# SAFETY DATA SHEET

## Stadis (R) 450

### 1. Identification of the substance/preparation and company/undertaking

**Identification of the substance or preparation**

- **Product name**: Stadis (R) 450
- **Product code**: 10101

**Company/undertaking identification**

- **Supplier**: Innospec Limited
  Innospec Manufacturing Park
  Oil Sites Road
  Ellesmere Port
  Cheshire CH65 4EY
  United Kingdom

- **Telephone no.**: +44 (0)151 355 3611
- **Fax no.**: +44 (0)151 356 2349
- **Emergency telephone number of the company**: +44 (0)151 355 3611

See section 16.

### 2. Composition/information on ingredients

**Substance/preparation**: Preparation

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>%</th>
<th>EC number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>30 - 60</td>
<td>203-625-9</td>
<td>F; R11 Repr. Cat. 3; R63 Xn; R48/20, R65 Xi; R38 R67</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy aromatic.</td>
<td>64742-94-5</td>
<td>14.99 - 30</td>
<td>265-198-5</td>
<td>Xn; R65 R66 N; R51/53 Xi; R38, R41</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>0.99 - 4.99</td>
<td>200-661-7</td>
<td>F; R11 Xi; R36 R67</td>
</tr>
<tr>
<td>naphthalene</td>
<td>91-20-3</td>
<td>0.099 - 0.99</td>
<td>202-049-5</td>
<td>Carc. Cat. 3; R40 Xn; R22 N; R50/53 R10 Xn; R20 Xi; R36/37/38</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>95-63-6</td>
<td>0.099 - 0.99</td>
<td>202-436-9</td>
<td></td>
</tr>
</tbody>
</table>

Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC - United Kingdom (UK)

Date of issue: November 30, 2006
2. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>SDS Number</th>
<th>R-phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>0.099 - 0.99</td>
<td>200-659-6</td>
</tr>
</tbody>
</table>

See section 16 for the full text of the R-phrases declared above.

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

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification**

- F; R11
- Repr. Cat. 3; R63
- Xn; R48/20, R65
- Xi; R41
- R66, R67
- R52/53

**Physical/chemical hazards**

- Highly flammable.

**Human health hazards**

- Risk of serious damage to eyes.
- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- Possible risk of harm to the unborn child.
- Harmful: may cause lung damage if swallowed.
- Repeated exposure may cause skin dryness or cracking.
- Vapours may cause drowsiness and dizziness.

**Environmental hazards**

- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

4. First-aid measures

**First-aid measures**

**Inhalation**

- Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Ingestion**

- Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

- Wash skin thoroughly with soap and water or use recognised skin cleanser. Get medical attention if irritation occurs. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Eye contact**

- Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.

**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.

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

Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC - United Kingdom (UK)

Date of issue: November 30, 2006
5. Fire-fighting measures

Extinguishing media

Suitable: Use dry chemical, CO2, water spray (fog) or foam.

Not suitable: Do not use water jet.

Special exposure hazards: Highly flammable liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2 etc.), sulphur oxides (SO2, SO3, etc.).

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.

6. Accidental release measures

Personal precautions: Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilt material.

Environmental precautions: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up: If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dyke spilt material or otherwise contain material to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal.

7. Handling and storage

Handling: Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not ingest. If ingested, do not induce vomiting. Avoid contact with eyes. Keep container closed. Use only with adequate ventilation. Avoid breathing vapour or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Avoid contact of spilt material and runoff with soil and surface waterways. Wash thoroughly after handling.

