



## SAFETY DATA SHEET

### Alumigrip® Hardener G3010

Code: 90189/000000

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

##### 1.1 Product identifier

**Product name** : Alumigrip® Hardener G3010

##### 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

Akzo Nobel Aerospace Coatings  
Rijksstraatweg 31  
2171 AJ Sassenheim  
P.O. Box 3  
2170 BA Sassenheim  
The Netherlands

**e-mail address of person responsible for this SDS** : ANACMSDS@AKZONOBEL.com

##### 1.4 Emergency telephone number

###### Supplier

**Telephone number** : + 31 (0)71 308 6944

**Hours of operation** : 24 hours

#### SECTION 2: Hazards identification

##### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

###### Classification according to Directive 1999/45/EC [DPD]

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

**Classification** : F; R11  
Repr. Cat. 2; R60, R61  
Xn; R20/21, R48/20  
Xi; R36  
R43, R66

**Physical/chemical hazards** : Highly flammable.

**Human health hazards** : May impair fertility. May cause harm to the unborn child. Also harmful by inhalation and in contact with skin. Also harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes. May cause sensitization by skin contact. Repeated exposure may cause skin dryness or cracking.

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

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**SECTION 2: Hazards identification**

Hazard symbol or symbols :



Indication of danger : Highly flammable, Toxic

Risk phrases

: R11- Highly flammable.  
 R60- May impair fertility.  
 R61- May cause harm to the unborn child.  
 R20/21- Also harmful by inhalation and in contact with skin.  
 R48/20- Also harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R36- Irritating to eyes.  
 R43- May cause sensitization by skin contact.  
 R66- Repeated exposure may cause skin dryness or cracking.

Safety phrases

: S53- Avoid exposure - obtain special instructions before use.  
 S36/37- Wear suitable protective clothing and gloves.

Hazardous ingredients

: Isocyanic acid, hexamethylene ester, polymers  
 2-ethoxyethyl acetate  
 toluene

Supplemental label elements

: Contains isocyanates. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.

**2.3 Other hazards**

Other hazards which do not result in classification : Not available.

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

Substance/mixture : Mixture

| Product/ingredient name                       | Identifiers                                                                        | %     | Classification                                                   |                                                                                                                                | Type    |
|-----------------------------------------------|------------------------------------------------------------------------------------|-------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------|
|                                               |                                                                                    |       | 67/548/EEC                                                       | Regulation (EC) No. 1272/2008 [CLP]                                                                                            |         |
| Isocyanic acid, hexamethylene ester, polymers | EC: 500-060-2<br>CAS: 28182-81-2                                                   | 35-50 | R43                                                              | Skin Sens. 1, H317                                                                                                             | [1] [2] |
| 2-ethoxyethyl acetate                         | EC: 203-839-2<br>CAS: 111-15-9<br>Index: 607-037-00-7                              | 7-25  | R10<br>Repr. Cat. 2; R60, R61<br>Xn; R20/21/22                   | Flam. Liq. 3, H226<br>Acute Tox. 4, H302<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319<br>Repr. 1B, H360FD | [1] [2] |
| Ethyl acetate                                 | REACH #: 01-2119475103-46<br>EC: 205-500-4<br>CAS: 141-78-6<br>Index: 607-022-00-5 | 20-25 | F; R11<br><br>Xi; R36<br>R66, R67                                | Flam. Liq. 2, H225<br><br>Eye Irrit. 2, H319<br>STOT SE 3, H336                                                                | [1] [2] |
| toluene                                       | EC: 203-625-9<br>CAS: 108-88-3<br>Index: 601-021-00-3                              | 10-15 | F; R11<br>Repr. Cat. 3; R63<br>Xn; R48/20, R65<br>Xi; R38<br>R67 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304         | [1] [2] |
| xylene                                        | EC: 215-535-7<br>CAS: 1330-20-7<br>Index: 601-022-00-9                             | 1-5   | R10<br>Xn; R20/21<br>Xi; R38                                     | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319                    | [1] [2] |
| hexamethylene-di-                             | EC: 212-485-8                                                                      | 0.1-1 | T; R23                                                           | Acute Tox. 4, H302                                                                                                             | [1] [2] |

