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

1.1. Product identifier

Identification of the substance/preparation

**Isononanoic acid**

Chemical Name 3,5,5-Trimethylhexanoic acid
CAS-No 3302-10-1
EC No. 221-975-0

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

Use of the Substance / Preparation
Intermediate, lubricant.

Uses advised against None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking OXEA GmbH
Rheinpromenade 4A
D-40789 Monheim
Germany

Product Information
Product Stewardship
FAX: +49 (0)208 693 2053
e-mail: psq@oxea-chemicals.com

1.4. Emergency telephone number

Emergency telephone number
+44 (0) 1235 239 670 (UK) available 24/7
in USA, call 800 424 9300
outside USA, call +1.703.527.3887, collect calls accepted available 24/7***

SECTION 2: Hazards identification

Europe

2.1. Classification of the substance or mixture

This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Acute oral toxicity Category 4, H302
Skin corrosion/irritation Category 2, H315
Serious eye damage/eye irritation Category 1, H318

Additional information
For full text of Hazard- and EU Hazard-statements see SECTION 16.
2.2. Label elements

Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

Hazard pictograms

- Signal word: Danger
- Hazard statements:
  - H302: Harmful if swallowed.
  - H315: Causes skin irritation.
  - H318: Causes serious eye damage.
- Precautionary statements:
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.
  - P301 + P330: IF SWALLOWED: Rinse mouth
  - P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
  - P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P310: Immediately call a POISON CENTER/doctor.

2.3. Other hazards

Vapour/air-mixtures are explosive at intense warming

PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

USA

2.1. Classification of the substance or mixture

This substance is classified in accordance with paragraph (d) of §1910.1200 (GHS-US classification).

- Acute oral toxicity Category 4, H302
- Skin corrosion/irritation Category 2, H315
- Serious eye damage/eye irritation Category 1, H318
- Environmental hazard Aquatic Acute 3; H402

2.2. Label elements

Labeling according to §1910.1200 (GHS-US labeling).

Hazard symbol(s)
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Isononanoic acid
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Version / Revision 3.01

Signal word  Danger

Hazard statements
H302: Harmful if swallowed.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H402: Harmful to aquatic life

Precautionary statements

Prevention
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/eye protection/face protection.

Response
P301 + P312: IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P330: Rinse mouth.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor.
P362 + P364: Take off contaminated clothing and wash it before reuse.

Disposal
P501: Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

Vapour/air-mixtures are explosive at intense warming

SECTION 3: Composition / information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>REACH-No</th>
<th>1272/2008/EC</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,5,5-Trimethylhexanoic acid</td>
<td>3302-10-1</td>
<td>01-2119517580-45</td>
<td>Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318</td>
<td>88 - 100</td>
</tr>
</tbody>
</table>

Remarks
Mixture of isomeric Isononanoic acids, mainly 3,5,5-Trimethylhexanoic acid.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.
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Eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Skin
Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

Ingestion
Call a physician immediately. Do not induce vomiting without medical advice.

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

Main symptoms
cough, headache, nausea, shortness of breath.

Special hazard
Lung irritation, Lung oedema.

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

General advice
Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, flush stomach and compensate acidosis.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
foam, dry chemical, carbon dioxide (CO2), water spray

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of:
carbon monoxide (CO)
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons
Vapour/air-mixtures are explosive at intense warming
Vapours are heavier than air and may spread along floors

5.3. Advice for firefighters

Special protective equipment for firefighters
Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

Precautions for firefighting
Cool containers / tanks with water spray. Water run-off and vapor cloud may be corrosive. Dike and collect water used to fight fire. Keep people away from and upwind of fire.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.

For emergency responders: Personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

6.3. Methods and material for containment and cleaning up

Methods for containment
Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

Methods for cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

6.4. Reference to other sections

For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

Hygiene measures
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Advice on the protection of the environment
See Section 8: Environmental exposure controls.

Incompatible products
bases
amines

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material. Vapour/air-mixtures are explosive at intense
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Technical measures/Storage conditions
Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep at temperatures between 0 and 38 °C (32 and 100 °F).

Suitable material
stainless steel

Unsuitable material
mild steel, copper, brass, including their alloys

Temperature class
T2

7.3. Specific end use(s)
Intermediate
Formulation
Distribution of substance
Functional Fluids
Lubricants and lubricant additives
Metal working fluids / rolling oils
laboratory chemicals

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits European Union
No exposure limits established.

