**GC/MS Forensic Toxicology Checkout Mixture, Part Number 5190-0471**

### Section 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>: GC/MS Forensic Toxicology Checkout Mixture, Part Number 5190-0471</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No.</td>
<td>5190-0471</td>
</tr>
</tbody>
</table>

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

- Analytical chemistry.
- Part No. 5190-0471-1 GC/MS Forensic Toxicology Checkout Mixture 3 x 1 ml

**Supplier/Manufacturer**

- Agilent Technologies Australia Pty Ltd
- 679 Springvale Road
- Mulgrave
- Victoria 3170, Australia
- 1800 802 402

**Emergency telephone number (with hours of operation)**

- CHEMTREC®: +(61)-290372994

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### Section 2. Hazard(s) identification

#### Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>FLAMMABLE LIQUIDS - Category 2</td>
</tr>
<tr>
<td>H302</td>
<td>ACUTE TOXICITY (oral) - Category 4</td>
</tr>
<tr>
<td>H315</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td>H360</td>
<td>REPRODUCTIVE TOXICITY (Fertility) - Category 1A</td>
</tr>
<tr>
<td>H360</td>
<td>REPRODUCTIVE TOXICITY (Unborn child) - Category 1A</td>
</tr>
<tr>
<td>H371</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2</td>
</tr>
<tr>
<td>H373</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2</td>
</tr>
<tr>
<td>H304</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

**GHS label elements**

- **Hazard pictograms**
- **Signal word**: DANGER
- **Hazard statements**: P225 - Highly flammable liquid and vapour.
- Precautionary statements
  - **Prevention**: P201 - Obtain special instructions before use.
  - P202 - Do not handle until all safety precautions have been read and understood.
  - P281 - Use personal protective equipment as required.
  - P280 - Wear protective gloves. Wear eye or face protection.
  - P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
  - P242 - Use only non-sparking tools.
  - P243 - Take precautionary measures against static discharge.
Section 2. Hazard(s) identification

P233 - Keep container tightly closed.  
P260 - Do not breathe vapour.  
P270 - Do not eat, drink or smoke when using this product.  
P264 - Wash hands thoroughly after handling.  

Response:

P314 - Get medical attention if you feel unwell.  
P309 + P311 - IF exposed or if you feel unwell: Call a POISON CENTER or physician.  
P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P302 + P352 + P362 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing.  
P332 + P313 - If skin irritation occurs: Get medical attention.

Storage:

P405 - Store locked up.  
P403 - Store in a well-ventilated place.  
P235 - Keep cool.

Disposal:

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:

Not applicable.

Other hazards which do not result in classification:

None known.

Section 3. Composition and ingredient information

Substance/mixture: Mixture

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>≥90</td>
<td>108-88-3</td>
</tr>
<tr>
<td>Methanol</td>
<td>≤5</td>
<td>67-56-1</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>≤5</td>
<td>75-05-8</td>
</tr>
</tbody>
</table>

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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. If necessary, call a poison center or physician.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 necessary, call a poison center or physician. 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.
Section 4. First aid measures

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. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Skin contact: Causes skin irritation.

Ingestion: Harmful if swallowed. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

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

Inhalation: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

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

Ingestion: Adverse symptoms may include the following:
- nausea or vomiting
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

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.

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.

See toxicological information (Section 11)
Section 5. Firefighting measures

**Extinguishing media**
- **Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.
- **Unsuitable extinguishing media**: Do not use water jet.

**Specific hazards arising from the chemical**
- Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous thermal decomposition products**
- Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Nitrogen oxides
  - Cyanides
  - Formaldehyde.

**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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**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.

**Hazchem code**
- 3YE

Section 6. Accidental release measures

**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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. 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 the information in "For non-emergency personnel".

**Environmental precautions**
- Avoid dispersal of spilt 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).

**Methods and material for containment and cleaning up**
- **Methods for cleaning up**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

**Precautions for safe handling**
Section 7. Handling and storage

Protective measures
Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Conditions for safe storage, including any incompatibilities
Do not store above the following temperature: 4°C (39.2°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Toluene         | Safe Work Australia (Australia, 1/2014). Absorbed through skin.  
STEL: 574 mg/m³ 15 minutes.  
STEL: 150 ppm 15 minutes.  
TWA: 191 mg/m³ 8 hours.  
TWA: 50 ppm 8 hours. |
| Methanol        | Safe Work Australia (Australia, 1/2014). Absorbed through skin.  
STEL: 328 mg/m³ 15 minutes.  
STEL: 250 ppm 15 minutes.  
TWA: 262 mg/m³ 8 hours.  
TWA: 200 ppm 8 hours. |
| Acetonitrile    | Safe Work Australia (Australia, 1/2014). Absorbed through skin.  
STEL: 101 mg/m³ 15 minutes.  
STEL: 60 ppm 15 minutes.  
TWA: 67 mg/m³ 8 hours.  
TWA: 40 ppm 8 hours. |

Appropriate engineering controls
Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
**Section 8. Exposure controls and personal protection**

**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.

**Individual protection measures**

**Hand protection**

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products.**

- In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Eye/face protection**

- Reservoirs are approved standard should be worn when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**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**

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Section 9. Physical and chemical properties**

**Appearance**

**Physical state**

- Liquid.