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

|            |                                      |  |                                                                          |                                                                                                                                                       |  |
|------------|--------------------------------------|--|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| isocyanate | CAS: 822-06-0<br>Index: 615-011-00-1 |  | Xn; R21/22<br>Xi; R36/37/38<br>R42/43                                    | Acute Tox. 4, H312<br>Acute Tox. 3, H331<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335 |  |
|            |                                      |  | <b>See Section 16 for the full text of the R-phrases declared above.</b> | <b>See Section 16 for the full text of the H statements declared above.</b>                                                                           |  |

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  
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII  
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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 recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this 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**

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 3 and 15 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. 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.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed

## SECTION 4: First aid measures

to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

2-ethoxyethyl acetate show(s) evidence from animal experiments that exposure in excess of the occupational exposure limit can also have harmful effects on the blood, kidneys and central nervous system.

Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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, CO<sub>2</sub>, powders, water spray or mist.
- 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, hydrogen cyanide, monomeric isocyanates.

### 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.

## 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 vapor 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 Section 8 for additional information on hygiene measures.

### 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.

### 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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days

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## SECTION 6: Accidental release measures

until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

- 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this preparation.**

- 7.1 Precautions for safe handling** :
- : Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor 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.
  - : To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.
  - : Care should be taken when re-opening partly-used containers. Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurization. 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 preparation. 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.
- Information on fire and explosion protection**
- : Vapors are heavier than air and may spread along floors. Vapors 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: oxidizing 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 container tightly closed.
  - : Keep away from sources of ignition. No smoking. Prevent unauthorized 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name                       | Exposure limit values                                                                                                                                                                                                      |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Isocyanic acid, hexamethylene ester, polymers | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitizer.</b><br>STEL: 0.07 mg/m <sup>3</sup> , (as NCO) 15 minute(s).<br>TWA: 0.02 mg/m <sup>3</sup> , (as NCO) 8 hour(s).                                        |
| 2-ethoxyethyl acetate                         | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin.</b><br>TWA: 55 mg/m <sup>3</sup> 8 hour(s).<br>TWA: 10 ppm 8 hour(s).                                                                              |
| Ethyl acetate                                 | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b><br>STEL: 400 ppm 15 minute(s).<br>TWA: 200 ppm 8 hour(s).                                                                                                             |
| toluene                                       | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin.</b><br>STEL: 384 mg/m <sup>3</sup> 15 minute(s).<br>STEL: 100 ppm 15 minute(s).<br>TWA: 191 mg/m <sup>3</sup> 8 hour(s).<br>TWA: 50 ppm 8 hour(s). |
| xylene                                        | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin.</b><br>STEL: 441 mg/m <sup>3</sup> 15 minute(s).<br>STEL: 100 ppm 15 minute(s).<br>TWA: 220 mg/m <sup>3</sup> 8 hour(s).<br>TWA: 50 ppm 8 hour(s). |
| hexamethylene-di-isocyanate                   | <b>EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitizer.</b><br>STEL: 0.07 mg/m <sup>3</sup> , (as NCO) 15 minute(s).<br>TWA: 0.02 mg/m <sup>3</sup> , (as NCO) 8 hour(s).                                        |

**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.

#### Derived effect levels

No DELs available.

#### Predicted effect concentrations

No PECs available.

### 8.2 Exposure controls

**Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this preparation.**

**Appropriate engineering controls** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn. (See Personal Protection.)

## SECTION 8: Exposure controls/personal protection

### 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** : Use safety eyewear designed to protect against splash of liquids.
- Skin protection**
- Hand protection** : 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:
- Not recommended: nitrile rubber, butyl rubber
- The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
- 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 fibers or of high-temperature-resistant synthetic fibers.
- 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** : By spraying: air-fed respirator.  
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.
- 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.
- Color** : Product Specific Information
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Neutral.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : 77.2°C
- Flash point** : Closed cup: -4°C
- Evaporation rate** : Not available.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 1.3% Upper: 14% (2-ethoxyethyl acetate)
- Vapor pressure** : Not available.
- Vapor density** : Highest known value: 4.7 (Air = 1) (2-ethoxyethyl acetate). Weighted average: 3.77 (Air = 1)
- Relative density** : 1.002
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water** : Not available.

