



**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** Speedway Total  
08967
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Adjuvant. For professional user only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
Amega Sciences plc  
Unit 17 Lanchester Way  
NN11 8PH Daventry - Northamptonshire - United Kingdom  
Phone.: 44 1327 704444 -  
Fax: +44 (0) 1327 311 226  
admin@amega-sciences.com
- 1.4 Emergency telephone number:** +44 (0) 7802844234 (for Emergency ONLY)

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**  
**Directive 67/548/EC and Directive 1999/45/EC:**  
This product was classified in accordance with Directive 67/548/EC and Directive 1999/45/EC, adapting the requirements to Regulation (EC) n°1907/2006 (REACH regulation).  
N: R50 - Very toxic to aquatic organisms  
Xi: R41 - Risk of serious damage to eyes  
Xn: R22 - Harmful if swallowed  
R67 - Vapours may cause drowsiness and dizziness
- CLP Regulation (EC) n° 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.  
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302  
Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400  
Eye Dam. 1: Serious eye damage, Category 1, H318  
Skin Irrit. 2: Skin irritation, Category 2, H315  
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Danger**
- 
- Hazard statements:**  
Acute Tox. 4: H302 - Harmful if swallowed  
Aquatic Acute 1: H400 - Very toxic to aquatic life  
Eye Dam. 1: H318 - Causes serious eye damage  
Skin Irrit. 2: H315 - Causes skin irritation  
STOT SE 3: H336 - May cause drowsiness or dizziness
- Precautionary statements:**  
P271: Use only outdoors or in a well-ventilated area  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352: IF ON SKIN: Wash with plenty of water  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310: Immediately call a POISON CENTER/doctor  
P403+P233: Store in a well-ventilated place. Keep container tightly closed  
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively
- 2.3 Other hazards:**

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**SECTION 2: HAZARDS IDENTIFICATION (continued)**

Non-applicable

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substance:**

Non-applicable

**3.2 Mixture:**

**Chemical description:** Polymer/s

**Components:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

| Identification  | Chemical name/Classification  |  | Concentration |
|---|---|--|---------------|
| CAS: 106232-83-1<br>EC: 500-294-5<br>Index: Non-applicable<br>REACH: Non-applicable       | <b>Alcohols, C12-15, branched and linear, ethoxylated</b> Self-classified |  | 30 - <50 %    |
|   | Directive 67/548/EC   | N: R50; Xi: R41; Xn: R22   |               |
|   | Regulation 1272/2008  | Acute Tox. 4: H302; Aquatic Acute 1: H400; Eye Dam. 1: H318 - Danger                                 |               |
| CAS: 68131-39-5<br>EC: 500-195-7<br>Index: Non-applicable<br>REACH: 01-2119488720-33-XXXX | <b>Alcohols, C12-15, ethoxylated (C12-15 PARETH-7)</b> Self-classified    |  | 30 - <50 %    |
|   | Directive 67/548/EC   | Xi: R41; Xn: R22   |               |
|   | Regulation 1272/2008  | Acute Tox. 4: H302; Eye Dam. 1: H318 - Danger  |               |
| CAS: 78-83-1<br>EC: 201-148-0<br>Index: 603-108-00-1<br>REACH: 01-2119484609-23-XXXX      | <b>Isobutanol</b> ATP CLP00   |  | 10 - <20 %    |
|   | Directive 67/548/EC   | Xi: R37/38, R41; R10; R67  |               |
|   | Regulation 1272/2008  | Eye Dam. 1: H318; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT SE 3: H335; STOT SE 3: H336 - Danger |               |

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

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## SECTION 5: FIREFIGHTING MEASURES (continued)

### 5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, containing flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

### 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

### 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

#### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

### 6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

### 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

#### A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

#### B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid projections and pulverizations. Consult section 10 for conditions and materials that should be avoided.

#### C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

#### D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

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**SECTION 7: HANDLING AND STORAGE (continued)**

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 0 °C  
Maximum Temp.: 40 °C  
Maximum time: 24 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment (EH40/2005 Workplace exposure limits):

| Identification                              | Environmental limits |        |                       |
|---|----------------------|--------|-----------------------|
|   | WEL (8h)             | 50 ppm | 154 mg/m <sup>3</sup> |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0 | WEL (15 min)         | 75 ppm | 231 mg/m <sup>3</sup> |
|   | Year                 | 2015   |                       |

