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

1.1 Product identifier:
Trade name: **ORGANOSOL XP FR Component A**

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

*Identified uses advised against:* No further relevant information available.

1.3 Details of the supplier of the safety data sheet:

Manufacturer/supplier:
De Neef Construction Chemicals BVBA
Industriepark 8,
2220 Heist-op-den-Berg,
Belgium.

Tel: +32 15 24 93 60
Fax: +32 15 24 80 72

Further information obtainable from: conchem@deneef.com

1.4 Emergency telephone number:
+44 (0)1235 239 670 (Multi-lingual – 24 Hours)
+44 (0)1235 239 671 (Dedicated phone line for Arabic speaking countries - 24 Hours)
EHS Department, Fanling, Hongkong - Tel. No.: (85-2) 2675-2040

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008
Skin Corr. 1B  H314  Causes severe skin burns and eye damage.
Eye Dam.  1  H318  Causes serious eye damage.
STOT SE 3  H335  May cause respiratory irritation.

2.2 Label elements:

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05  GHS07

Signal word Danger

Hazard-determining components of labelling:
2-dimethylaminoethanol

Hazard statements
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
Trade name: ORGANOSON XL FR Component A

Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3 Other hazards:
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterization: Mixtures:
Description: Mixture of substances listed below with non-hazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th>CAS: 7320-34-5</th>
<th>EINECS: 230-785-7</th>
<th>Tetrapotassium pyrophosphate</th>
<th>Eye Irrit. 2, H319</th>
<th>10-20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 108-01-0</td>
<td>2-dimethylaminoethanol</td>
<td>Flam. Liq. 3, H226</td>
<td>Skin Corr. 1B, H314</td>
<td>Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332</td>
<td>5.0-10.0%</td>
</tr>
<tr>
<td>EINECS: 203-542-8</td>
<td>Index number: 603-047-00-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:
General information: Get medical advice/attention if you feel unwell.
After inhalation: No special measures required.
After skin contact: Wash with plenty of soap and water.
After eye contact: Rinse cautiously with water for several minutes.
After swallowing: Rinse mouth.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed: Irritating to eyes.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.
**SECTION 5: Firefighting measures**

5.1 Extinguishing media:

Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.

5.2 Special hazards arising from the substance or mixture: No further relevant information available.

5.3 Advice for firefighters:

Protective equipment: Wear self-contained respiratory protective device.

Additional information: Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage**

7.1 Precautions for safe handling:

Prevent formation of aerosols.

Avoid contact with skin.

Avoid contact with eyes.

Do not eat, drink or smoke when using this product.

Store in a well-ventilated place. Keep container tightly closed.

Keep only in original container.

Use only outdoors or in a well-ventilated area.

**Information about fire - and explosion protection:** No special measures required.

7.2 Conditions for safe storage, including any incompatibilities:

**STORAGE**

**Information about storage in one common storage facility:** No special measures required.
Further information about storage conditions:
Protect from frost.
Store in a dry place.
Keep cool.

7.3 Specific end use(s): No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters:

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>WEL (Great Britain)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>108-01-0</td>
<td>2-dimethylaminoethanol</td>
<td>Short-term value: 22 mg/m³, 6 ppm</td>
<td>Long-term value: 7.4 mg/m³, 2 ppm</td>
</tr>
</tbody>
</table>

Additional information: Based on the lists valid at the date of MSDS creation.

8.2 Exposure controls:

PERSONAL PROTECTIVE EQUIPMENT

General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:
Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

Protection of hands: Protective gloves.
Material of gloves: Rubber gloves.
Penetration time of glove material:
The exact breakthrough time has to be determined by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses with side shield protection.

