# SAFETY DATA SHEET



#### **ARIES® Extraction Kit**

## Section 1. Identification

| Product identifier                                   | : ARIES <sup>®</sup> Extraction Kit                     |
|--|---|
| Product code   |   |
|  |   |
|  |   |
| Other means of identification                        | : Not available.  |
| Product type   | : Liquid.   |
| Identified uses                                      | : For Professional use only. Use as per Product Insert. |
|  |   |
| Supplier's details                                   | : Luminex Corporation<br>12212 Technology Blvd          |
|  | Austin, Texas 78727                                     |
|  | Tel: 1-512-381-4397                                     |
|  | Toll free: 1-877-785-2323 (US and Canada)               |
|  | Fax: 1-512-219-5114<br>http://www.luminexcorp.com       |
| e-mail address of person<br>responsible for this SDS | : Support@Luminexcorp.com                               |
| Emergency telephone                                  | : 1-512-381-4397  |
| number (with hours of operation)                     | 24/7  |

# Section 2. Hazards identification

| Classification of the | : Plug 1 | Not classified.                                 |
|-----------------------|----------|---|
| substance or mixture  | Plug 2   | FLAMMABLE LIQUIDS - Category 2                  |
|                       | -        | SERIOUS EYE DAMAGE/EYE IRRITATION -             |
|                       |          | Category 2A                                     |
|                       |          | SPECIFIC TARGET ORGAN TOXICITY -                |
|                       |          | SINGLE EXPOSURE (Narcotic effects) -            |
|                       |          | Category 3                                      |
|                       | Plug 3   | FLAMMABLE LIQUIDS - Category 2                  |
|                       |          | SERIOUS EYE DAMAGE/EYE IRRITATION -             |
|                       |          | Category 2A                                     |
|                       |          | SPECIFIC TARGET ORGAN TOXICITY -                |
|                       |          | SINGLE EXPOSURE (Narcotic effects) -            |
|                       |          | Category 3                                      |
|                       | Plug 4   | ACUTE TOXICITY (oral) - Category 4              |
|                       | Wash 1   | FLAMMABLE LIQUIDS - Category 2                  |
|                       |          | SERIOUS EYE DAMAGE/EYE IRRITATION -             |
|                       |          | Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY - |
|                       |          | SINGLE EXPOSURE (Narcotic effects) -            |
|                       |          | Category 3                                      |
|                       | Wash 2   | Not classified.                                 |
|                       | Elution  | Not classified.                                 |
|                       |          | Not oldoshou.                                   |



# Section 2. Hazards identification

| GHS label elements, including precautionary statements |   |   |
|--|---|---|
| Hazard pictograms                                      | : |   |
| Signal word  | : | Danger  |
|  |   | The hazards in this SDS are present, but given the extremely small quantities in this product, the hazards may be less severe.  |
| Hazard statements                                      | : | H225 - Highly flammable liquid and vapour.  |
| Precautionary statements                               |   |   |
| Prevention   | : | <ul> <li>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P241 - Use explosion-proof electrical, ventilating or lighting equipment.</li> <li>P242 - Use non-sparking tools.</li> <li>P243 - Take action to prevent static discharges.</li> <li>P233 - Keep container tightly closed.</li> </ul> |
| Response   | : | Not applicable.   |
| Storage  | 1 | P403 + P235 - Store in a well-ventilated place. Keep cool.  |
| Disposal   | : | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  |
|  |   |   |

Other hazards which do not : None known. result in classification

# Section 3. Composition/information on ingredients

| Substance/mixture | : Mixture        |
|-------------------|------------------|
| Other means of    | : Not available. |
| identification    |                  |

| Ingredient name   | %                     | CAS number            |
|---|-----------------------|-----------------------|
| Plug 2<br>Isopropyl alcohol   | ≥90                   | 67-63-0               |
| Plug 3<br>Isopropyl alcohol   | 80 - 100              | 67-63-0               |
| <b>Plug 4</b><br>Guanidinium thiocyanate<br>Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy- | ≥50 - <55<br>≥3 - ≤5  | 593-84-0<br>9002-93-1 |
| <b>Wash 1</b><br>Isopropyl alcohol<br>Guanidinium thiocyanate   | ≥25 - ≤50<br>≥5 - ≤10 | 67-63-0<br>593-84-0   |