**SECTION 9: Physical and chemical properties**

|                                  |                                          |
|----------------------------------|------------------------------------------|
| <b>Auto-ignition temperature</b> | : Not available.                         |
| <b>Decomposition temperature</b> | : Not available.                         |
| <b>Viscosity</b>                 | : Kinematic: 0.399202 cm <sup>2</sup> /s |
| <b>Explosive properties</b>      | : Not available.                         |
| <b>Oxidizing properties</b>      | : Not available.                         |
| <b>VOC content</b>               | : 593                                    |

**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** : The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure buildup could result in distortion, expansion and, in extreme cases, bursting of the container.
- 10.4 Conditions to avoid** : In a fire, hazardous decomposition products may be produced.
- 10.5 Incompatible materials** : Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 3 and 15 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. 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.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

2-ethoxyethyl acetate show(s) evidence from animal experiments that exposure in excess of the occupational exposure limit can also have harmful effects on the blood, kidneys and central nervous system.

Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

**Acute toxicity**

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**SECTION 11: Toxicological information**

| Product/ingredient name | Result    | Species | Dose       | Exposure |
|-------------------------|-----------|---------|------------|----------|
| 2-ethoxyethyl acetate   | LD50 Oral | Rat     | 2700 mg/kg | -        |
| Ethyl acetate           | LD50 Oral | Rat     | 5620 mg/kg | -        |
| toluene                 | LD50 Oral | Rat     | 636 mg/kg  | -        |
| xylene                  | LD50 Oral | Rat     | 4300 mg/kg | -        |

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

| Product/ingredient name                             | Result                   | Species | Score | Exposure                         | Observation |
|-----------------------------------------------------|--------------------------|---------|-------|----------------------------------|-------------|
| Isocyanic acid,<br>hexamethylene ester,<br>polymers | Eyes - Moderate irritant | Rabbit  | -     | 100<br>milligrams                | -           |
|                                                     | Skin - Moderate irritant | Rabbit  | -     | 500<br>milligrams                | -           |
| 2-ethoxyethyl acetate                               | Eyes - Moderate irritant | Rabbit  | -     | 40 milligrams                    | -           |
|                                                     | Skin - Mild irritant     | Rabbit  | -     | 490<br>milligrams                | -           |
| toluene                                             | Eyes - Mild irritant     | Rabbit  | -     | 0.5 minutes<br>100<br>milligrams | -           |
|                                                     | Eyes - Mild irritant     | Rabbit  | -     | 870<br>Micrograms                | -           |
|                                                     | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 2<br>milligrams         | -           |
|                                                     | Skin - Mild irritant     | Pig     | -     | 24 hours 250<br>microliters      | -           |
| xylene                                              | Skin - Mild irritant     | Rabbit  | -     | 435<br>milligrams                | -           |
|                                                     | Skin - Moderate irritant | Rabbit  | -     | 24 hours 20<br>milligrams        | -           |
|                                                     | Skin - Moderate irritant | Rabbit  | -     | 500<br>milligrams                | -           |
|                                                     | Eyes - Mild irritant     | Rabbit  | -     | 87 milligrams                    | -           |
|                                                     | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 5<br>milligrams         | -           |
|                                                     | Skin - Mild irritant     | Rat     | -     | 8 hours 60<br>microliters        | -           |
|                                                     | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500<br>milligrams       | -           |
|                                                     | Skin - Moderate irritant | Rabbit  | -     | 100 Percent                      | -           |

**Conclusion/Summary** : Not available.

**Sensitization**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Other information** : Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

