for this kind of product.

Packaging materials: For containers, or container linings use materials specifically approved for use with this product. Compatibility should be checked with the manufacturer.

7.3. Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Phenol, isopropylated, phosphate (3:1) (68937-41-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Belgium</td>
</tr>
<tr>
<td>Denmark</td>
</tr>
<tr>
<td>Denmark</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>Country</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Ireland</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA - ACGIH</td>
</tr>
<tr>
<td>USA - NIOSH</td>
</tr>
<tr>
<td>USA - OSHA</td>
</tr>
</tbody>
</table>

### Mineral base oil, severely refined

<table>
<thead>
<tr>
<th>Country</th>
<th>Standard</th>
<th>Concentration (mg/m³)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>MAK</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Belgium</td>
<td>Limit value</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Denmark</td>
<td>Grænseværdi (langvarig)</td>
<td>1 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Denmark</td>
<td>Grænseværdi (kortvarig)</td>
<td>2 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Hungary</td>
<td>AK-érték</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>MAC TGG 8h</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Spain</td>
<td>VLA-ED</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Spain</td>
<td>VLA-EC</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Sweden</td>
<td>Nivågränsvärde (NVG)</td>
<td>1 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Sweden</td>
<td>Kortidsvärde (KTV)</td>
<td>3 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL TWA (mg/m³)</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL STEL (mg/m³)</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VECD (mg/m³)</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP (mg/m³)</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>USA - ACGIH</td>
<td>ACGIH TLV®-TWA (mg/m³)</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>USA - ACGIH</td>
<td>ACGIH TLV®-STEL (mg/m³)</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>USA - NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>USA - NIOSH</td>
<td>NIOSH REL (STEL) (mg/m³)</td>
<td>10 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
<tr>
<td>USA - OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>5 mg/m³</td>
<td>(Mineral base oil mist, severely refined, DMSO extract &lt;3% m/m)</td>
</tr>
</tbody>
</table>
Eni Dicrea ESX 100

PNEC (additional information)

Additional information | Not applicable
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Monitoring methods: Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts, refer to relevant legislation and in any case to the good practice of industrial hygiene.

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

### 8.2. Exposure controls

#### Appropriate engineering controls

Appropriate engineering controls: Before commencing any operation in a confined area (e.g. tunnels), check the atmosphere for oxygen content and flammability.

#### Personal protective equipment (for industrial or professional use)

Personal protective equipment (for industrial or professional use): Gloves. Protective clothing. Safety glasses. Safety shoes or boots. High gas/vapour concentration: gas mask with filter type AX.

#### Hand protection

Hand protection: In case of repeated or prolonged contact wear gloves. Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard.

#### Eye protection

Eye protection: Safety glasses. DIN EN 166

#### Skin and body protection

Skin and body protection: Long-sleeved overalls. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Antistatic non-skid safety shoes or boots, chemical resistant.

#### Respiratory protection

Respiratory protection: No respiratory protection needed under normal use conditions. Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Open or well ventilated spaces: in presence of oil mists and if the product is handled without adequate containment means: use full or half-face masks with filter for mists/aerosols. In case there is a significant presence of vapours (e.g. through handling at high temperature), use full or half-face masks with filter for hydrocarbon vapours. (EN 136/140/145). Combination filter device (DIN EN 141). Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. (EN 136/140/145)

#### Thermal hazard protection

Thermal hazard protection: If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.

#### Environmental exposure controls

Environmental exposure controls: Do not discharge the product into the environment. Storage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Prevent discharge of undissolved substance to or recover from onsite wastewater. Onsite wastewater treatment required. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