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  | : Not applicable. |
|--------------|-------------------|
| Inhalation   | : Not applicable. |
| Skin contact | : Not applicable. |
| Ingestion    | : Not applicable. |

#### Most important symptoms/effects, acute and delayed Potential acute health effects

| i otential acute fieatti | enects  |   |
|--------------------------|---|---|
| Eye contact              | : Plug 1<br>Plug 2<br>Plug 3<br>Plug 4<br>Wash 1<br>Wash 2<br>Elution | No known significant effects or critical hazards.<br>Causes serious eye irritation.<br>Causes serious eye irritation.<br>No known significant effects or critical hazards.<br>Causes serious eye irritation.<br>No known significant effects or critical hazards.<br>No known significant effects or critical hazards.  |
| Inhalation               | : Plug 1<br>Plug 2<br>Plug 3  | No known significant effects or critical hazards.<br>Can cause central nervous system (CNS)<br>depression. May cause drowsiness or dizziness.<br>Can cause central nervous system (CNS)   |
|                          | Plug 4<br>Wash 1  | depression. May cause drowsiness or dizziness.<br>No known significant effects or critical hazards.<br>Can cause central nervous system (CNS)<br>depression. May cause drowsiness or dizziness.   |
|                          | Wash 2<br>Elution   | No known significant effects or critical hazards.<br>No known significant effects or critical hazards.  |
| Skin contact             | : Plug 1<br>Plug 2<br>Plug 3<br>Plug 4<br>Wash 1<br>Wash 2<br>Elution | No known significant effects or critical hazards.<br>No known significant effects or critical hazards. |
| Ingestion                | : Plug 1<br>Plug 2  | No known significant effects or critical hazards.<br>Can cause central nervous system (CNS)<br>depression.  |
|                          | Plug 3  | Can cause central nervous system (CNS) depression.  |
|                          | Plug 4  | Harmful if swallowed.   |
|                          | Wash 1  | Can cause central nervous system (CNS) depression.  |
|                          | Wash 2  | No known significant effects or critical hazards.   |
|                          | Elution   | No known significant effects or critical hazards.   |
| Over-exposure signs/     | symptoms  | -   |

#### **Over-exposure signs/symptoms**

| Eye contact  | : No known significant effects or critical hazards. |
|--------------|---|
| Inhalation   | : No known significant effects or critical hazards. |
| Skin contact | : No known significant effects or critical hazards. |
| Ingestion    | : No known significant effects or critical hazards. |

| Indication of immediate r | nedical attention and special treatment needed, if necessary |
|---------------------------|--|
| Notes to physician        | : None identified.   |
| Specific treatments       | : No specific treatment.                                     |



## Section 4. First aid measures

Protection of first-aiders : No special measures required.

See toxicological information (Section 11)

# Section 5. Firefighting measures

| Extinguighing modia                            |   |
|--|---|
| <u>Extinguishing media</u>                     |   |
| Suitable extinguishing media                   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.  |
| Unsuitable extinguishing media                 | : Do not use water jet.   |
| Specific hazards arising from the chemical     | : Highly flammable liquid and vapour.   |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>sulfur oxides                                |
| Special protective actions for fire-fighters   | : 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. |

# Section 6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures |   |  |
|---|---|--|
| For non-emergency<br>personnel                                      | : 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   | : No special requirements.  |  |

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

| Spill | : Dilute with water and mop up if water-soluble or absorb with an inert dry material |
|-------|--|
|       | and place in an appropriate waste disposal container.                                |

# Section 7. Handling and storage

#### Precautions for safe handling

| Protective measures                    | : Put on appropriate personal protective equipment (see Section 8).   |
|--|---|
| 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. See also Section 8 for additional information on hygiene measures. |