A face shield should also be worn if there is potential exposure to splash or spray.
Body protection:
Use personal protective equipment as required.
Take off contaminated clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

<table>
<thead>
<tr>
<th>GENERAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Liquid.</td>
</tr>
<tr>
<td>Colour: According to product specification.</td>
</tr>
<tr>
<td>Odour: Neutral</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value (~) at 20 °C: 11</td>
</tr>
<tr>
<td>Change in conditions:-</td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 100 °C</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Self-igniting: Product is not self-igniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>EXPLOSION LIMITS</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>VOC Content: Not determined.</td>
</tr>
<tr>
<td>Vapour pressure: Not determined.</td>
</tr>
<tr>
<td>Density at 20 °C: ~ 1.1 g/cm³</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not determined.</td>
</tr>
<tr>
<td>Evaporation rate: Not determined.</td>
</tr>
<tr>
<td>Solubility in/Miscibility with:</td>
</tr>
<tr>
<td>Water: Fully miscible.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td>VISCOSITY</td>
</tr>
<tr>
<td>Dynamic: Not determined.</td>
</tr>
<tr>
<td>Kinematic: Not determined.</td>
</tr>
<tr>
<td>Molecular weight: Not applicable.</td>
</tr>
</tbody>
</table>

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: Stable under normal conditions.

10.2 Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Safety Data Sheet
According to 1272/2008/EC (CLP)

Trade name: ORGANOSOL XP FR Component A

10.4 Conditions to avoid: No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

ACUTE TOXICITY

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7320-34-5 Tetrapotassium pyrophosphate</td>
<td>Dermal</td>
<td>LD50 &gt;2000 mg/kg (mus)</td>
</tr>
<tr>
<td>108-01-0 2-dimethylaminoethanol</td>
<td>Dermal</td>
<td>LD50 2000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>LC50, 4h 3,25 mg/l (mus)</td>
</tr>
</tbody>
</table>

Primary irritant effect:-
- Skin corrosion/irritation
  Causes severe skin burns and eye damage.
- Serious eye damage/irritation
  Causes serious eye damage.
- Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.
- Germ cell mutagenicity
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Based on available data, the classification criteria are not met.
- Reproductive toxicity
  Based on available data, the classification criteria are not met.
- STOT-single exposure
  May cause respiratory irritation.
- STOT-repeated exposure
  Based on available data, the classification criteria are not met.
- Aspiration hazard
  Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity:
- AQUATIC TOXICITY: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

ADDITIONAL ECOLOGICAL INFORMATION

General notes: Not known to be hazardous to water.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.
SECTION 13: Disposal considerations

13.1 Waste treatment methods:
Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

UNCLEANED PACKAGING
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR, ADN, IMDG, IATA
Not Regulated

14.2 UN proper shipping name
ADR, ADN, IMDG, IATA
Not Regulated

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Class
Not Regulated

14.4 Packing group
ADR, IMDG, IATA
Not Regulated

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user:
Not Regulated

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not Regulated

UN "Model Regulation":
Not regulated for transport.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
See Section 2 for hazard identification.

National regulations:

Other regulations, limitations and prohibitive regulations: All components EINECS listed or exempt.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
 Trade name: **ORGANOSOL XP FR Component A**

(SECTION 16: Other information)

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases:**

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.

**Department issuing MSDS:**

EHS Department,  
Asia Pacific Region  
Grace Construction Products  
SCIP, Canlubang, Calamba City, Laguna  
Philippines 4028  
Tel: ++63 (02) 884-0300, Fax: ++63 (49) 549-7778

**Other Information:**

In the previous MSDS, version control was by Issue Number and Date. With the change to alternative MSDS creation software, version control is now based on printing and review dates which appear at the top of each page. Also consequent on this change, amendments have been made in all Sections of this MSDS. In future updates to MSDS, amended sections will be indicated by an asterisk (*) in the left-hand margin.

**The first date of preparation:** 26.08.2015  
**Number of revision times and the latest revision date:** 1.0 / 26.08.2015
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Trade name: ORGANOSOL XP FR Component B

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

Identified uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet:
Manufacturer/supplier:
De Neef Construction Chemicals BVBA
Industriepark 8,
2220 Heist-op-den-Berg,
Belgium.

Tel: +32 15 24 93 60
Fax: +32 15 24 80 72

Further information obtainable from: conchem@deneef.com

1.4 Emergency telephone number:
+44 (0)1235 239 670 (Multi-lingual – 24 Hours)
+44 (0)1235 239 671 (Dedicated phone line for Arabic speaking countries - 24 Hours)
EHS Department, Fanling, Hongkong - Tel. No.: (85-2) 2675-2040

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:
Classification according to Regulation (EC) No 1272/2008
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Carc. 2 H351 Suspected of causing cancer.
STOT SE 3 H335 May cause respiratory irritation.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements:
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07
GHS08
**Trade name:** ORGANOSOL XP FR Component B

**Signal word** Danger

**Hazard-determining components of labelling:**
- Diphenylmethanediisocyanate, isomers and homologues
- Diphenylmethane-4,4’-di-isocyanate

**Hazard statements**
- H332 Harmful if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 [In case of inadequate ventilation] wear respiratory protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

**Additional information:**
Contains isocyanates. May produce an allergic reaction.

**2.3 Other hazards:**

**Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

**3.2 Chemical characterization: Mixtures:**

**Description:** Mixture of substances listed below with non-hazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 9016-87-9</td>
<td>Diphenylmethanediisocyanate, isomers and homologues</td>
</tr>
<tr>
<td>EC number: 618-498-9</td>
<td>Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373</td>
</tr>
<tr>
<td>Index number: 615-005-00-9</td>
<td>Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335</td>
</tr>
<tr>
<td>Reg.nr.: 01-2119457014-47-XXXX</td>
<td></td>
</tr>
<tr>
<td>CAS: 101-68-8</td>
<td>Diphenylmethane-4,4’-di-isocyanate</td>
</tr>
<tr>
<td>EINECS: 202-966-0</td>
<td>Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373</td>
</tr>
<tr>
<td>Index number: 615-005-00-9</td>
<td>Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335</td>
</tr>
<tr>
<td>CAS: 13674-84-5</td>
<td>tris(2-chloroisopropyl)-phosphate</td>
</tr>
<tr>
<td>Reg.nr.: 01-2119486772-26-0005</td>
<td>Acute Tox. 4, H302</td>
</tr>
</tbody>
</table>

**Additional information:** For the wording of the listed risk phrases refer to section 16.
SECTION 4: First aid measures

4.1 Description of first aid measures:

General information: Get medical advice/attention if you feel unwell.
After inhalation: No special measures required.
After skin contact: Wash with plenty of soap and water.
After eye contact: Rinse cautiously with water for several minutes.
After swallowing:
Rinse mouth.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed:
May cause sensitisation by skin contact.
Irritating to eyes.

4.3 Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray.

5.2 Special hazards arising from the substance or mixture: No further relevant information available.

5.3 Advice for firefighters:
Protective equipment: Wear self-contained respiratory protective device.
Additional information: Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation.
Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
Trade name: ORGANOSOL XP FR Component B

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Prevent formation of aerosols.
Avoid contact with skin.
Avoid contact with eyes.
Do not eat, drink or smoke when using this product.
Store in a well-ventilated place. Keep container tightly closed.
Keep only in original container.
Use only outdoors or in a well-ventilated area.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities:

STORAGE
Information about storage in one common storage facility: No special measures required.
Further information about storage conditions:
Protect from frost.
Store in a dry place.
Keep cool.

7.3 Specific end use(s): No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters:

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9016-87-9 Diphenylmethanediisocyanate, isomers and homologues</strong></td>
</tr>
<tr>
<td>WEL (Great Britain)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>101-68-8 Diphenylmethane-4,4'-di-isocyanate</strong></td>
</tr>
<tr>
<td>WEL (Great Britain)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>PEL (USA)</td>
</tr>
<tr>
<td>REL (USA)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>TLV (USA)</td>
</tr>
</tbody>
</table>
Trade name: **ORGANOSOL XP FR Component B**

### DNELs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8 Diphenylmethane-4,4′-di-isocyanate</td>
<td>20 mg/kg bw/d (general population)</td>
<td>0,025 mg/m³ (general population)</td>
<td>17,2 mg/cm² (general population)</td>
<td>25 mg/kg bw/d (general population)</td>
<td>0,05 mg/m³ (general population)</td>
<td>0,05 mg/m³ (general population)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28,7 mg/cm² (workers)</td>
<td>50 mg/kg bw/d (workers)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PNECs

<table>
<thead>
<tr>
<th>Substance</th>
<th>PNEC STP</th>
<th>PNEC freshwater</th>
<th>PNEC marine water</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8 Diphenylmethane-4,4′-di-isocyanate</td>
<td>1 mg/l (-)</td>
<td>1 mg/l (-)</td>
<td>0,1 mg/l (-)</td>
</tr>
</tbody>
</table>

**Additional information:** Based on the lists valid at the date of MSDS creation.

**8.2 Exposure controls:**

**PERSONAL PROTECTIVE EQUIPMENT**

**General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:**
Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

**Protection of hands:** Protective gloves.

**Material of gloves:** Rubber gloves.

**Penetration time of glove material:**
The exact breakthrough time has to be determined by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

- Safety glasses with side shield protection.
- A face shield should also be worn if there is potential exposure to splash or spray.

**Body protection:**
Use personal protective equipment as required.

(Contd. on page 6)
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

GENERAL INFORMATION
Appearance: Liquid.
Form: Liquid.
Colour: Dark brown.
Odour: Characteristic.
Odour threshold: Not determined.

pH-value (~): Not determined.

Change in conditions:-
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Not determined.
Flash point: 145 °C

Flammability (solid, gaseous): Not applicable.
Decomposition temperature: Not determined.
Self-igniting: Product is not self-igniting.
Danger of explosion: Product does not present an explosion hazard.

EXPLOSION LIMITS
Lower: 0.4 Vol %
Upper: Not determined.
VOC Content: Not determined.

Vapour pressure: Not determined.
Density at 20 °C: ~ 1.1 g/cm³
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not determined.

Solubility in/Miscibility with: -
Water: Not miscible or difficult to mix.
Partition coefficient (n-octanol/water): Not determined.

VISCOSITY
Dynamic: Not determined.
Kinematic: Not determined.
Molecular weight: Not applicable.

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: Stable under normal conditions.
10.2 Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions
Reacts with water.
Reacts with oxidising agents.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

ACUTE TOXICITY
Harmful if inhaled.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8 Diphenylmethane-4,4'-di-isocyanate</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

13674-84-5 tris(2-chloroisopropyl)-phosphate
| Dermal | LD50 | 3600 mg/kg (rat) |

Primary irritant effect:-

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity
Suspected of causing cancer.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure
May cause respiratory irritation.

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity:

AQUATIC TOXICITY No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.
12.4 Mobility in soil: No further relevant information available.

ADDITIONAL ECOLOGICAL INFORMATION

General notes: Not known to be hazardous to water.

12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

UNCLEANED PACKAGING

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR, ADN, IMDG, IATA
Not Regulated

14.2 UN proper shipping name
ADR, ADN, IMDG, IATA
Not Regulated

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Class
Not Regulated

14.4 Packing group
ADR, IMDG, IATA
Not Regulated

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user:
Not Regulated

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not Regulated

UN "Model Regulation": Not regulated for transport.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
See Section 2 for hazard identification.

National regulations:

Other regulations, limitations and prohibitive regulations: All components EINECS listed or exempt.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H343 May cause or asthma symptoms or breathing difficulties if inhaled.
H35 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

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Other Information:
In the previous MSDS, version control was by Issue Number and Date. With the change to alternative MSDS creation software, version control is now based on printing and review dates which appear at the top of each page. Also consequent on this change, amendments have been made in all Sections of this MSDS. In future updates to MSDS, amended sections will be indicated by an asterisk (*) in the left-hand margin.

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