Storage: Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Packaging materials

Recommended: Use original container.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Occupational exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>EH40-WEL (United Kingdom (UK), 1/2005). Skin</td>
</tr>
<tr>
<td></td>
<td>STEL: 574 mg/m³ 15 minute/minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 150 ppm 15 minute/minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 191 mg/m³ 8 hour/hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 50 ppm 8 hour/hours.</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy aromatic.</td>
<td>Innospec Inc. (Europe, 2006).</td>
</tr>
<tr>
<td></td>
<td>TWA: 100 mg/m³ 8 hour/hours.</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>EH40-WEL (United Kingdom (UK), 1/2005).</td>
</tr>
<tr>
<td></td>
<td>STEL: 1250 mg/m³ 15 minute/minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 500 ppm 15 minute/minutes.</td>
</tr>
<tr>
<td></td>
<td>TWA: 999 mg/m³ 8 hour/hours.</td>
</tr>
</tbody>
</table>
### 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA: 400 ppm 8 hour/hours. EU OEL (Europe, 2/2006). Notes: Indicative TWA: 50 mg/m³ 8 hour/hours. TWA: 10 ppm 8 hour/hours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>naphthalene</td>
<td><strong>EH40-WEL (United Kingdom (UK), 1/2005).</strong> TWA: 125 mg/m³ 8 hour/hours. TWA: 25 ppm 8 hour/hours.</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td><strong>EH40-WEL (United Kingdom (UK), 1/2005).</strong> TWA: 125 mg/m³ 8 hour/hours. TWA: 25 ppm 8 hour/hours.</td>
</tr>
<tr>
<td>methanol</td>
<td><strong>EH40-WEL (United Kingdom (UK), 1/2005). Skin</strong> STEL: 333 mg/m³ 15 minute/minutes. STEL: 250 ppm 15 minute/minutes. TWA: 266 mg/m³ 8 hour/hours. TWA: 200 ppm 8 hour/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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

**Exposure controls**

**Occupational exposure controls**: Use only with adequate ventilation. If user operations generate dust, fumes, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Respiratory protection**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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: full-face mask organic vapour filter (Type A)

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 

>8 hour/hours (breakthrough time): Viton; <1 hour/hours (breakthrough time): nitrile rubber, polyvinyl alcohol (PVA)

**Eye protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles

**Skin protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
9. **Physical and chemical properties**

**General information**

**Appearance**
- Physical state: Liquid. (Clear.)
- Colour: Amber. (Dark.)
- Odour: Aromatic.
- Odour threshold: The lowest known value is 1.74 ppm (toluene)

**Important health, safety and environmental information**

- **Boiling point**: 90°C (194°F)
- **Melting point**: May start to solidify at <-20°C (-4°F) based on data for: solvent naphtha (petroleum), heavy aromatic. Weighted average: -70.37°C (-94.7°F)
- **Pour point**: <-39°C
- **Flash point**: Closed cup: 6°C (42.8°F). (Pensky-Martens. ASTM D93)
- **Explosion limits**: The greatest known range is Lower: 2.3% Upper: 12.7% (propan-2-ol)
- **Vapour pressure**: <6.2 kPa (<46.5 mm Hg) (at 20°C)
- **Density**: 0.92 g/cm³ (15°C / 59°F)
- **Solubility**: Insoluble in cold water, hot water.
- **Viscosity**: Dynamic: >7 cP
  Kinematic: >7 cSt
  Kinematic (40°C): 6.9 cSt

- **Vapour density**: The highest known value is 4.6 to 5.5 (Air = 1) (solvent naphtha (petroleum), heavy aromatic.). Weighted average: 3.72 (Air = 1)
- **Evaporation rate (butyl acetate = 1)**: The highest known value is 2 (toluene) Weighted average: 1.37 compared with Butyl acetate.
- **Auto-ignition temperature**: The lowest known value is 399°C (750.2°F) (propan-2-ol).

10. **Stability and reactivity**

- **Stability**: The product is stable.
- **Materials to avoid**: Highly reactive or incompatible with the following materials: oxidizing materials.

11. **Toxicological information**

**Potential acute health effects**

- **Inhalation**: Harmful by inhalation.
- **Ingestion**: Aspiration hazard if swallowed. Can enter lungs and cause damage.
- **Skin contact**: Slightly irritating to the skin.
- **Eye contact**: Severely irritating to eyes.

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Route</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>LD50</td>
<td>636 mg/kg</td>
<td>Oral</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>LDL0</td>
<td>50 mg/kg</td>
<td>Oral</td>
<td>human</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>26700 ppm (1 hour/hours)</td>
<td>Inhalation</td>
<td>Rat</td>
</tr>
</tbody>
</table>

| solvent naphtha (petroleum), heavy aromatic. | LD50 | >2000 mg/kg | Oral | Rat |
| naphthalenesulfonic acid, dinonyl-propan-2-ol | LD50 | >2000 mg/kg | Oral | Rat |

| naphthalene | LD50 | 490 mg/kg  | Oral | Rat |
|            | LD50 | 316 mg/kg  | Oral | Mouse |
## 11. Toxicological information

### Inhalation

- **Harmful**: danger of serious damage to health by prolonged exposure through inhalation.

