SAFETY DATA SHEET
Tech A Compound

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

1.1 Product identifier
Product name: Tech A Compound
Product code: 858AEL, 859AEL
Product description: Solid
Product type: Not available.
Other means of identification: Not available.
Trade name: Tech A Compound

1.2 Relevant identified uses of the substance or mixture and uses advised against

<table>
<thead>
<tr>
<th>Identified uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial applications: Rubber Filler</td>
</tr>
<tr>
<td>Other non-specified industry: Rubber Filler</td>
</tr>
</tbody>
</table>

1.3 Details of the supplier of the safety data sheet
Distributor: Tech Europe 15 Ballinderry Road, Lisburn, BT28 2SA, UK, info@techeurope.co.uk, Chemtrec UK - +(44)-870-8200418
Manufacturer: Tech International, 200 East Coshocton Street, Johnstown, Ohio 43031, 740-967-9015 CHEMTREC: 1-800-424-9300
E-mail address of person responsible for this SDS: jsellers@techtirerepairs.com

1.4 Emergency telephone number
National advisory body/Poison Center: CHEMTREC France: +(33)-975181407
Supplier: +44 2892 665721
Hours of operation: 09.00-17.00 GMT
Information limitations: Material Safety Data Sheet

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition: Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Acute Tox. 4, H302
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Repr. 2, H361d
STOT SE 3, H336
STOT RE 2, H373
Aquatic Chronic 2, H411
Ingredients of unknown toxicity: Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 44.1%

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SECTION 2: Hazards identification

Ingredients of unknown ecotoxicity: Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 43.4%

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

Classification: Repr. Cat. 3; R63
Xn; R48/20
Xi; R36/38
R43, R67
N; R51/53

Human health hazards: Possible risk of harm to the unborn child. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes and skin. May cause sensitization by skin contact. Vapors may cause drowsiness and dizziness.

Environmental hazards: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

2.2 Label elements

2.2.1 Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:
Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of damaging the unborn child.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary statements

General: Not applicable.

Prevention: Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not breathe dust.

Response: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Storage: Store locked up.

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

2.2.2 Label elements

Hazard symbol or symbols:

Indication of danger: Harmful, Dangerous for the environment

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SECTION 2: Hazards identification

Risk phrases:
- R63: Possible risk of harm to the unborn child.
- R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R36/38: Irritating to eyes and skin.
- R43: May cause sensitization by skin contact.
- R67: Vapors may cause drowsiness and dizziness.
- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:
- S36/37: Wear suitable protective clothing and gloves.
- S61: Avoid release to the environment. Refer to special instructions/safety data sheet.

Hazardous ingredients:
- Toluene
- Zinc bis(dibutylthiocarbamate)

Supplemental label elements:
- Containers to be fitted with child-resistant fastenings: Not applicable.
- Tactile warning of danger: Not applicable.

SECTION 3: Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc bis(dibutylthiocarbamate)</td>
<td>EC: 205-232-8, CAS: 136-23-2, Index: 006-081-00-9</td>
<td>&gt;=1, &lt;2.5</td>
<td>Xi; R36/37/38 R43 N; R50/53</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
<td>[1]</td>
</tr>
<tr>
<td>zinc oxide</td>
<td>EC: 215-222-5, CAS: 1314-13-2, Index: 030-013-00-7</td>
<td>&gt;=0.25, &lt;2.5</td>
<td>N; R50/53</td>
<td>Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
<td>[1] [2]</td>
</tr>
<tr>
<td>cyclohexyl(ethyl)amine</td>
<td>EC: 226-733-8, CAS: 5459-93-8</td>
<td>&gt;=1, &lt;3</td>
<td>R10 Xn; R22 Xi; R36/38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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SECTION 3: Composition/information on ingredients

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

Type

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. 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

**Potential acute health effects**

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SECTION 4: First aid measures

Eye contact: Irritating to eyes.
Inhalation: Vapors may cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact: Irritating to skin. May cause sensitization by skin contact.
Ingestion: Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- irritation
- watering
- redness

Inhalation: Adverse symptoms may include the following:
- nausea or vomiting
- headache
- drowsiness/fatigue
- dizziness/vertigo
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Skin contact: Adverse symptoms may include the following:
- irritation
- redness
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

Ingestion: Adverse symptoms may include the following:
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Hazard from the substance or mixture: No specific fire or explosion hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
- sulfur oxides
- metal oxide/oxides

5.3 Advice for firefighters

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SECTION 5: Firefighting measures

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Small spill: Move containers from spill area. Avoid dust generation. Place spilled material in a designated, labeled waste container. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

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).

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not
SECTION 7: Handling and storage

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Notes: Labour Act, Art 4412-149 (Regulatory binding exposure limits)</td>
</tr>
<tr>
<td></td>
<td>TWA: 20 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 100 ppm 15 minutes.</td>
</tr>
<tr>
<td>calcium carbonate</td>
<td>Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>zinc oxide</td>
<td>Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours. Form: dust</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hours. Form: fume</td>
</tr>
</tbody>
</table>

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

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SECTION 8: Exposure controls/personal protection

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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

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: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: Solid. [Viscous mass.]

Color: Tan. [Light]

Odor: Solvent. [Strong]

Odor threshold: Not applicable.

pH: Not available.