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

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

| Product/ingredient name | Result                                         | Species                                                             | Exposure |
|-------------------------|------------------------------------------------|---------------------------------------------------------------------|----------|
| 2-ethoxyethyl acetate   | Acute LC50 40000 ug/L Marine water             | Fish - Menidia beryllina - 40 to 100 mm                             | 96 hours |
| Ethyl acetate           | Acute EC50 1800000 to 3200000 ug/L Fresh water | Algae - Selenastrum sp.                                             | 72 hours |
|                         | Acute EC50 2500000 ug/L Fresh water            | Algae - Selenastrum sp.                                             | 96 hours |
|                         | Acute LC50 750000 ug/L Fresh water             | Crustaceans - Gammarus pulex                                        | 48 hours |
|                         | Acute LC50 154000 ug/L Fresh water             | Daphnia - Daphnia cucullata - 11 days                               | 48 hours |
|                         | Acute LC50 212500 to 225420 ug/L Fresh water   | Fish - Heteropneustes fossilis - 14.16 cm - 25.54 g                 | 96 hours |
|                         | Chronic NOEC 2400 ug/L Fresh water             | Daphnia - Daphnia magna - <=24 hours                                | 21 days  |
|                         | Chronic NOEC 75.6 mg/L Fresh water             | Fish - Pimephales promelas - Embryo - <24 hours                     | 32 days  |
| toluene                 | Acute EC50 >433 ppm Marine water               | Algae - Skeletonema costatum                                        | 96 hours |
|                         | Acute EC50 12500 ug/L Fresh water              | Algae - Pseudokirchneriella subcapitata                             | 72 hours |
|                         | Acute EC50 11600 ug/L Fresh water              | Crustaceans - Gammarus pseudolimnaeus - Adult - 9 mm - 0.017 g      | 48 hours |
|                         | Acute EC50 6000 ug/L Fresh water               | Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours |
| xylene                  | Acute LC50 5500 ug/L Fresh water               | Fish - Oncorhynchus kisutch - Fry - 1 g                             | 96 hours |
|                         | Chronic NOEC 1000 ug/L Fresh water             | Daphnia - Daphnia magna - <=24 hours                                | 21 days  |
|                         | Acute LC50 8500 ug/L Marine water              | Crustaceans - Palaemonetes pugio                                    | 48 hours |
|                         | Acute LC50 3300 to 4093 ug/L Fresh water       | Fish - Oncorhynchus mykiss - 0.6 g                                  | 96 hours |

**Conclusion/Summary** : Not available.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

**12.3 Bioaccumulative potential**

| Product/ingredient name     | LogP <sub>ow</sub> | BCF         | Potential |
|-----------------------------|--------------------|-------------|-----------|
| 2-ethoxyethyl acetate       | 0.24               | -           | low       |
| Ethyl acetate               | 0.73               | -           | low       |
| toluene                     | 2.73               | 8.317637711 | low       |
| xylene                      | 3.16               | -           | high      |
| hexamethylene-di-isocyanate | 1.08               | -           | low       |

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

## SECTION 12: Ecological information

### 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.

### 13.1 Waste treatment methods

#### Product

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.
- European waste catalogue (EWC)** : The European Waste Catalogue classification of this product, when disposed of as waste, is:  
wastes not otherwise specified.  
If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

#### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**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.

#### UN

- UN number** : UN1992  
**Proper shipping name** : Flammable liquid, toxic, n.o.s. (2-ethoxyethyl acetate)  
**Class** : 3  
**Subsidiary class** : 6.1  
**Packing group** : II  
**Label** :



#### IMDG

**Date of issue/Date of revision** : 8/21/2012.

**Version number** : 1

**SECTION 14: Transport information**

**UN number** : UN1263  
**Proper shipping name** : PAINT RELATED MATERIAL  
**Class** : 3  
**Subsidiary class** : 6.1  
**Packing group** : II  
**Label** :



**Marine pollutant** : No.  
**Emergency schedules (EmS)** : F-E, S-E  
**Special provisions** : Not available.

**ADR**

**UN number** : UN1263  
**Proper shipping name** : PAINT RELATED MATERIAL  
**Class** : 3  
**Subsidiary class** : 6.1  
**Packing group** : II  
**Label** :



**Environmental hazards** : No.

**ADN/ADNR**

**UN number** : UN1263  
**Proper shipping name** : PAINT RELATED MATERIAL  
**Class** : 3  
**Subsidiary class** : 6.1  
**Packing group** : II  
**Label** :



**Environmental hazards** : No.

**IATA**

**UN number** : UN1263  
**Proper shipping name** : PAINT RELATED MATERIAL  
**Class** : 3  
**Subsidiary class** : 6.1  
**Packing group** : II  
**Label** :



**Special provisions** : Not available.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorization****Substances of very high concern**

2-ethoxyethyl acetate

Candidate

ED/31/2011

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.

**Other EU regulations****Priority List Chemicals** : Listed**Integrated pollution prevention and control list (IPPC) - Air** : Not listed**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|-------------------------|----------------------|-------------------|-----------------------|-------------------|
| 2-ethoxyethyl acetate   | -                    | -                 | Repr. Cat. 2; R61     | Repr. Cat. 2; R60 |
| toluene                 | -                    | -                 | Repr. Cat. 3; R63     | -                 |

**Industrial use** : 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.

**International regulations****Chemical Weapons Convention List Schedule I Chemicals** : Not listed**Chemical Weapons Convention List Schedule II Chemicals** : Not listed**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

**EU statistical classification (Tariff Code)** : 38249097

☑ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

**Date of issue/Date of revision** : 8/21/2012.

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**SECTION 16: Other information****Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 2, H225  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 Skin Sens. 1, H317  
 Repr. 1B, H360FD  
 STOT SE 3, H336  
 STOT RE 2, H373

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

| Classification                                                                                                                                  | Justification                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Repr. 1B, H360FD<br>STOT SE 3, H336<br>STOT RE 2, H373 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

**Full text of abbreviated H statements** :

- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness and dizziness.
- H360FD May damage fertility. May damage the unborn child.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.

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

- Acute Tox. 3, H331 ACUTE TOXICITY: INHALATION - Category 3
- Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4
- Acute Tox. 4, H312 ACUTE TOXICITY: SKIN - Category 4
- Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4
- Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1
- Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2
- Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3
- Repr. 1B, H360FD TOXIC TO REPRODUCTION [Fertility and Unborn child] - Category 1B
- Repr. 2, H361d TOXIC TO REPRODUCTION [Unborn child] - Category 2
- Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1
- Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
- Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
- STOT RE 2, H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
- STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
- STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3

**SECTION 16: Other information**

**Full text of abbreviated R phrases** : R11- Highly flammable.  
R10- Flammable.  
R60- May impair fertility.  
R61- May cause harm to the unborn child.  
R63- Possible risk of harm to the unborn child.  
R23- Also toxic by inhalation.  
R20/21- Also harmful by inhalation and in contact with skin.  
R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.  
R21/22- Also harmful in contact with skin and if swallowed.  
R48/20- Also harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R65- Also harmful: may cause lung damage if swallowed.  
R36- Irritating to eyes.  
R38- Irritating to skin.  
R36/37/38- Irritating to eyes, respiratory system and skin.  
R43- May cause sensitization by skin contact.  
R42/43- May cause sensitization by inhalation and skin contact.  
R66- Repeated exposure may cause skin dryness or cracking.  
R67- Vapors may cause drowsiness and dizziness.

**Full text of classifications [DSD/DPD]** : F - Highly flammable  
Repr. Cat. 2 - Toxic to reproduction category 2  
Repr. Cat. 3 - Toxic to reproduction category 3  
T - Toxic  
Xn - Harmful  
Xi - Irritant

**Date of printing** : 8/21/2012.

**Date of issue/ Date of revision** : 8/21/2012.

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

**Version** : 1

**Notice to reader****FOR PROFESSIONAL USE ONLY**

**IMPORTANT NOTE** The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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