Exposure limits Germany

MAK-values from the DFG

<table>
<thead>
<tr>
<th>Component</th>
<th>MAK (ppm)</th>
<th>MAK (mg/m³)</th>
<th>listed w/o limits</th>
<th>Ceiling limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,5,5-Trimethylhexanoic acid</td>
<td></td>
<td></td>
<td>Ja / Yes***</td>
<td></td>
</tr>
<tr>
<td>CAS: 3302-10-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note
For details and further information please refer to the original regulation.

Exposure limits United States of America
No exposure limits established.

8.2. Exposure controls

Appropriate Engineering controls
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts)
should be used in mechanical ventilation systems.

**Personal protective equipment**

**General industrial hygiene practice**
Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

**Hygiene measures**
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

**Eye protection**
Safety glasses with side-shields. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

**Hand protection**
Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

**Suitable material**
nitrile rubber
**Evaluation**
according to EN 374: level 6
**Glove thickness**
approx 0.55 mm
**Break through time**
> 480 min

**Suitable material**
polyvinylchloride
**Evaluation**
Information derived from practical experience
**Glove thickness**
approx 0.8 mm

**Skin and body protection**
Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

**Respiratory protection**
Respirator with filter for organic vapour. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Equipment should conform to NIOSH, EN or other applicable national standards.

**Environmental exposure controls**
If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

**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><strong>Appearance</strong></td>
<td>liquid @ 20 °C (68 °F)</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>colourless</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>slightly acidic</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>4.4 (0.1 g/l in water @ 20 °C (68 °F))</td>
</tr>
<tr>
<td><strong>Melting point/range</strong></td>
<td>approx. -77 °C (Pour point)</td>
</tr>
<tr>
<td><strong>Boiling point/range</strong></td>
<td>236 °C @ 1013 hPa</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>117 °C</td>
</tr>
</tbody>
</table>
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Method
ISO 2719, @ 1013 hPa

Evaporation rate
No data available

Flammability (solid, gas)
Does not apply, the substance is a liquid

Lower explosion limit
1.2 Vol %

Upper explosion limit
No data available

Vapour pressure

<table>
<thead>
<tr>
<th>Values [hPa]</th>
<th>Values [kPa]</th>
<th>Values [atm]</th>
<th>@ °C</th>
<th>@ °F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0046</td>
<td>0.00046</td>
<td>&lt; 0.001</td>
<td>20</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>0.45</td>
<td>0.004</td>
<td>50</td>
<td>122</td>
<td></td>
</tr>
</tbody>
</table>

Vapour density
No data available

Relative density

<table>
<thead>
<tr>
<th>Values</th>
<th>@ °C</th>
<th>@ °F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.900</td>
<td>20</td>
<td>68</td>
<td>DIN 51757</td>
</tr>
<tr>
<td>0.876</td>
<td>50</td>
<td>122</td>
<td>DIN 51757</td>
</tr>
</tbody>
</table>

Solubility
0.7 g/l @ 20 ºC, in water, OECD 105

log Pow
3.2 (measured), OECD 117

Autoignition temperature
320 - 415 ºC

Method
DIN 51794 @ 1009 hPa

Decomposition temperature
No data available

Viscosity
11.47 mPa*s @ 20 ºC

Method
DIN 51562, dynamic

Oxidizing properties
Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties

Explosive properties
Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties

9.2. Other information

Molecular weight
158.23

Molecular formula
C₉H₁₈O₂

log Koc
2.9 @ pH 4 1.99 @ pH 7 calculated

Dissoziation constant
pKa not determinable due to low water solubility @ 20°C (68°F) OECD 112

Refractive index
1.429 @ 20 ºC

Surface tension
35.3 mN/m (0.63 g/l @ 20°C (68°F)), OECD 115

SECTION 10: Stability and Reactivity

10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid
Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

10.5. Incompatible materials
bases, amines.

10.6. Hazardous decomposition products
No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure  Ingestion, Inhalation, Eye contact, Skin contact