**Colour**

- Colourless.

**Odour**

- Benzene-like.

**Odour threshold**

- Not available.

**pH**

- Not available.

**Melting point**

- Not available.

**Boiling point**

- Not available.

**Flash point**

- Closed cup: -18 to 23°C (-0.4 to 73.4°F)

**Evaporation rate**

- >1 (butyl acetate = 1)

**Flammability (solid, gas)**

- Not applicable.

**Lower and upper explosive (flammable) limits**

- Not available.

**Vapour pressure**

- Not available.

**Vapour density**

- Not available.

**Relative density**

- 0.858
Section 9. Physical and chemical properties

Density : 0.858 g/cm³
Solubility : Easily soluble in the following materials: methanol, diethyl ether and acetone. Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.
Chemical stability : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

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 Vapour</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Methanol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>145000 ppm</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>64000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rabbit</td>
<td>15800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>17100 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2460 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

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>-</td>
<td>0.5 minutes 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>870 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>435 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Methanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>40 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20</td>
<td>-</td>
</tr>
</tbody>
</table>
**Section 11. Toxicological information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>- milligrams 24 hours 100 microliters</td>
<td>-</td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>- milligrams 500</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**

**Skin**
- Repeated exposure may cause skin dryness or cracking.

**Sensitisation**
- Not available.

**Mutagenicity**
- Not available.

**Carcinogenicity**
- Not available.

**Reproductive toxicity**
- Not available.

**Teratogenicity**
- Not available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Aspiration hazard**

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>GC/MS Forensic Toxicology Checkout Mixture, Part Number 5190-0471</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

**Information on likely routes of exposure**
- Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Eye contact**
- No known significant effects or critical hazards.

**Inhalation**
- No known significant effects or critical hazards.

**Skin contact**
- Causes skin irritation.

**Ingestion**
- Harmful if swallowed. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

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

**Inhalation**
- Adverse symptoms may include the following:
  - reduced foetal weight
  - increase in foetal deaths
  - skeletal malformations
Section 11. Toxicological information

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

Ingestion:
Adverse symptoms may include the following:
- nausea or vomiting
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Delayed and immediate effects as well as 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.
- General: May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity: No known significant effects or critical hazards.
- Mutagenicity: No known significant effects or critical hazards.
- Teratogenicity: May damage the unborn child.
- Developmental effects: No known significant effects or critical hazards.
- Fertility effects: May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1819.2 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>5147.6 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>51.48 mg/l</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: blurred or double vision. Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage.

Section 12. Ecological information

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 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 -</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 17/07/2017
Date of previous issue: 30/05/2016
Version: 6
Section 12. Ecological information

### Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

### 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>2.73</td>
<td>90</td>
<td>low</td>
</tr>
<tr>
<td>Methanol</td>
<td>-0.77</td>
<td>&lt;10</td>
<td>low</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>-0.34</td>
<td>3</td>
<td>low</td>
</tr>
</tbody>
</table>

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)**

Not available.

### Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods**

The generation of waste should be avoided or minimised 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

**ADG / IMDG / IATA**

Not regulated as Dangerous Goods according to the ADG Code.

**Additional information**

**De minimis quantities**

**ADG**

Hazchem code: 3YE
Section 14. Transport information

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.

Transport in bulk according to Annex II of Marpol and the IBC Code: Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Model Work Health and Safety Regulations - Scheduled Substances

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Restricted hazardous chemical [For spray painting if the substance contains more than 1% by volume]</td>
</tr>
</tbody>
</table>

International regulations

- Chemical Weapon Convention List Schedules I, II & III Chemicals
  Not listed.

- Montreal Protocol (Annexes A, B, C, E)
  Not listed.

- Stockholm Convention on Persistent Organic Pollutants
  Not listed.

- Rotterdam Convention on Prior Informed Consent (PIC)
  Not listed.

- UNECE Aarhus Protocol on POPs and Heavy Metals
  Not listed.

Inventory list

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Canada</td>
<td>Not determined.</td>
</tr>
<tr>
<td>China</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Europe</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>
| Japan            | Japan inventory (ENCS): Not determined.  
|                  | Japan inventory (ISHL): Not determined. |
| Malaysia         | Not determined.               |
| New Zealand      | Not determined.               |
| Philippines      | Not determined.               |
| Republic of Korea| Not determined.               |
| Taiwan           | Not determined.               |
| Thailand         | Not determined.               |
| Turkey           | Not determined.               |
| United States    | Not determined.               |
| Viet Nam         | Not determined.               |
Section 16. Any other relevant information

History
Date of issue/Date of revision : 17/07/2017
Date of previous issue : 30/05/2016.
Version : 6
Key to abbreviations : ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships,
1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1A, H360 (Fertility)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1A, H360 (Unborn child)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 2, H371</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Asp. Tox. 1, H304</td>
<td>Expert judgment</td>
</tr>
</tbody>
</table>

References : 5190-0471 Taiwan Safety Data Sheet (30/05/2016)

Indicates information that has changed from previously issued version.

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