**DNEL (Workers):**

| Identification  |            | Short exposure |                | Long exposure         |                       |
|---|------------|----------------|----------------|-----------------------|-----------------------|
|   |            | Systemic       | Local          | Systemic              | Local                 |
| Alcohols, C12-15, ethoxylated (C12-15 PARETH-7)<br>CAS: 68131-39-5<br>EC: 500-195-7 | Oral       | Non-applicable | Non-applicable | Non-applicable        | Non-applicable        |
|   | Dermal     | Non-applicable | Non-applicable | 2080 mg/kg            | Non-applicable        |
|   | Inhalation | Non-applicable | Non-applicable | 294 mg/m <sup>3</sup> | Non-applicable        |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0   | Oral       | Non-applicable | Non-applicable | Non-applicable        | Non-applicable        |
|   | Dermal     | Non-applicable | Non-applicable | Non-applicable        | Non-applicable        |
|   | Inhalation | Non-applicable | Non-applicable | Non-applicable        | 310 mg/m <sup>3</sup> |

**DNEL (General population):**

| Identification  |            | Short exposure |                | Long exposure        |                      |
|---|------------|----------------|----------------|----------------------|----------------------|
|   |            | Systemic       | Local          | Systemic             | Local                |
| Alcohols, C12-15, ethoxylated (C12-15 PARETH-7)<br>CAS: 68131-39-5<br>EC: 500-195-7 | Oral       | Non-applicable | Non-applicable | 25 mg/kg             | Non-applicable       |
|   | Dermal     | Non-applicable | Non-applicable | 1250 mg/kg           | Non-applicable       |
|   | Inhalation | Non-applicable | Non-applicable | 87 mg/m <sup>3</sup> | Non-applicable       |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0   | Oral       | Non-applicable | Non-applicable | 25 mg/kg             | Non-applicable       |
|   | Dermal     | Non-applicable | Non-applicable | Non-applicable       | Non-applicable       |
|   | Inhalation | Non-applicable | Non-applicable | Non-applicable       | 55 mg/m <sup>3</sup> |

**PNEC:**

| Identification  |              | Environmental limits |                         |             |
|---|--------------|----------------------|-------------------------|-------------|
|   |              | STP                  | Fresh water             | 0.0446 mg/L |
| Alcohols, C12-15, ethoxylated (C12-15 PARETH-7)<br>CAS: 68131-39-5<br>EC: 500-195-7 | Soil         | 1 mg/kg              | Marine water            | 0.0446 mg/L |
|   | Intermittent | 0.0446 mg/L          | Sediment (Fresh water)  | 41.3 mg/kg  |
|   | Oral         | Non-applicable       | Sediment (Marine water) | 41.3 mg/kg  |
|   | STP          | 10000 mg/L           | Fresh water             | 0.0446 mg/L |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0   | Soil         | 0.0699 mg/kg         | Marine water            | 0.04 mg/L   |
|   | Intermittent | 11 mg/L              | Sediment (Fresh water)  | 1.52 mg/kg  |
|   | Oral         | Non-applicable       | Sediment (Marine water) | 0.152 mg/kg |
|   | STP          | 10 mg/L              | Fresh water             | 0.4 mg/L    |

**8.2 Exposure controls:**

A.- General security and hygiene measures in the work place

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**

| Pictogram   | PPE  | Labelling   | CEN Standard                               | Remarks   |
|---|--|---|--|---|
| <br>Mandatory respiratory tract protection | Filter mask for gases, vapours and particles |  | EN 149:2001+A1:2009<br>EN 405:2001+A1:2009 | Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected. |

**C.- Specific protection for the hands**

| Pictogram  | PPE                                   | Labelling   | CEN Standard | Remarks   |
|--|---------------------------------------|---|--------------|---|
| <br>Mandatory hand protection | Protective gloves against minor risks |  |              | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374. |

**D.- Ocular and facial protection**

| Pictogram  | PPE                                     | Labelling   | CEN Standard                    | Remarks   |
|--|---|---|---------------------------------|---|
| <br>Mandatory face protection | Panoramic glasses against liquid splash |  | EN 166:2001<br>EN ISO 4007:2012 | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

**E.- Bodily protection**

| Pictogram | PPE                  | Labelling   | CEN Standard      | Remarks |
|-----------|----------------------|---|-------------------|---------|
|           | Work clothing        |  |                   |         |
|           | Anti-slip work shoes |  | EN ISO 20347:2012 |         |

**F.- Additional emergency measures**

It is not necessary to take additional emergency measures.

| Emergency measure   | Standards                      | Emergency measure  | Standards                     |
|---|--------------------------------|--|-------------------------------|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2002 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2002 |

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

|                          |                                       |
|--------------------------|---------------------------------------|
| V.O.C. (Supply):         | 14 % weight                           |
| V.O.C. density at 20 °C: | 127.81 kg/m <sup>3</sup> (127.81 g/L) |
| Average carbon number:   | 4                                     |

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Average molecular weight: 74.1 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

|                          |                |
|--------------------------|----------------|
| Physical state at 20 °C: | Liquid         |
| Appearance:              | Characteristic |
| Colour:                  | Colourless     |
| Odour:                   | Characteristic |