### Over-exposure signs/symptoms

- **LD50**: 1200 mg/kg Oral Guinea pig
- **LD50**: >2500 mg/kg Dermal Rat
- **LD50**: >2000 mg/kg Dermal Rabbit
- **LDLo**: 400 mg/kg Oral child
- **LC50**: >340 mg/m³ (1 hour/hours) Inhalation Rat

### 1,2,4-trimethylbenzene

- **LD50**: 6900 mg/kg Oral Mouse
- **LD50**: 5628 mg/kg Oral Rat
- **LD50**: 14200 mg/kg Oral Rabbit
- **LD50**: 7300 mg/kg Oral Mouse
- **LD50**: 15800 mg/kg Dermal Rabbit
- **LDLo**: 143 mg/kg Oral human
- **LDLo**: 428 mg/kg Oral human
- **LDLo**: 6422 mg/kg Oral man
- **LDLo**: 393 mg/kg Dermal Monkey

### Ecological information

### Ecotoxicity data

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Species</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stadis (R) 450</td>
<td>Minnows (LC50)</td>
<td>96 hour/hours</td>
<td>12 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>6 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>6.56 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (EC50)</td>
<td>48 hour/hours</td>
<td>6.78 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (LC50)</td>
<td>96 hour/hours</td>
<td>5.8 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (LC50)</td>
<td>96 hour/hours</td>
<td>6.78 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>12.6 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fish (LC50)</td>
<td>96 hour/hours</td>
<td>1 to 10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>1 to 10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Algae (IC50)</td>
<td>72 hour/hours</td>
<td>1 to 10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (EC50)</td>
<td>48 hour/hours</td>
<td>10000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Lepomis macrourus (LC50)</td>
<td>96 hour/hours</td>
<td>&gt;1400 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>6550 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>9640 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>10400 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>11130 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>1.6 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>2.194 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>2.55 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia pulex (LC50)</td>
<td>96 hour/hours</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (LC50)</td>
<td>96 hour/hours</td>
<td>1.6 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (LC50)</td>
<td>96 hour/hours</td>
<td>1.8 mg/l</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (LC50)</td>
<td>96 hour/hours</td>
<td>7.72 mg/l</td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (EC50)</td>
<td>48 hour/hours</td>
<td>&gt;10000 mg/l</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (EC50)</td>
<td>48 hour/hours</td>
<td>13200 mg/l</td>
</tr>
</tbody>
</table>

### Carcinogenicity

- No known significant effects or critical hazards.

### Mutagenicity

- No known significant effects or critical hazards.

### Reproductive toxicity

- Contains material which may cause birth defects based, on animal data.

### Inhalation

- Harmful: danger of serious damage to health by prolonged exposure through inhalation.

### Target organs

- Contains material which causes damage to the following organs: kidneys, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
### 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>48 hour/hours</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy aromatic.</td>
<td>96 hour/hours</td>
<td>-</td>
<td>Inherent</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>96 hour/hours</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

#### Other ecological information

**Persistence/degradability**

<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>toluene</td>
<td>2.65</td>
<td>&lt;100</td>
<td>low</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy aromatic.</td>
<td>&gt;3</td>
<td>&lt;100</td>
<td>high</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>0.05</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>4.09</td>
<td>-</td>
<td>high</td>
</tr>
</tbody>
</table>

#### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>low</td>
</tr>
<tr>
<td>solvent naphtha (petroleum), heavy aromatic.</td>
<td>high</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>low</td>
</tr>
<tr>
<td>1,2,4-trimethylbenzene</td>
<td>high</td>
</tr>
</tbody>
</table>

Other adverse effects: Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### 13. Disposal considerations

#### Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. 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.

#### Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.

### 14. Transport information

#### International transport regulations

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Class</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR/RID Class</td>
<td>UN1993</td>
<td>FLAMMABLE LIQUID, N.O.S. (toluene, propan-2-ol)</td>
<td>3</td>
<td>II</td>
<td>Hazard identification number 33</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Limited quantity</strong> LQ4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>CEFIC Tremcard</strong> 30GF1-I+II</td>
<td></td>
</tr>
<tr>
<td>ADNR Class</td>
<td>UN1993</td>
<td>FLAMMABLE LIQUID, N.O.S. (toluene, propan-2-ol)</td>
<td>3</td>
<td>II</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IMDG Class</td>
<td>UN1993</td>
<td>FLAMMABLE LIQUID, N.O.S. (toluene, propan-2-ol)</td>
<td>3</td>
<td>II</td>
<td><strong>Emergency schedules (EmS)</strong> F-E, <em>S-E</em></td>
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Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC - United Kingdom (UK)