#### Consumer exposure controls

Consumer exposure controls: Not applicable.
8.3. Hygiene measures

General protective and hygienic measures:
Avoid contact with skin and eyes, Do not breathe vapours or mists, Do not clean hands with dirty or oil-soaked rags, Do not keep dirty rags in the overall pockets, Do not drink, eat or smoke with dirty hands, Wash hands with water and mild soap, do not use solvents or other irritant products which have a defatting effect on the skin, Do not re-use clothes, if they are still contaminated.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid, bright &amp; clear.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow-brown</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight odour of petroleum.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>There are no data available on the preparation/mixture itself.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>Negligible.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-30 °C (pour point) (ASTM D 97)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>245 °C (ASTM D 92)</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>990 kg/m³ (15°C) (ASTM D 4052)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Immiscible and insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Log Kow</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>100 mm²/s (40 °C) (ASTM D 445)</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>None (according to composition).</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>None (according to composition).</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Additional information</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

The above data (9.1 - 9.2) are typical values and do not constitute a specification.

SECTION 10: Stability and reactivity

10.1. Reactivity

This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.

10.2. Chemical stability

Stable product, according to its intrinsic properties (in normal conditions of storage and handling).
10.3. Possibility of hazardous reactions
None (in normal conditions of storage and handling).

10.4. Conditions to avoid
Keep away from strong oxidizers. Keep away from open flames, hot surfaces and sources of ignition. Avoid the build-up of electrostatic charge.

10.5. Incompatible materials
Strong oxidants.

10.6. Hazardous decomposition products
Thermal decomposition generates: Carbon dioxide, Carbon monoxide, Toxic fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified (Based on available data, the classification criteria are not met) (according to composition)

**reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>500 - 2000 mg/kg bodyweight</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>2000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**Phenol, isopropylated, phosphate (3:1) (68937-41-7)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>≥ 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>≥ 2000 mg/kg bodyweight</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>≥ 5 mg/l/4h</td>
</tr>
</tbody>
</table>

**Mineral base oil, severely refined**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg bodyweight (OECD 401)</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 5000 mg/kg bodyweight (OECD 402)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 5 mg/l/4h (OECD 403)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified (Based on available data, the classification criteria are not met) (according to composition)

pH: Not applicable.

Serious eye damage/irritation: Not classified (Based on available data, the classification criteria are not met) (according to composition)

pH: Not applicable.

Respiratory or skin sensitisation: Not classified (Based on available data, the classification criteria are not met) (according to composition)

Germ cell mutagenicity: Not classified (Based on available data, the classification criteria are not met) (according to composition)

Carcinogenicity - Description

All the mineral base oils contained in this product have a value < 3 % wt of DMSO extract, according to IP 346/92 (Nota L - Annex VI Reg (CE) 1272/2008, # 1.1.3)

Reproductive toxicity: Not classified (Based on available data, the classification criteria are not met) (according to composition)

This product contains: Phenol, isopropylated, phosphate (3:1)

Suspected of damaging fertility.

The actual relevance of these effects in man is not certain.

**reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL (oral, rat)</td>
<td>5 mg/kg bw/day (28 d)</td>
</tr>
</tbody>
</table>

**STOT-repeated exposure**

: Not classified (Based on available data, the classification criteria are not met) (according to composition)

**Mineral base oil, severely refined**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL (oral, rat, 90 days)</td>
<td>125 mg/kg bodyweight/day (OECD TG 408)</td>
</tr>
</tbody>
</table>
Aspiration hazard: Not classified (Based on available data, the classification criteria are not met) (according to composition)

Eni Dicrea ESX 100

Viscosity, kinematic: 100 mm²/s (40 °C) (ASTM D 445)

Potential adverse human health effects and symptoms: Contact with eyes may cause temporary reddening and irritation. Prolonged or repeated skin contact may cause a slight transient irritation.

Other information: None.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. An uncontrolled release to the environment may produce a contamination of different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - air: This product has a low vapour pressure. A significant exposure may happen only if the product is used at high temperature, or in case of sprays and mists.

Ecology - water: This product is not soluble in water. It floats on water and forms a film on the surface. The damage to aquatic organisms is of mechanical kind (immobilization and entrapment).

Eni Dicrea ESX 100

EC50 Daphnia 1 > 1 mg/l (Daphnia magna)
EC50 other aquatic organisms 1 > 1 mg/l (Oncorhynchus mykiss - 96h)

reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (125643-61-0)

LC50 fish 1 > 74 mg/l
ErC50 (algae) > 33,7 mg/l (OECD 201, 72 h, Pseudokirchnerella subspicata)
NOEC (acute) 33,7 mg/l (72 h, Pseudokirchnerella subspicata)
NOEC (chronic) < 0,01 mg/l (21 d, Daphnia magna)

Phenol, isopropylated, phosphate (3:1) (68937-41-7)

LC50 fish 1 1,6 mg/l (96h)
EC50 Daphnia 1 2,44 mg/l (48 h)

Mineral base oil, severely refined

LC50 fish 1 > 100 mg/l (LL 50)
EC50 Daphnia 1 > 10000 mg/l WAF, 48 h (OECD 202)

12.2. Persistence and degradability

Eni Dicrea ESX 100

Persistence and degradability: The most significant constituents of the product should be considered as "readily biodegradable".

Biodegradation: > 95 % (OECD 301C)

Mineral base oil, severely refined: The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.

12.3. Bioaccumulative potential

Eni Dicrea ESX 100

Log Pow: Not applicable for mixtures
Log Kow: Not applicable for mixtures
Bioaccumulative potential: Not established.

12.4. Mobility in soil

Eni Dicrea ESX 100

Ecology - soil: No data available.

12.5. Results of PBT and vPvB assessment

Eni Dicrea ESX 100

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Results of PBT-vPvB assessment: The components in this formulation do not meet the criteria for classification as PBT or vPvB. The product should be considered prudentially as "Persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)

12.6. Other adverse effects

Other adverse effects: None.
Additional information: This product has no specific properties for inhibition of bacterial activity. In any case, wastewater containing this product should be treated in plants that are suited for the specific purpose.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: Do not dispose of the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector. Dispose of empty containers and wastes safely.

Sewage disposal recommendations: Dispose of in a safe manner in accordance with local/national regulations. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Product/Packaging disposal recommendations: European Waste Catalogue code(s) (Decision 2001/118/CE): 13 02 05* (mineral-based non-chlorinated engine, gear and lubricating oils). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.

Additional information: Empty containers may contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been cleaned, and declared safe.

Ecology - waste materials: The product as it is does not contain halogenated substances.
EURAL code (EWC): 13 02 05* - Mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Dangerous for the environment: No</td>
<td>Dangerous for the environment: No</td>
<td>Dangerous for the environment: No</td>
<td>Dangerous for the environment: No</td>
</tr>
</tbody>
</table>

Other information: None.

14.6. Special precautions for user

Special transport precautions: None.
- Overland transport
  Transport regulations (ADR): Not subject
- Transport by sea
  Transport regulations (IMDG): Not subject
  Limited quantities (IMDG): Not applicable
- Air transport
  Transport regulations (IATA): Not subject
SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Substance/Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008</td>
<td>reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate - Phenol, isopropylated, phosphate (3:1)</td>
</tr>
<tr>
<td>3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10</td>
<td>Phenol, isopropylated, phosphate (3:1)</td>
</tr>
<tr>
<td>3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1</td>
<td>Eni Dicrea ESX 100 - reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate - Phenol, isopropylated, phosphate (3:1)</td>
</tr>
</tbody>
</table>

No ingredients are included in the REACH Candidate list (> 0,1 % m/m).
Contains no REACH Annex XIV substances

Relevant EU Legislation:
- Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work).
- Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding)
- Directive 2012/18/CE (Control of major-accident hazards involving dangerous substances)
- Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds)

15.1.2. National regulations

National adoption of EU Directives concerning health and safety on the workplace.
National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE).
Relevant national laws on prevention of water pollution.
Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC).
National adoption of Directives 75/439/CEE - 87/101/CEE concerning disposal of used oils.

France
Maladies professionnelles (F) : RG 36 - Affections provoquées par les huiles et graisses d'origine minérale ou de synthèse

Germany

17/10/2017 EN (English) 12/14
**Eni Dicrea ESX 100**

**Safety Data Sheet**

According to Regulation (EU) No. 830/2015

**Product code:** 7288

**Revision date:** 10/10/2017

**Version:** 5.0

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**VwVwS Annex reference:** Water hazard class (WGK) (D) 1, low hazard to waters (Classification according to VwVwS, Annex 4)

**WGK remark:** Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

**VbF class (D):** Not applicable.

**Storage class (LGK) (D):** LGK 12 - Non-combustible liquids

**Employment restrictions:** Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.

**12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV:** Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Other information, restrictions and prohibition regulations:**
- TRGS 900: Occupational Exposure Limits
- TRGS 800: Fire protection measures
- TRGS 555: Working instruction and information for workers
- TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure
- TRGS 401: Risks resulting from skin contact - identification, assessment, measures
- TRGS 400: Hazard assessment for activities involving Hazardous Substances

**Netherlands**

**Waterbezwaarlijkheid:** 8 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Saneringsinspanningen:** C - Lozing minimaliseren

**SZW-lijst van kankerverwekkende stoffen:** None of the components are listed

**SZW-lijst van mutagene stoffen:** None of the components are listed

**NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding:** None of the components are listed

**NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid:** None of the components are listed

**NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling:** None of the components are listed

**Denmark**

**Recommendations Danish Regulation:** Pregnant/breastfeeding women working with the product must not be in direct contact with it

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**15.2. Chemical safety assessment**

For this mixture a chemical safety assessment has been carried out

**A chemical safety assessment has been carried out for the following components of this mixture:**

- reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate
- Phenol, isopropylated, phosphate (3:1)

---

**SECTION 16: Other information**

**Indication of changes:**

**Other information.**

**Abbreviations and acronyms:**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/D</td>
<td>Not available</td>
</tr>
<tr>
<td>N/A</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ADN</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</td>
</tr>
<tr>
<td>ADR</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>CLP</td>
<td>Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect level</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived-No Effect Level</td>
</tr>
</tbody>
</table>
EC50 | Effective concentration for 50 percent of test population (median effective concentration)
IARC | International Agency for Research on Cancer
IATA | International Air Transport Association
IMDG | International Maritime Dangerous Goods
LC50 | Lethal concentration for 50 percent of test population (median lethal concentration)
LD50 | Lethal dose for 50 percent of test population (median lethal dose)
LOAEL | Lowest Observed Adverse Effect Level
NOAEC | No-Observed Adverse Effect Concentration
NOAEL | No-Observed Adverse Effect Level
NOEC | No-Observed Effect Concentration
OECD | Organisation for Economic Co-operation and Development
PBT | Persistent Bioaccumulative Toxic
PNEC | Predicted No-Effect Concentration
RID | Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS | Safety Data Sheet
STP | Sewage treatment plant
vPvB | Very Persistent and Very Bioaccumulative

Data sources: This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.

Training advice: Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.

Other information: Do not use the product for any purposes that have not been advised by the manufacturer.

Full text of H- and EUH-statements:

- **Aquatic Chronic 1**: Hazardous to the aquatic environment — Chronic Hazard, Category 1
- **Aquatic Chronic 3**: Hazardous to the aquatic environment — Chronic Hazard, Category 3
- **Aquatic Chronic 4**: Hazardous to the aquatic environment — Chronic Hazard, Category 4
- **Repr. 2**: Reproductive toxicity, Category 2
- **STOT RE 2**: Specific target organ toxicity — Repeated exposure, Category 2
- **H361fd**: Suspected of damaging fertility. Suspected of damaging the unborn child.
- **H373**: May cause damage to organs through prolonged or repeated exposure.
- **H410**: Very toxic to aquatic life with long lasting effects.
- **H412**: Harmful to aquatic life with long lasting effects.
- **H413**: May cause long lasting harmful effects to aquatic life.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

- **Aquatic Chronic 3**
- **H412**
- **Calculation method**

SDS EU (REACH Annex II) eni 2015

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.