**Volatility:**

|  |                  |
|--|------------------|
| Boiling point at atmospheric pressure: | 80 °C            |
| Vapour pressure at 20 °C:              | Non-applicable * |
| Vapour pressure at 50 °C:              | Non-applicable * |
| Evaporation rate at 20 °C:             | Non-applicable * |

**Product description:**

|  |                             |
|--|-----------------------------|
| Density at 20 °C:                            | 903 - 923 kg/m <sup>3</sup> |
| Relative density at 20 °C:                   | 0.913                       |
| Dynamic viscosity at 20 °C:                  | Non-applicable *            |
| Kinematic viscosity at 20 °C:                | Non-applicable *            |
| Kinematic viscosity at 40 °C:                | Non-applicable *            |
| Concentration:                               | Non-applicable *            |
| pH:  | 6 - 8                       |
| Vapour density at 20 °C:                     | Non-applicable *            |
| Partition coefficient n-octanol/water 20 °C: | Non-applicable *            |
| Solubility in water at 20 °C:                | Non-applicable *            |
| Solubility properties:                       | Miscible                    |
| Decomposition temperature:                   | Non-applicable *            |
| Melting point/freezing point:                | Non-applicable *            |
| Explosive properties:                        | Non-applicable *            |
| Oxidising properties:                        | Non-applicable *            |

**Flammability:**

|                           |                  |
|---------------------------|------------------|
| Flash Point:              | 62 °C            |
| Autoignition temperature: | Non-applicable * |
| Lower flammability limit: | Non-applicable * |
| Upper flammability limit: | Non-applicable * |

**9.2 Other information:**

|                           |                  |
|---------------------------|------------------|
| Surface tension at 20 °C: | Non-applicable * |
| Refraction index:         | Non-applicable * |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

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## SECTION 10: STABILITY AND REACTIVITY (continued)

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight   | Humidity       |
|--------------------|------------------|-------------------------|------------|----------------|
| Not applicable     | Not applicable   | Precaution              | Precaution | Not applicable |

### 10.5 Incompatible materials:

| Acids              | Water          | Combustive materials | Combustible materials | Others                        |
|--------------------|----------------|----------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact  | Not applicable        | Avoid alkalis or strong bases |

### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

#### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

#### A.- Ingestion (acute effect):

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

#### B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.

#### C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces serious eye damage after contact.

#### D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

#### E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

#### F- Specific target organ toxicity (STOT) - single exposure:

Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

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**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**
**G- Specific target organ toxicity (STOT)-repeated exposure:**

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**H- Aspiration hazard:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

| Identification  | Acute toxicity  |                  | Genus  |
|---|-----------------|------------------|--------|
|   |                 |                  |        |
| Alcohols, C12-15, ethoxylated (C12-15 PARETH-7)<br>CAS: 68131-39-5<br>EC: 500-195-7     | LD50 oral       | 500 mg/kg (ATEi) |        |
|   | LD50 dermal     | >2000 mg/kg      |        |
|   | LC50 inhalation | >20 mg/L (4 h)   |        |
| Alcohols, C12-15, branched and linear, ethoxylated<br>CAS: 106232-83-1<br>EC: 500-294-5 | LD50 oral       | 2001 mg/kg       | Rat    |
|   | LD50 dermal     | 2001 mg/kg       | Rabbit |
|   | LC50 inhalation | >20 mg/L (4 h)   |        |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0   | LD50 oral       | 3350 mg/kg       | Rat    |
|   | LD50 dermal     | 2460 mg/kg       | Rabbit |
|   | LC50 inhalation | 24.6 mg/L (4 h)  | Rat    |

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

| Identification  | Acute toxicity |                     | Species                 | Genus      |
|---|----------------|---------------------|-------------------------|------------|
|   |                |                     |                         |            |
| Alcohols, C12-15, branched and linear, ethoxylated<br>CAS: 106232-83-1<br>EC: 500-294-5 | LC50           | 0.1 - 1 mg/L (96 h) |                         | Fish       |
|   | EC50           | 0.1 - 1 mg/L        |                         | Crustacean |
|   | EC50           | 0.1 - 1 mg/L        |                         | Algae      |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0   | LC50           | 2030 mg/L (96 h)    | Carassius auratus       | Fish       |
|   | EC50           | 1439 mg/L (48 h)    | Daphnia magna           | Crustacean |
|   | EC50           | 1250 mg/L (48 h)    | Scenedesmus subspicatus | Algae      |

**12.2 Persistence and degradability:**

| Identification                              | Degradability |             | Biodegradability |          |
|---|---------------|-------------|------------------|----------|
|   |               |             |                  |          |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0 | BOD5          | 0.4 g O2/g  | Concentration    | 100 mg/L |
|   | COD           | 2.41 g O2/g | Period           | 14 days  |
|   | BOD5/COD      | 0.17        | % Biodegradable  | 90 %     |

