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

1.1 Product identifier

Product name: EMPIRE
Product description: Alkyd paint.

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

Recommended use: Painting work

1.3 Details of the supplier of the safety data sheet

Manufacturer or Distributor
Tikkurila Oyj
P.O. Box 53
FI-01301 VANTAA
FINLAND
Telephone +358 20 191 2000

E-mail address of person responsible for this SDS: Tikkurila Oyj, Product Safety, e-mail: productsafety@tikkurila.com

1.4 Emergency telephone number

Telephone number: 112 (24h)

Supplier or Manufacturer
Telephone number: Tikkurila Oyj +358 20 191 2000 (GMT +2) Mon-Fri 8-16

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Flam. Liq. 3, H226
STOT SE 3, H336

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2 Label elements

Hazard pictograms:

--- symbols ---

Signal word: Warning
Hazard statements: H226 - Flammable liquid and vapor.
H336 - May cause drowsiness or dizziness.

Precautionary statements
General: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
Prevention: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing mist/vapors/spray. P271 - Use only outdoors or in a well-ventilated area.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Hazardous ingredients: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Supplemental label elements: Contains ethyl methyl ketoxime. May produce an allergic reaction.

Wear protective gloves.

2.3 Other hazards

Other hazards which do not result in classification: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures: Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, &lt;2% aromatics</td>
<td>REACH #: 01-2119463258-33 EC: 919-857-5 CAS: -</td>
<td>≥25 - ≤50</td>
<td>Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066</td>
<td>-</td>
</tr>
<tr>
<td>2-ethylhexanoic acid, zirconium salt</td>
<td>REACH #: 01-2119979088-21 EC: 245-018-1 CAS: 22464-99-9</td>
<td>≤0.3</td>
<td>Repr. 2, H361d (Unborn child)</td>
<td>-</td>
</tr>
<tr>
<td>Ethyl methyl ketoxime</td>
<td>REACH #: 01-2119539477-28 EC: 202-496-6 CAS: 96-29-7 Index: 616-014-00-0</td>
<td>≤0.3</td>
<td>Acute Tox. 4, H312 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351 See Section 16 for the full text of the H statements declared above.</td>
<td>-</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Notes, if applicable, refer to Notes given in Annex VI of 1272/2008/EC.

SECTION 4: First aid measures

4.1 Description of first aid measures

General: In all cases of doubt, or when symptoms persist, seek medical attention. Show this safety data sheet or label to the doctor if possible.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of lukewarm water, keeping eyelids open. Continue to rinse for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion : If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Remove to fresh air and keep at rest in a position comfortable for breathing. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed
May cause drowsiness or dizziness.
See Section 11 for more detailed information on health effects and symptoms.

Contains:
ethyl methyl ketoxime
May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed
None.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire. Recommended: Alcohol resistant foam, CO₂, powders or water spray/mist.

Unsuitable extinguishing media : Do not use a direct water jet that could spread the fire.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products : When exposed to high temperatures, hazardous decomposition products may be produced, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

5.3 Advice for firefighters
Special protective actions for fire-fighters : Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Do not release runoff from fire to drains or watercourses.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures : Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Avoid breathing vapor or mist. Avoid direct skin contact with product. See Section 8 for information on appropriate personal protective equipment.

6.2 Environmental precautions : Do not allow to enter drains, water courses or soil.

6.3 Methods and materials for containment and cleaning up : 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. Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.

Version : 3
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. Isolate from sources of heat, sparks and open flame. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically; always use earthing leads when transferring from one container to another. No sparking tools should be used.

Skin contact with the product and exposure to spray mist and vapor should be avoided. Avoid contact with skin and eyes. Avoid inhalation of dust from sanding. Wear appropriate respirator when ventilation is inadequate. See Section 8 for information on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored. Wash hands before breaks and immediately after handling the product.