### Acute toxicity

<table>
<thead>
<tr>
<th>3,5,5-Trimethylhexanoic acid (3302-10-1)</th>
<th>Routes of Exposure</th>
<th>Endpoint</th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>1160 mg/kg</td>
<td>rat, male/female</td>
<td>OECD 401</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>&gt; 2000 mg/kg</td>
<td>rat, male/female</td>
<td>read across</td>
<td></td>
</tr>
</tbody>
</table>

**3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1**

**Assessment**
The available data lead to the classification given in section 2
For acute inhalation toxicity, no data are available

### Irritation and corrosion

<table>
<thead>
<tr>
<th>3,5,5-Trimethylhexanoic acid (3302-10-1)</th>
<th>Target Organ Effects</th>
<th>Species</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>rabbit</td>
<td>irritating</td>
<td>OECD 404</td>
<td>in vivo</td>
</tr>
<tr>
<td>Eyes</td>
<td>rabbit</td>
<td>severe irritation</td>
<td>OECD 405</td>
<td>in vivo</td>
</tr>
</tbody>
</table>

**3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1**

**Assessment**
The available data lead to the classification given in section 2
For respiratory irritation, no data are available

### Sensitization

<table>
<thead>
<tr>
<th>3,5,5-Trimethylhexanoic acid (3302-10-1)</th>
<th>Target Organ Effects</th>
<th>Species</th>
<th>Evaluation</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>guinea pig</td>
<td>not sensitizing</td>
<td>OECD 406</td>
<td>read across</td>
</tr>
</tbody>
</table>

**3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1**

**Assessment**
Based on available data, the classification criteria are not met for:
Skin sensitization
For respiratory sensitization, no data are available***

### Subacute, subchronic and prolonged toxicity

<table>
<thead>
<tr>
<th>3,5,5-Trimethylhexanoic acid (3302-10-1)</th>
<th>Type</th>
<th>Dose</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subacute toxicity</td>
<td>LOAEL: 200</td>
<td>rat, male/female</td>
<td>OECD 407</td>
<td>Oral</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Type</th>
<th>Dose</th>
<th>Species</th>
<th>Evaluation</th>
<th>Method</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutagenicity</td>
<td></td>
<td>Salmonella typhimurium</td>
<td>negative</td>
<td>OECD 471 (Ames)</td>
<td>In vitro study</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td></td>
<td>Escherichia coli</td>
<td>negative</td>
<td>OECD 472</td>
<td>In vitro study</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td></td>
<td>CHO (Chinese Hamster Ovary) cells</td>
<td>ambiguous</td>
<td>OECD 473 (Chromosomal Aberration)</td>
<td>In vitro study</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td></td>
<td>V79 cells, Chinese hamster</td>
<td>negative</td>
<td>OECD 476 (Mammalian Gene Mutation)</td>
<td>In vitro study</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>LOAEL 165 - 500 mg/kg/d</td>
<td>rat, parental, female</td>
<td>OECD 415</td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>NOAEL 79 - 228 mg/kg/d</td>
<td>rat, parental, female</td>
<td>OECD 415</td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>Developmental Toxicity</td>
<td>NOAEL 60 mg/kg/d</td>
<td>rat</td>
<td>OECD 414, Oral</td>
<td>Oral</td>
<td></td>
</tr>
</tbody>
</table>

3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1
CMR Classification
The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B***

Evaluation
In vitro tests did not show mutagenic effects***

3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1
Main symptoms
cough, headache, nausea, shortness of breath.

Target Organ Systemic Toxicant - Single exposure
Based on available data, the classification criteria are not met for:
STOT SE***

Target Organ Systemic Toxicant - Repeated exposure
Based on available data, the classification criteria are not met for:
STOT RE

Aspiration toxicity
no data available***

Note
Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:

SECTION 12: Ecological information

12.1. Toxicity
### Acute aquatic toxicity

**3,5,5-Trimethylhexanoic acid (3302-10-1)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Exposure time</th>
<th>Dose</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>96h</td>
<td>LC50: 123 mg/l</td>
<td>OECD 203</td>
</tr>
<tr>
<td>Activated sludge (bacteriae)</td>
<td>3 h</td>
<td>EC50: 470 mg/l</td>
<td>OECD 209</td>
</tr>
<tr>
<td>Daphnia magna (Water flea)</td>
<td>48h</td>
<td>EC50: 68 mg/l</td>
<td>OECD 202</td>
</tr>
<tr>
<td>Pseudokirchneriella subcapitata</td>
<td>72h</td>
<td>EC50: 81 mg/l (Growth rate)</td>
<td>OECD 201</td>
</tr>
<tr>
<td>Pseudokirchneriella subcapitata</td>
<td>72h</td>
<td>EC50: 51 mg/l (Biomass)</td>
<td>OECD 201</td>
</tr>
</tbody>
</table>