**12.3 Bioaccumulative potential:**

| Identification                              | Bioaccumulation potential |      |
|---|---------------------------|------|
|   |                           |      |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0 | BCF                       | 3    |
|   | Pow Log                   | 0.76 |
|   | Potential                 | Low  |

**12.4 Mobility in soil:**

| Identification                              | Absorption/desorption |                      | Volatility |                |
|---|-----------------------|----------------------|------------|----------------|
|   |                       |                      |            |                |
| Isobutanol<br>CAS: 78-83-1<br>EC: 201-148-0 | Koc                   | Non-applicable       | Henry      | Non-applicable |
|   | Conclusion            | Non-applicable       | Dry soil   | Non-applicable |
|   | Surface tension       | 2.378E-2 N/m (25 °C) | Moist soil | Non-applicable |

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

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**SECTION 12: ECOLOGICAL INFORMATION (continued)**

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

| Code | Description   | Waste class (Regulation (EU) No 1357/2014) |
|------|---|--|
|      | It is not possible to assign a specific code, as it depends on the intended use by the user | Dangerous                                  |

**Type of waste (Regulation (EU) No 1357/2014):**

HP14 Ecotoxic, HP4 Irritant — skin irritation and eye damage, HP6 Acute Toxicity

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

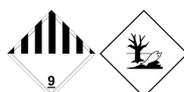
In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2015 and RID 2015:



- 14.1 UN number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-15, ethoxylated (C12-15 PARETH-7); Alcohols, C12-15, branched and linear, ethoxylated)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Dangerous for the environment:** Yes
- 14.6 Special precautions for user**
  - Special regulations: 274, 335, 375, 601
  - Tunnel restriction code: E
  - Physico-Chemical properties: see section 9
  - Limited quantities: 5 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

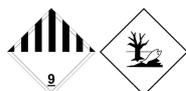
**Transport of dangerous goods by sea:**

With regard to IMDG 37-14:

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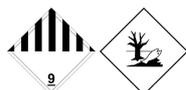
**SECTION 14: TRANSPORT INFORMATION (continued)**



- 14.1 UN number:** UN3082  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-15, ethoxylated (C12-15 PARETH-7); Alcohols, C12-15, branched and linear, ethoxylated)  
**14.3 Transport hazard class(es):** 9  
**Labels:** 9  
**14.4 Packing group:** III  
**14.5 Dangerous for the environment:** Yes  
**14.6 Special precautions for user**  
Special regulations: 274, 909  
EmS Codes: F-A, S-F  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L  
**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2015:



- 14.1 UN number:** UN3082  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Alcohols, C12-15, ethoxylated (C12-15 PARETH-7); Alcohols, C12-15, branched and linear, ethoxylated)  
**14.3 Transport hazard class(es):** 9  
**Labels:** 9  
**14.4 Packing group:** III  
**14.5 Dangerous for the environment:** Yes  
**14.6 Special precautions for user**  
Physico-Chemical properties: see section 9  
**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

- CONTINUED ON NEXT PAGE -



**SECTION 15: REGULATORY INFORMATION (continued)**

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009, 2009 No. 716  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885  
Control of Substances Hazardous to Health Regulations 2002 (as amended)  
EH40/2005 Workplace exposure limits  
The Waste Regulations 2011, 2011 No. 988

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

Non-applicable

**Texts of the legislative phrases mentioned in section 2:**

H302: Harmful if swallowed  
H315: Causes skin irritation  
H318: Causes serious eye damage  
H336: May cause drowsiness or dizziness  
H400: Very toxic to aquatic life

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**Directive 67/548/EC and Directive 1999/45/EC:**

R10: Flammable  
R22: Harmful if swallowed  
R37/38: Irritating to respiratory system and skin  
R41: Risk of serious damage to eyes  
R50: Very toxic to aquatic organisms  
R67: Vapours may cause drowsiness and dizziness

**CLP Regulation (EC) n° 1272/2008:**

Acute Tox. 4: H302 - Harmful if swallowed  
Aquatic Acute 1: H400 - Very toxic to aquatic life  
Eye Dam. 1: H318 - Causes serious eye damage  
Flam. Liq. 3: H226 - Flammable liquid and vapour  
Skin Irrit. 2: H315 - Causes skin irritation  
STOT SE 3: H335 - May cause respiratory irritation  
STOT SE 3: H336 - May cause drowsiness or dizziness

**Classification procedure:**

Acute Tox. 4: Calculation method  
Skin Irrit. 2: Calculation method  
Eye Dam. 1: Calculation method  
STOT SE 3: Calculation method  
Aquatic Acute 1: Calculation method

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>  
<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

- CONTINUED ON NEXT PAGE -

**SECTION 16: OTHER INFORMATION (continued)**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol–water partition coefficient  
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -