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

1.1 Product identifier
Product name: Liquid Driers
Product description: Additive
Product type: Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

1.3 Details of the supplier of the safety data sheet
Blackfriar Paints Ltd
Portobello Industrial Estate
Birtley
County Durham
United Kingdom
DH3 2RE
Telephone no.: +44 (0) 191 4106611
Fax no.: +44 (0) 191 4920125
e-mail address of person responsible for this SDS: rpmeurohas@ro-m.com

1.4 Emergency telephone number
Telephone number: +44 (0) 207 858 1228
Hours of operation: 24 / 7

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
Skin Irrit. 2, H315
Skin Sens. 1, H317
STOT SE 3, H336
Aquatic Chronic 3, H412
Classification according to Directive 1999/45/EC [DPD]
The product is classified as dangerous according to Directive 1999/45/EC and its amendments.
Classification: R10
Xn; R65
R43, R66, R67
N; R51/53
Physical/chemical hazards: Flammable.
Human health hazards: Harmful: may cause lung damage if swallowed. May cause sensitisation by skin contact. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
Environmental hazards: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Date of issue/Date of revision: 16-07-2013
Date of previous issue: No previous validation
Version: 1
SECTION 2: Hazards identification

See Section 16 for the full text of the R phrases or H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:
- Flammable liquid and vapour.
- May cause an allergic skin reaction.
- May be fatal if swallowed and enters airways.
- May cause drowsiness or dizziness.
- Harmful to aquatic life with long lasting effects.

Precautionary statements:

General:
- Keep out of reach of children. Read label before use. If medical advice is needed, have product container or label at hand.

Prevention:
- Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Avoid breathing vapour. Wear protective gloves: nitrile rubber (EN 374).

Response:
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF SWALLOWED: Immediately call a doctor. Do NOT induce vomiting.

Storage:
- Store in a well-ventilated place. Keep cool. Store locked up.

Disposal:
- Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
- Repeated exposure may cause skin dryness or cracking.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:
- Not applicable.

Special packaging requirements:
- Containers to be fitted with child-resistant fastenings:
- Not applicable.
- Tactile warning of danger:
- Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

Substance/mixture:
- Mixture
### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-iso/cyclo-alkanes, &lt; 2% aromatics</td>
<td>REACH #: 01-2119463258-33 EC: 265-150-3 CAS: 64742-48-9 Index: 649-327-00-6</td>
<td>75 - &lt;90</td>
<td>R10 \n Xn; R65 \n R66, R67</td>
<td>Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>neodecanoic acid, cobalt salt</td>
<td>EC: 248-373-0 CAS: 27253-31-2</td>
<td>7 - &lt;10</td>
<td>Xn; R22 \n Xi; R38 \n R43 \n N; R51/53 \n Xn; R65 \n R66</td>
<td>Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>hydrocarbons, C10-C13, n-iso/cyclo-alkanes, &lt; 2% aromatics</td>
<td>REACH #: 01-2119457273-39 EC: 265-150-3 CAS: 64742-48-9 Index: 649-327-00-6</td>
<td>&lt;10</td>
<td>R65 \n R66</td>
<td></td>
</tr>
<tr>
<td>2-ethylhexanoic acid, zirconium salt</td>
<td>EC: 245-018-1 CAS: 22464-99-9</td>
<td>1 - &lt;5</td>
<td>Repr. Cat. 3; R63 \n Xi; R38 See Section 16 for the full text of the R-phrases declared above.</td>
<td>Skin Irrit. 2, H315 Repr. 2, H361fd See Section 16 for the full text of the H statements declared above.</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

**Type**
- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [5] Substance of equivalent concern

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

### 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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

**Eye contact**
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

**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.

**Skin contact**
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

**Ingestion**
If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

**Protection of first-aiders**
No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

#### 4.2 Most important symptoms and effects, both acute and delayed
SECTION 4: First aid measures

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour 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.

Solvents may cause some of the above effects by absorption through the skin. 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, diarrhoea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains neodecanoic acid, cobalt salt. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters: Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters: Appropriate breathing apparatus may be required.

Additional information: No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

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SECTION 6: Accidental release measures

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 (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling: Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. 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. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

Information on fire and explosion protection
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations.

Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations: Not available.

Industrial sector specific solutions: Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
Liquid Driers

SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 850 mg/m³, (as turpentine) 15 minutes. Form: Vapour TWA: 566 mg/m³, (as turpentine (100 ppm)) 8 hours. Form: Vapour</td>
</tr>
<tr>
<td>neodecanoic acid, cobalt salt</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitisier. TWA: 0.1 mg/m³, (as Co) 8 hours.</td>
</tr>
<tr>
<td>hydrocarbons, C10-C13, n-/iso-/cyclo-alkanes, &lt; 2% aromatics</td>
<td>EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 850 mg/m³, (as turpentine) 15 minutes. Form: Vapour TWA: 566 mg/m³, (as turpentine (100 ppm)) 8 hours. Form: Vapour</td>
</tr>
<tr>
<td>2-ethylhexanoic acid, zirconium salt</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 10 mg/m³, (as Zr) 15 minutes. TWA: 5 mg/m³, (as Zr) 8 hours.</td>
</tr>
</tbody>
</table>

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

**DNELs/DMELs**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>208 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>871 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Oral, Dermal</td>
<td>125 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>185 mg/m³</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
</tbody>
</table>

**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. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

**Individual protection measures**

**Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**: Safety glasses with side shields. (EN166)

**Skin protection**

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

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

**Gloves**  
For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user’s risk assessment.

**Body protection**  
Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres. (EN 1149-1)

**Other skin protection**  
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**  
If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter (Type A) (EN 141)

**Environmental exposure controls**  
Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**  
Liquid.

**Colour**  
Purple.

**Odour**  
Hydrocarbon.

**pH**  
Not available.

**Melting point/freezing point**  
Not available.

**Initial boiling point and boiling range**  
Not available.

**Flash point**  
Closed cup: 37°C

**Evaporation rate**  
Not available.

**Flammability (solid, gas)**  
Not available.

**Burning time**  
Not applicable.

**Burning rate**  
Not applicable.

**Upper/lower flammability or explosive limits**  
Lower: 0.6%

Upper: 8%

**Vapour pressure**  
Not available.

**Vapour density**  
>1 [Air = 1]

**Relative density**  
0.8 to 0.81

**Solubility(ies)**  
Insoluble in the following materials: cold water and hot water.
SECTION 9: Physical and chemical properties

Solubility in water : Not available.
Partition coefficient: n-octanol/water : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Not available.
Explosive properties : Not available.
Oxidising properties : Not available.

9.2 Other information
No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO2 and smoke can be generated.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour 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. Solvents may cause some of the above effects by absorption through the skin. 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. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains neodecanoic acid, cobalt salt. May produce an allergic reaction.

Acute toxicity
### Liquid Driers

#### SECTION 11: Toxicological information

**Product/ingredient name** | **Result** | **Species** | **Dose** | **Exposure**
--- | --- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | LC50 Inhalation Vapour | Rat | 8500 mg/m³ | 4 hours
hydrocarbons, C10-C13, n-/ iso-/ cyclo-alkanes, < 2% aromatics | LC50 Inhalation Vapour | Rat | >5000 mg/kg | -
2-ethylhexanoic acid, zirconium salt | LD50 Dermal | Rat | >3000 mg/kg | -
2-ethylhexanoic acid, zirconium salt | LD50 Oral | Rat | >5 g/kg | -

**Conclusion/Summary** : Not available.

### Acute toxicity estimates

Not available.