### Long term toxicity

**3,5,5-Trimethylhexanoic acid (3302-10-1)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Species</th>
<th>Dose</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic toxicity</td>
<td>Pseudokirchneriella subcapitata</td>
<td>NOEC: 10 mg/l</td>
<td>OECD 201</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

**3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1**

**Biodegradation**

96 % (21*** d), activated sludge, domestic, non-adapted, aerobic, OECD 301 A / ISO 7827.***

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abiotic Degradation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrolysis</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Photolysis</td>
<td>Rate constant: 0.52-1 x 10^(-11) cm^3/(molecule x s)</td>
<td>calculated</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

**3,5,5-Trimethylhexanoic acid (3302-10-1)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>log Pow</td>
<td>3,2</td>
<td>measured, OECD 117</td>
</tr>
<tr>
<td>BCF</td>
<td>3,1 - 7 @ 0,1 mg/l</td>
<td>OECD 305 C</td>
</tr>
<tr>
<td>BCF</td>
<td>0,5 - 1,7 @ 1 mg/l</td>
<td>OECD 305 C</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

**3,5,5-Trimethylhexanoic acid (3302-10-1)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>35,3 mN/m (0,63 g/l @ 20°C (68°F))</td>
<td>OECD 115</td>
</tr>
<tr>
<td>Distribution to environmental compartments</td>
<td>Soil: 12,6 %</td>
<td>calculated</td>
</tr>
<tr>
<td>Adsorption/Desorption</td>
<td>log Koc: 2,9 @ pH 4</td>
<td>calculated</td>
</tr>
<tr>
<td>Adsorption/Desorption</td>
<td>log Koc: 1,99 @ pH 7</td>
<td>calculated</td>
</tr>
</tbody>
</table>
12.5. Results of PBT and vPvB assessment

3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1
PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)***

12.6. Other adverse effects

3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1
No data available***

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product Information
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.
Hazardous waste according to European Waste Catalogue (EWC)

Uncleaned empty packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

SECTION 14: Transport information

Section 14.1 - 14.6

ICAO-TI / IATA-DGR Not restricted

IMDG Not restricted

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

<table>
<thead>
<tr>
<th>Product name</th>
<th>Nonanoic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship type</td>
<td>3</td>
</tr>
<tr>
<td>Pollution category</td>
<td>Y</td>
</tr>
</tbody>
</table>

ADR/RID Not restricted

SECTION 15: Regulatory information

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

Regulation 1272/2008, Annex VI not listed***
SAFETY DATA SHEET

Isononanoic acid
10310

DI 2012/18/EU (Seveso III)
Category
not subject

DI 1999/13/EC (VOC Guideline)

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,5,5-Trimethylhexanoic acid</td>
<td>not subject</td>
</tr>
<tr>
<td>CAS: 3302-10-1</td>
<td></td>
</tr>
</tbody>
</table>

International Inventories

3,5,5-Trimethylhexanoic acid, CAS: 3302-10-1
AICS (AU)***
DSL (CA)***
IECSC (CN)***
EC-No. 2219750 (EU)***
ENCS (2)-608 (JP)***
ISHL (2)-608 (JP)***
KECI KE-34559 (KR)***
PICCS (PH)***
TSCA (US)***
NZIoC-NZ May be used as single component chemical***
TCSI (TW)***

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3
H302: Harmful if swallowed.
H315: Causes skin irritation.
H318: Causes serious eye damage.

Abbreviations
A table of terms and abbreviations can be found under the following link:

Training advice
For effective first-aid, special training / education is needed.

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Oxea owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

Further information for the safety data sheet
Changes against the previous version are marked by ***. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the Oxea homepage (www.oxea-chemicals.com).

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substances. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

End of Safety Data Sheet