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**SECTION 9: Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>111°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: 21.7°C</td>
</tr>
<tr>
<td></td>
<td>Open cup: Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>2.24 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Burning time</td>
<td>229 s</td>
</tr>
<tr>
<td>Burning rate</td>
<td>0.87 mm/s</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Lower: 1.1%</td>
</tr>
<tr>
<td></td>
<td>Upper: 7.1%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>2.9 kPa [room temperature]</td>
</tr>
<tr>
<td>Vapor density</td>
<td>3.14 [Air = 1]</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.04</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>422°C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Dynamic (room temperature): Not applicable.</td>
</tr>
<tr>
<td>VOC content</td>
<td>2.9 lbs/gal (347.5 g/l)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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 : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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**Tech A Compound**

**SECTION 11: Toxicological information**

### Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>calcium carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>zinc bis (dibutyldithiocarbamate)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>cyclohexyl(ethyl)amine</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>590 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**: Not available.

### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>0.5 minutes 100 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>870 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>24 hours 2 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Pig</td>
<td>24 hours 250 microliters</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>435 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>500 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>calcium carbonate</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>24 hours 750 micrograms</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>zinc bis (dibutyldithiocarbamate)</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>39 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>zinc oxide</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>0.5 Grams 24 hours 500 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>cyclohexyl(ethyl)amine</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>24 hours 250 micrograms</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>24 hours 5 milligrams</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**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.

**Date of issue/Date of revision**: 11/12/2014.
SECTION 11: Toxicological information

Teratogenicity
Conclusion/Summary : Not available.

Information on the likely routes of exposure
Potential acute health effects
Eye contact : Irritating to eyes.
Inhalation : Vapors may cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact : Irritating to skin. May cause sensitization by skin contact.
Ingestion : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact : Adverse symptoms may include the following:
irritation
watering
redness
Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
reduced fetal weight
increase in fetal deaths
skeletal malformations
Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.
Potential chronic health effects
Not available.

Conclusion/Summary : Not available.
General : Harmful: danger of serious damage to health by prolonged exposure through inhalation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: May cause birth defects, based on animal data.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Other information: Not available.

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>Acute EC50 433 ppm Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 12500 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 11600 µg/l Fresh water</td>
<td>Crustaceans - Gammarus pseudolimnaeus - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 6000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5500 µg/l Fresh water</td>
<td>Fish - Oncorhynchus kisutch - Fry</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 500000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td>calcium carbonate</td>
<td>Chronic NOEC 1000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;56000000 µg/l Fresh water</td>
<td>Fish - Gambusia affinis - Adult</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 61 mg/g Fresh water</td>
<td>Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>28 days</td>
</tr>
<tr>
<td>zinc oxide</td>
<td>Acute EC50 0.042 mg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 98 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.1 ppm Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.017 mg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata - Exponential growth phase</td>
<td>72 hours</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

12.2 Persistence and degradability

Conclusion/Summary: Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>2.69</td>
<td>8.317637711</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

Mobility: Not available.

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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).

13.1 Waste treatment methods

**Product**

Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste**

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

**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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Additional information**

**14.6 Special precautions for user**

Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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**SECTION 14: Transport information**

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: 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: None of the components are listed.

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

**Other EU regulations**

- Europe inventory: Not determined.
- Black List Chemicals: Not listed
- 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**

<table>
<thead>
<tr>
<th>Carcinogenic effects</th>
<th>Mutagenic effects</th>
<th>Developmental effects</th>
<th>Fertility effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>-</td>
<td></td>
<td>Repr. Cat. 3; R63</td>
</tr>
</tbody>
</table>

**National regulations**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>List name</th>
<th>Name on list</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>France Occupational Exposure Limits</td>
<td>toluène</td>
<td>Repro. R2</td>
<td></td>
</tr>
</tbody>
</table>

- **Social Security Code, Articles L 461-1 to L 461-7**
  - toluene
    - RG 4bis

- **Reinforced medical surveillance**
  - Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

- **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

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SECTION 15: Regulatory information

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

SECTION 16: Other information

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

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
- Acute Tox. 4, H302
- Skin Irrit. 2, H315
- Eye Irrit. 2, H319
- Skin Sens. 1, H317
- Repr. 2, H361d
- STOT SE 3, H336
- STOT RE 2, H373
- Aquatic Chronic 2, H411

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Irr. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 2, H361d</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

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.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.
- H336: May cause drowsiness and dizziness.
- H361d: Suspected of damaging the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H411: Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]:
- Acute Tox. 4, H302: ACUTE TOXICITY: ORAL - Category 4
- Aquatic Acute 1, H400: AQUATIC HAZARD (ACUTE) - Category 1
- Aquatic Chronic 1, H410: AQUATIC HAZARD (LONG-TERM) - Category 1
- Aquatic Chronic 2, H411: AQUATIC HAZARD (LONG-TERM) - Category 2
- 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. 2, H361d: TOXIC TO REPRODUCTION [Unborn child] - Category 2

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SECTION 16: Other information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>SKIN SENSITIZATION - Category 1</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2</td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3</td>
</tr>
<tr>
<td>STOT SE 3, H336</td>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3</td>
</tr>
</tbody>
</table>

Full text of abbreviated R phrases:
- R11- Highly flammable.
- R10- Flammable.
- R63- Possible risk of harm to the unborn child.
- R22- Harmful if swallowed.
- R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R65- Harmful: may cause lung damage if swallowed.
- R38- Irritating to skin.
- R36/38- Irritating to eyes and skin.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R43- May cause sensitization by skin contact.
- R67- Vapors may cause drowsiness and dizziness.
- R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]:
- F - Highly flammable
- Repr. Cat. 3 - Toxic to reproduction category 3
- Xn - Harmful
- Xi - Irritant
- N - Dangerous for the environment

Notice to reader:
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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