### Irritation/Corrosion

**Product/ingredient name** | **Result** | **Species** | **Score** | **Exposure** | **Observation**
--- | --- | --- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Skin - Oedema | Rabbit | 1 | - | -
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Skin - Erythema/Eschar | Rabbit | 2.67 | - | -
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Eyes - Cornea opacity | Rabbit | 0 | - | -

**Conclusion/Summary** : Not available.

### Sensitisation

**Product/ingredient name** | **Route of exposure** | **Species** | **Result**
--- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | skin | Rabbit | Not sensitizing

**Conclusion/Summary** : Not available.

### Mutagenicity

**Product/ingredient name** | **Test** | **Experiment** | **Result**
--- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | OECD 473, 474, 476 | Subject: Mammalian-Animal | Negative

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Product/ingredient name** | **Result** | **Species** | **Dose** | **Exposure**
--- | --- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Negative - Inhalation - TC | Rat | - | -

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Product/ingredient name** | **Maternal toxicity** | **Fertility** | **Developmental toxin** | **Species** | **Dose** | **Exposure**
--- | --- | --- | --- | --- | --- | ---
hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | - | - | Negative | Rat - Female | Oral | -

**Conclusion/Summary** : Not available.

**Date of issue/Date of revision** : 16-07-2013. **Date of previous issue** : No previous validation. **Version** : 1
SECTION 11: Toxicological information

Teratogenicity

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>hydrocarbons, C10-C13, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Other information: Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>Acute EC50 &gt;1000 mg/l</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 &gt;1000 mg/l</td>
<td>Daphnia spec.</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 &gt;1000 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.23 mg/l</td>
<td>Daphnia spec.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.131 mg/l</td>
<td>Fish</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 &gt;1000 mg/l</td>
<td>Daphnia spec.</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>Acute IC50 &gt;1000 mg/l</td>
<td>Algae</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;1000 mg/l</td>
<td>Fish</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>OECD 301B</td>
<td>&gt;80 % - Readily - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>OECD 301F</td>
<td>&gt;80 % - Readily - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>-</td>
<td>100%; &lt; 28 day(s)</td>
<td>Readily</td>
</tr>
<tr>
<td>hydrocarbons, C10-C13, n-/iso-/ cyclo-alkanes, &lt; 2% aromatics</td>
<td>Fresh water &lt;28 days</td>
<td>80%; &lt; 28 day(s)</td>
<td>Readily</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 16-07-2013. Date of previous issue: No previous validation. Version: 1 10/14.
SECTION 12: Ecological information

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrocarbons, C9-C11, n-/iso-/cyclo-alkanes, &lt; 2% aromatics</td>
<td>5 to 6.5</td>
<td>-</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

- Soil/water partition coefficient (K<sub>OC</sub>) : Not available.
- Mobility : Not available.

12.5 Results of PBT and vPvB assessment

- PBT : Not applicable.
- vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product
  - Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional/local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
  - Hazardous waste : Yes.
  - Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. 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.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

<table>
<thead>
<tr>
<th>Waste code</th>
<th>Waste designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 02 14*</td>
<td>wastes from additives containing dangerous substances</td>
</tr>
</tbody>
</table>

Packaging

- Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Not emptied containers are hazardous waste.
SECTION 13: Disposal considerations

**Special precautions**: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.1 UN number</strong></td>
<td>UN1993</td>
<td>UN1993</td>
<td>UN1993</td>
</tr>
<tr>
<td><strong>14.2 UN proper shipping name</strong></td>
<td>Flammable liquid n.o.s. [hydrocarbons, C9-C11, n-/iso-/cyclo-alkanes, &lt; 2% aromatics]</td>
<td>Flammable liquid n.o.s. [hydrocarbons, C9-C12, n-/iso-/cyclo-alkanes, &lt; 2% aromatics]</td>
<td>Flammable liquid n.o.s. [hydrocarbons, C9-C12, n-/iso-/cyclo-alkanes, &lt; 2% aromatics]</td>
</tr>
<tr>
<td><strong>14.3 Transport hazard class(es)</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>14.4 Packing group</strong></td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td><strong>14.5 Environmental hazards</strong></td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Additional information**

- **Limited quantity**: LQ7
- **Emergency schedules (EmS)**: F-E + S-E
- **Marine pollutant**: NO
- **Remarks**: (< 5L: ) Limited Quantity - ADR/IMDG 3.4.6
- **Passenger and Cargo Aircraft**
  - **Quantity limitation**: 60 L
  - **Packaging instructions**: 355
- **Cargo Aircraft Only**
  - **Quantity limitation**: 220 L
  - **Packaging instructions**: 366
- **Limited Quantities - Passenger Aircraft**
  - **Quantity limitation**: 10 L
  - **Packaging instructions**: Y 344

**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.

SECTION 15: Regulatory information

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

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

**CN code**: 3211 00 00

**EU Regulation (EC) No. 1907/2006 (REACH)**

- **Annex XIV - List of substances subject to authorisation**
- **Annex XIV**
  - None of the components are listed.
- **Substances of very high concern**
  - None of the components are listed.

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**Date of previous issue**: No previous validation

**Version**: 1
SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not applicable.

Other EU regulations

VOC for Ready-for-Use Mixture: Exempt

Europe inventory: All components are listed or exempted.

<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</td>
<td>-</td>
<td>-</td>
<td>Repr. 2, H361d</td>
<td>Repr. 2, H361f</td>
</tr>
</tbody>
</table>

National regulations

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>List name</th>
<th>Name on list</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>neodecanoic acid, cobalt salt</td>
<td>UK Occupational Exposure Limits EH40 - WEL</td>
<td>cobalt compounds</td>
<td>Carc.</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

Abbreviations and acronyms:

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3, H226</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H336 May cause drowsiness or dizziness.
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
### SECTION 16: Other information

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10</td>
<td>Flammable</td>
</tr>
<tr>
<td>R63</td>
<td>Possible risk of harm to the unborn child.</td>
</tr>
<tr>
<td>R22</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>R65</td>
<td>Harmful: may cause lung damage if swallowed.</td>
</tr>
<tr>
<td>R38</td>
<td>Irritating to skin.</td>
</tr>
<tr>
<td>R43</td>
<td>May cause sensitisation by skin contact.</td>
</tr>
<tr>
<td>R66</td>
<td>Repeated exposure may cause skin dryness or cracking.</td>
</tr>
<tr>
<td>R51/53</td>
<td>Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
</tr>
<tr>
<td>Acute Tox. 4, H302</td>
<td>ACUTE TOXICITY: ORAL - Category 4</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>AQUATIC TOXICITY (CHRONIC) - Category 2</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>AQUATIC TOXICITY (CHRONIC) - Category 3</td>
</tr>
<tr>
<td>Asp. Tox. 1, H304</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Flam. Liq. 3, H226</td>
<td>FLAMMABLE LIQUIDS - Category 3</td>
</tr>
<tr>
<td>Repr. 2, H361fd</td>
<td>TOXIC TO REPRODUCTION [Fertility and Unborn child] - Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>SKIN SENSITIZATION - Category 1</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3</td>
</tr>
</tbody>
</table>

**Full text of abbreviated R phrases**

- R10- Flammable.
- R63- Possible risk of harm to the unborn child.
- R22- Harmful if swallowed.
- R65- Harmful: may cause lung damage if swallowed.
- R38- Irritating to skin.
- R43- May cause sensitisation by skin contact.
- R66- Repeated exposure may cause skin dryness or cracking.
- R51- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R67- Vapours may cause drowsiness and dizziness.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Full text of classifications [DSD/DPD]**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repr. Cat. 3 - Toxic to reproduction category 3</td>
<td></td>
</tr>
<tr>
<td>Xn - Harmful</td>
<td></td>
</tr>
<tr>
<td>Xi - Irritant</td>
<td></td>
</tr>
<tr>
<td>N - Dangerous for the environment</td>
<td></td>
</tr>
</tbody>
</table>

**Notice to reader**

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product’s properties.