Risk of self-ignition! Materials such as cleaning rags and paper wipes, sanding dust and overspray containing the product, may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed or dried preferably outdoors or incinerated immediately. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

7.2 Conditions for safe storage, including any incompatibilities

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store and use away from heat, sparks, open flame or any other ignition source. No smoking. Keep container tightly closed. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature is +5°C ...+25°C. Store in accordance with local regulations.

7.3 Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
No exposure limit value known.

Recommended monitoring procedures
If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNELs/DMELs
No DNELs/DMELs available.

PNECs
No PNECs available.

8.2 Exposure controls

Appropriate engineering controls
Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Use explosion-proof ventilation equipment. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn (see Personal protection). Comply with the health and safety at work laws.

Individual protection measures
Eye/face protection
Use safety eyewear designed to protect against splash of liquids (EN166).
Hand protection : Wear protective gloves. Gloves should be replaced regularly and if there is any sign of damage to the glove material. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Recommended glove material (EN374):
> 8 hours (breakthrough time): nitrile rubber, laminated foil

Skin protection : Wear suitable protective clothing. This product is classified as flammable. If necessary, personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

Respiratory protection : If ventilation is inadequate, use respirator that will protect against organic vapor and dust/mist. During spray-application use respirators with combination filter A/P3 (EN405:2001). Wear a half mask or full face respirator with gas and vapor filter A and dust filter P2 during sanding (EN140:1998, EN405:2001). During continuous and long-term work the use of motor-driven or air-fed respirators is recommended (EN12941:1998). Be sure to use an approved/certified respirator or equivalent. Check that mask fits tightly and change filter regularly.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
- Physical state : Liquid.
- Color : Various
- Odor : Strong.
- Odor threshold : Not relevant for the hazard assessment of the product.
- pH : Not relevant for the hazard assessment of the product.

Physical state
- Melting point/freezing point : ≤15°C (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Initial boiling point and boiling range : 150 to 200°C (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Flash point : 36 °C (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Evaporation rate : Not relevant due to the nature of the product.
- Flammability (solid, gas) : Not applicable. Product is a liquid.
- Upper/lower flammability or explosive limits : Lower: 0.6% (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
  Upper: 7% (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Vapor pressure : 0.3 kPa [room temperature] (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Vapor density : >3 (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
- Density : To 1.2 g/cm³
- Solubility(ies) : Insoluble in water.

Partition coefficient: n-octanol/water
- Not available.

Auto-ignition temperature : 250°C (hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
Decomposition temperature : Not relevant for the hazard assessment of the product.
Viscosity
- Kinematic (40°C): >20.5 mm²/s
  >60 s [ISO 6mm cup]

Explosive properties : No explosive ingredients present.
Oxidizing properties : No oxidizing ingredients present.

9.2 Other information
No additional information.
SECTION 10: Stability and reactivity

10.1 Reactivity  
See Section 10.5.

10.2 Chemical stability  
Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions  
May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.

10.4 Conditions to avoid  
Avoid extreme heat and freezing. Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials  
Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong acids, strong alkalis.

10.6 Hazardous decomposition products  
When exposed to high temperatures, hazardous decomposition products may be produced, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There is no testdata available on the product itself. The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting.

Acute toxicity  
Not classified.

Irritation/Corrosion  
Not classified.

Sensitization  
Contains small amounts of sensitizing substances: ethyl methyl ketoxime.

Mutagenicity  
Not classified.

Carcinogenicity  
Not classified.

Reproductive toxicity  
Not classified.

Teratogenicity  
Not classified.

Specific target organ toxicity (single exposure)  
May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)  
Not classified.

Aspiration hazard  
Not classified.
**SECTION 12: Ecological information**

Ecological testing has not been conducted on this product. Do not allow to enter drains, water courses or soil.

The product is not classified as environmentally hazardous according to Regulation (EC) 1272/2008.

12.1 Toxicity : No specific data.

12.2 Persistence and degradability : No specific data.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>Bioconcentration factor [BCF]</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl methyl ketoxime</td>
<td>0.63</td>
<td>2.5 to 5.8</td>
<td>low</td>
</tr>
<tr>
<td>2-ethylhexanoic acid, zirconium salt</td>
<td>-</td>
<td>2.96</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : Not available.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

**Product**

Methods of disposal : Remove as much product as possible from the tools before cleaning. Liquid residue and cleaning liquids are hazardous waste and must not be emptied into drains or sewage system, but handled in accordance with national regulations. Product residues should be left at special companies which have permission for gathering this kind of wastes.

**European waste catalogue (EWC)**

<table>
<thead>
<tr>
<th>Waste code</th>
<th>Waste designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 01 11*</td>
<td>waste paint and varnish containing organic solvents or other hazardous substances</td>
</tr>
</tbody>
</table>

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

**Packaging**

Methods of disposal : Empty packaging should be recycled or disposed of in accordance with national regulations.

Special precautions : **Risk of self-ignition!** Materials such as cleaning rags and paper wipes, sanding dust and overspray containing the product, may spontaneously self-ignite some hours later. To avoid the risks of fires, waste like this should be placed in a metal container filled with water and sealed before disposal, or dried preferably outdoors or incinerated immediately.
SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1263</td>
<td>UN1263</td>
<td>UN1263</td>
<td></td>
</tr>
</tbody>
</table>

| 14.2 UN proper | ADR/RID | IMDG | IATA |
| shipping name  |         |      |      |
| PAINT          | PAINT   | PAINT |

| 14.3 Transport | ADR/RID | IMDG | IATA |
| hazard class(es)|   |      |      |
| 3               | 3      | 3    |

<table>
<thead>
<tr>
<th>14.4 Packing group</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>III</td>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.5 Environmental hazards</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td></td>
</tr>
</tbody>
</table>

Additional information

**ADR/RID**  : Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1. Tunnel code (D/E)

**IMDG** : Emergency schedules F-E,S-E Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.

14.6 Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Other EU regulations

Europe inventory: At least one component is not listed.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Carcinogenic effects</th>
<th>Mutagenic effects</th>
<th>Developmental effects</th>
<th>Fertility effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ethylhexanoic acid, zirconium salt ethyl methyl ketoxime</td>
<td>-</td>
<td>-</td>
<td>Repr. 2, H361d (Unborn child)</td>
<td>-</td>
</tr>
<tr>
<td>Carc. 2, H351</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment: This product contains substances for which Chemical Safety Assessments are still required.
## SECTION 16: Other information

- Indicates information that has changed from previously issued version.

### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>CLP</td>
<td>Classification, Labelling and 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>
<tr>
<td>EUH statement</td>
<td>CLP-specific Hazard statement</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>RRN</td>
<td>REACH Registration Number</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and Very Bioaccumulative</td>
</tr>
</tbody>
</table>

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

#### Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3, H226</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

#### Full text of abbreviated H statements

<table>
<thead>
<tr>
<th>H226</th>
<th>Flammable liquid and vapor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H361d</td>
<td>Suspected of damaging the unborn child.</td>
</tr>
</tbody>
</table>

#### Full text of classifications [CLP/GHS]

| Acute Tox. 4, H312 | ACUTE TOXICITY (dermal) - Category 4 |
| Asp. Tox. 1, H304 | ASPIRATION HAZARD - Category 1 |
| Carc. 2, H351 | CARCINOGENICITY - Category 2 |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Flam. Liq. 3, H226 | FLAMMABLE LIQUIDS - Category 3 |
| Repr. 2, H361d | TOXIC TO REPRODUCTION (Unborn child) - Category 2 |
| Skin Sens. 1, H317 | SKIN SENSITIZATION - Category 1 |
| STOT SE 3, H336 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |

### Notice to reader

This Safety Data Sheet is prepared in accordance with Annex II (EU) No 830/2015 to Regulation (EC) No 1907/2006 (REACH). The information contained in this Safety Data Sheet is based on the present state of knowledge and current EU and national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.