Date of issue: November 30, 2006
14. Transport information

<table>
<thead>
<tr>
<th>IATA Class</th>
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<th>Flammable liquid, n.o.s. (toluene, propan-2-ol)</th>
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<table>
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<th>Subsidiary class</th>
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<th>PG*</th>
<th>Packing group</th>
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</table>

Passenger and Cargo Aircraft

Quantity limitation: 5 L

Cargo Aircraft Only
Quantity limitation: 60 L

Limited Quantities - Passenger Aircraft
Quantity limitation: 1 L

15. Regulatory information

**EU regulations**

Hazard symbol/symbols

- Highly flammable, Harmful

Risk phrases

- R11- Highly flammable.
- R63- Possible risk of harm to the unborn child.
- R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R65- Harmful: may cause lung damage if swallowed.
- R41- Risk of serious damage to eyes.
- R66- Repeated exposure may cause skin dryness or cracking.
- R67- Vapours may cause drowsiness and dizziness.
- R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

Contains

toluene 203-625-9

Product use

Classification and labelling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.

- Industrial applications.

16. Other information

**Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)**

- R11- Highly flammable.
- R10- Flammable.
- R40- Limited evidence of a carcinogenic effect.
- R63- Possible risk of harm to the unborn child.
- R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
- R39/23/24/25- Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- R20- Harmful by inhalation.
- R22- Harmful if swallowed.
- R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R65- Harmful: may cause lung damage if swallowed.
- R36- Irritating to eyes.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R38- Irritating to skin.
- R41- Risk of serious damage to eyes.
- R66- Repeated exposure may cause skin dryness or cracking.
- R67- Vapours may cause drowsiness and dizziness.
- R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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16. Other information

aquatic environment.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - United Kingdom (UK):

F - Highly flammable
Carc. Cat.3 - Carcinogen Category 3
Repr. Cat.3 - Toxic to reproduction Category 3
T - Toxic
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment.

History

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Version: 1.1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Information contact

Germany
Telephone no.: +49 (0)2325 9800
Fax no.: +49 (0)2325 980 - 216

France
Telephone no.: +33 667742948
Fax no.: +33 (0)2.32.64.35.35

Italy
Telephone no.: +39 (02) 93 30 94 1
Fax no.: +33 (0)2.32.51.43.24

Emergency telephone number of official advisory body:
+33 (0)1 45 42 59 59 (ORFILA)

Germany
Telephone no.: +49 (0) 3461 43 40 66
Fax no.: +49 (0) 3461 43 40 70

Spain
Telephone no.: +34 667742948
Fax no.: +33 (0)2.32.64.35.35

Emergency telephone number of official advisory body:
+33 (0)2.32.51.43.24

France
Telephone no.: +46 (0)54-19 00 12
Fax no.: +36 34540572

Cyprus
Telephone no.: +39 (02) 93 79 68 28
Fax no.: +34667742948

Emergency telephone number of official advisory body:
02-66101029

Greece
Telephone no.: +39 (02) 93 79 93 00
Fax no.: +39 (02) 93 79 93 00

United States
Telephone no.: +1-800-441-9547 / 1-303-792-5554
Fax no.: +1-800-441-9547 / 1-303-792-5554

India
Telephone no.: +971 4 3551900
Fax no.: +357 25762545

United Arab Emirates
Telephone no.: +971 4 3551900
Fax no.: +357 25762545

United States
Telephone no.: 1-302-454-8100
Fax no.: 1-302-451-1380

South Africa
Telephone no.: +27 21 701 5340
Fax no.: +27 21 701 6284

United Kingdom (UK)
Telephone no.: +44 (0) 3461 43 40 66
Fax no.: +49 (0) 3461 43 40 70

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<tr>
<td>China</td>
<td>+86 10 6800 1019</td>
<td>+86 10 6800 1261</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>+82 31 715 4901</td>
<td>+82 31 715 4903</td>
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<td>Singapore</td>
<td>+65 6336 6286</td>
<td>+65 6336 1692</td>
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<td>United Kingdom (UK)</td>
<td>+91 (0) 124 4049568</td>
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