## Section 7. Handling and storage

**Conditions for safe storage,** : Store in accordance with local regulations. Please store at 15°C to 30°C upon receipt. including any

incompatibilities

# Section 8. Exposure controls/personal protection

#### **Control parameters**

#### **Occupational exposure limits**

| Ingredient name             | Exposure limits   |
|-----------------------------|---|
| Plug 2<br>Isopropyl alcohol | Workplace Safety and Health Act (Singapore, 2/2006).<br>PEL (long term): 400 ppm 8 hours.<br>PEL (long term): 983 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 1230 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 500 ppm 15 minutes. |
| Plug 3<br>Isopropyl alcohol | Workplace Safety and Health Act (Singapore, 2/2006).<br>PEL (long term): 400 ppm 8 hours.<br>PEL (long term): 983 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 1230 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 500 ppm 15 minutes. |
| Wash 1<br>Isopropyl alcohol | Workplace Safety and Health Act (Singapore, 2/2006).<br>PEL (long term): 400 ppm 8 hours.<br>PEL (long term): 983 mg/m <sup>3</sup> 8 hours.<br>PEL (short term): 1230 mg/m <sup>3</sup> 15 minutes.<br>PEL (short term): 500 ppm 15 minutes. |

| Appropriate engineering controls | : No special ventilation requirements. |
|----------------------------------|--|
| Environmental exposure controls  | : No special measures required.        |
| Individual protection measur     | es                                     |

| Hygiene measures              | : Follow good industrial hygiene practice.     |
|-------------------------------|--|
| Eye/face protection           | : Not required under normal conditions of use. |
| Skin protection               |  |
| Hand protection               | : Not required under normal conditions of use. |
| Body protection               | : Not required under normal conditions of use. |
| Other skin protection         | : Not required under normal conditions of use. |
| <b>Respiratory protection</b> | : Not required under normal conditions of use. |

# Section 9. Physical and chemical properties

ŝ

#### **Appearance**

**Physical state** 

| Plug 1  | Liquid. |
|---------|---------|
| Plug 2  | Liquid. |
| Plug 3  | Liquid. |
| Plug 4  | Liquid. |
| Wash 1  | Liquid. |
| Wash 2  | Liquid. |
| Elution | Liquid. |
|         |         |



#### **ARIES® Extraction Kit**

# Section 9. Physical and chemical properties

| Oection 5.1 Hysical                          | and chemical proper | 105                         |
|--|---------------------|-----------------------------|
| Colour                                       | : Plug 1            | Colourless.                 |
|  | Plug 2              | Colourless.                 |
|  | Plug 3              | Colourless.                 |
|  | Plug 4              | Colourless.                 |
|  | Wash 1              | Colourless.                 |
|  | Wash 2              | Colourless.                 |
|  | Elution             | Colourless.                 |
| Odour  | : Plug 1            | Odourless.                  |
|  | Plug 2              | Odourless.                  |
|  | Plug 3              | Odourless.                  |
|  | Plug 4              | Odourless.                  |
|  | Wash 1              | Odourless.                  |
|  | Wash 2              | Odourless.                  |
|  | Elution             | Odourless.                  |
| Odour threshold                              | Not available.      |                             |
| рН   | Plug 1              | Not available.              |
|  | Plug 2              | Not available.              |
|  | Plug 3              | Not available.              |
|  | Plug 4              | Not available.              |
|  | Wash 1              | Not available.              |
|  | Wash 2              | Not available.              |
|  | Elution             | Not available.              |
| Melting point                                | Not available.      |                             |
| Boiling point                                | Not available.      |                             |
|  | : Plug 1            | Not available.              |
|  | Plug 2              | Closed cup: 11.7°C (53.1°F) |
|  | Plug 3              | Closed cup: 11.7°C (53.1°F) |
|  | Plug 4              | Not available.              |
|  | Wash 1              | Closed cup: 21°C (69.8°F)   |
|  | Wash 2              | Not available.              |
|  | Elution             | Not available.              |
| Evaporation rate                             | : Plug 1            | Not available.              |
|  | Plug 2              | Not available.              |
|  | Plug 3              | Not available.              |
|  | Plug 4              | Not available.              |
|  | Wash 1              | Not available.              |
|  | Wash 2              | Not available.              |
|  | Elution             | Not available.              |
| Flammability (solid, gas)                    | Not available.      |                             |
| Lower and upper explosive (flammable) limits | : Not available.    |                             |
| Vapour pressure                              | Not available.      |                             |
| Vapour density                               | Not available.      |                             |
| Relative density                             | : Plug 1            | Not available.              |
| -  | Plug 2              | Not available.              |
|  | Plug 3              | Not available.              |
|  | Plug 4              | Not available.              |
|  | Wash 1              | Not available.              |
|  | Wash 2              | Not available.              |
|  | Elution             | Not available.              |
| Solubility                                   | Not available.      |                             |
| Solubility in water                          | : Not available.    |                             |



# **Section 9. Physical and chemical properties**

| Partition coefficient: n-<br>octanol/water | 1 | Not available. |
|--|---|----------------|
| Auto-ignition temperature                  | 1 | Not available. |
| Decomposition temperature                  | 1 | Not available. |
| Viscosity                                  | 1 | Not available. |
| Flow time (ISO 2431)                       | 1 | 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: oxidising materials.

| SADT                             | : Not available.   |
|----------------------------------|--|
| 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

| Product/ingredient name                         | Result                   | Species       | Dose                      | Exposure |
|---|--------------------------|---------------|---------------------------|----------|
| Plug 2  |                          |               |                           |          |
| Isopropyl alcohol                               | LD50 Dermal<br>LD50 Oral | Rabbit<br>Rat | 12800 mg/kg<br>5000 mg/kg | -        |
| Plug 3  |                          |               |                           |          |
| Isopropyl alcohol                               | LD50 Dermal              | Rabbit        | 12800 mg/kg               | -        |
|   | LD50 Oral                | Rat           | 5000 mg/kg                | -        |
| Plug 4  |                          |               |                           |          |
| Poly(oxy-1,2-ethanediyl), α-                    | LD50 Oral                | Rat           | 1800 mg/kg                | -        |
| [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy- |                          |               |                           |          |
| Wash 1  |                          |               |                           |          |
| Isopropyl alcohol                               | LD50 Dermal              | Rabbit        | 12800 mg/kg               | -        |
|   | LD50 Oral                | Rat           | 5000 mg/kg                | -        |

#### Irritation/Corrosion



# Section 11. Toxicological information

| Product/ingredient name   | Result                   | Species | Score | Exposure        | Observation |
|---|--------------------------|---------|-------|-----------------|-------------|
| Plug 2  |                          |         |       |                 |             |
| Isopropyl alcohol   | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 mg | -           |
| ,   | Eyes - Moderate irritant | Rabbit  | -     | 10 mg           | -           |
|   | Eyes - Severe irritant   | Rabbit  | -     | 100 mg          | -           |
|   | Skin - Mild irritant     | Rabbit  | -     | 500 mg          | -           |
| Plug 3  |                          |         |       |                 |             |
| Isopropyl alcohol   | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 mg | -           |
|   | Eyes - Moderate irritant | Rabbit  | -     | 10 mg           | -           |
|   | Eyes - Severe irritant   | Rabbit  | -     | 100 mg          | -           |
|   | Skin - Mild irritant     | Rabbit  | -     | 500 mg          | -           |
| Plug 4  |                          |         |       |                 |             |
| Poly(oxy-1,2-ethanediyl), α-<br>[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy- | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 10 μL  | -           |
|   | Skin - Mild irritant     | Rabbit  | -     | 24 hours 500 μL | -           |
| Wash 1  |                          |         |       |                 |             |
| Isopropyl alcohol   | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 mg | -           |
|   | Eyes - Moderate irritant | Rabbit  | -     | 10 mg           | -           |
|   | Eyes - Severe irritant   | Rabbit  | -     | 100 mg          | -           |
|   | Skin - Mild irritant     | Rabbit  | -     | 500 mg          | -           |

#### Sensitisation

There is no data available.

#### **Mutagenicity**

There is no data available.

#### **Carcinogenicity**

There is no data available.

#### Reproductive toxicity

There is no data available.

#### **Teratogenicity**

#### There is no data available.

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

| Name                        | Category   | Target organs    |
|-----------------------------|------------|------------------|
| Plug 2<br>Isopropyl alcohol | Category 3 | Narcotic effects |
| Plug 3<br>Isopropyl alcohol | Category 3 | Narcotic effects |
| Wash 1<br>Isopropyl alcohol | Category 3 | Narcotic effects |

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

There is no data available.

#### **Aspiration hazard**

There is no data available.

#### Information on likely routes : Dermal contact. Eye contact. Inhalation. Ingestion.

#### of exposure

#### Potential acute health effects

# Section 11. Toxicological information

| Eye contact  | : Plug 1<br>Plug 2 | No known significant effects or critical hazards.<br>Causes serious eye irritation. |
|--------------|--------------------|---|
|              | Plug 3             | Causes serious eye irritation.  |
|              | Plug 4             | No known significant effects or critical hazards.                                   |
|              | Wash 1             | Causes serious eye irritation.  |
|              | Wash 2             | No known significant effects or critical hazards.                                   |
|              | Elution            | No known significant effects or critical hazards.                                   |
| Inhalation   | : Plug 1           | No known significant effects or critical hazards.                                   |
|              | Plug 2             | Can cause central nervous system (CNS)  |
|              | U                  | depression. May cause drowsiness or dizziness.                                      |
|              | Plug 3             | Can cause central nervous system (CNS)  |
|              | -                  | depression. May cause drowsiness or dizziness.                                      |
|              | Plug 4             | No known significant effects or critical hazards.                                   |
|              | Wash 1             | Can cause central nervous system (CNS)  |
|              |                    | depression. May cause drowsiness or dizziness.                                      |
|              | Wash 2             | No known significant effects or critical hazards.                                   |
|              | Elution            | No known significant effects or critical hazards.                                   |
| Skin contact | : Plug 1           | No known significant effects or critical hazards.                                   |
|              | Plug 2             | No known significant effects or critical hazards.                                   |
|              | Plug 3             | No known significant effects or critical hazards.                                   |
|              | Plug 4             | No known significant effects or critical hazards.                                   |
|              | Wash 1             | No known significant effects or critical hazards.                                   |
|              | Wash 2             | No known significant effects or critical hazards.                                   |
|              | Elution            | No known significant effects or critical hazards.                                   |
| Ingestion    | : Plug 1           | No known significant effects or critical hazards.                                   |
| -            | Plug 2             | Can cause central nervous system (CNS)  |
|              | -                  | depression.   |
|              | Plug 3             | Can cause central nervous system (CNS)  |
|              |                    | depression.   |
|              | Plug 4             | Harmful if swallowed.   |
|              | Wash 1             | Can cause central nervous system (CNS)  |
|              |                    | depression.   |
|              | Wash 2             | No known significant effects or critical hazards.                                   |
|              | Elution            | No known significant effects or critical hazards.                                   |
|              |                    |   |

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

| Eye contact  | : No known significant effects or critical hazards. |
|--------------|---|
| Inhalation   | : No known significant effects or critical hazards. |
| Skin contact | : No known significant effects or critical hazards. |
| Ingestion    | : No known significant effects or critical hazards. |

#### <u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u> <u>Short term exposure</u>

| Potential immediate effects   | : No known significant effects or critical hazards. |
|-------------------------------|---|
| Potential delayed effects     | : No known significant effects or critical hazards. |
| Long term exposure            |   |
| Potential immediate effects   | : No known significant effects or critical hazards. |
| Potential delayed effects     | : No known significant effects or critical hazards. |
| Potential chronic health effe | ects  |

# Section 11. Toxicological information

| General                      | : No known significant effects or critical hazards. |
|------------------------------|---|
| Carcinogenicity              | : No known significant effects or critical hazards. |
| Mutagenicity                 | : No known significant effects or critical hazards. |
| Teratogenicity               | : No known significant effects or critical hazards. |
| <b>Developmental effects</b> | : No known significant effects or critical hazards. |
| Fertility effects            | : No known significant effects or critical hazards. |

#### Numerical measures of toxicity

#### Acute toxicity estimates

| Route                          | ATE value                   |
|--------------------------------|-----------------------------|
| Plug 4<br>Oral                 | 924.4 mg/kg                 |
| Dermal<br>Inhalation (vapours) | 2067.67 mg/kg<br>20.68 mg/L |
| Wash 1                         |                             |
| Oral                           | 7692.31 mg/kg               |
| Dermal                         | 16923.08 mg/kg              |
| Inhalation (vapours)           | 169.23 mg/L                 |

# Section 12. Ecological information

#### **Toxicity**

| Product/ingredient name   | Result   | Species   | Exposure                         |
|---|--|---|----------------------------------|
| Plug 2  |  |   |                                  |
| Isopropyl alcohol   | Acute EC50 7550 mg/L Fresh water<br>Acute LC50 1400000 μg/L Marine water<br>Acute LC50 4200 mg/L Fresh water | Daphnia - Daphnia magna - Neonate<br>Crustaceans - Crangon crangon<br>Fish - Rasbora heteromorpha | 48 hours<br>48 hours<br>96 hours |
| Plug 3  |  |   |                                  |
| Isopropyl alcohol   | Acute EC50 7550 mg/L Fresh water   | Daphnia - Daphnia magna - Neonate   | 48 hours                         |
|   | Acute LC50 1400000 µg/L Marine water   | Crustaceans - Crangon crangon   | 48 hours                         |
|   | Acute LC50 4200 mg/L Fresh water   | Fish - Rasbora heteromorpha   | 96 hours                         |
| Plug 4  |  |   |                                  |
| Poly(oxy-1,2-ethanediyl), α-<br>[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy- | Acute LC50 5.85 mg/L Fresh water   | Crustaceans - Ceriodaphnia rigaudi -<br>Neonate   | 48 hours                         |
|   | Acute LC50 11.2 mg/L Fresh water   | Daphnia - Daphnia magna - Neonate   | 48 hours                         |
|   | Acute LC50 4500 µg/L Fresh water   | Fish - Pimephales promelas  | 96 hours                         |
| Wash 1  |  |   |                                  |
| Isopropyl alcohol   | Acute EC50 7550 mg/L Fresh water   | Daphnia - Daphnia magna - Neonate   | 48 hours                         |
|   | Acute LC50 1400000 µg/L Marine water   | Crustaceans - Crangon crangon   | 48 hours                         |
|   | Acute LC50 4200 mg/L Fresh water   | Fish - Rasbora heteromorpha   | 96 hours                         |

#### Persistence/degradability

There is no data available.

#### **Bioaccumulative potential**



# Section 12. Ecological information

| Product/ingredient name     | LogPow | BCF | Potential |
|-----------------------------|--------|-----|-----------|
| Plug 2<br>Isopropyl alcohol | 0.05   | -   | low       |
| Plug 3<br>Isopropyl alcohol | 0.05   | -   | low       |
| Wash 1<br>Isopropyl alcohol | 0.05   | -   | low       |

#### **Mobility in soil**

| Soil/water partition | : No data available. |
|----------------------|----------------------|
| coefficient (Koc)    |                      |

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. No specific disposal consideration.

# Section 14. Transport information

|                               | UN                         | IMDG                       | IATA                       |
|-------------------------------|----------------------------|----------------------------|----------------------------|
| UN number                     | UN1219                     | UN1219                     | UN1219                     |
| UN proper<br>shipping name    | ISOPROPYL ALCOHOL solution | ISOPROPYL ALCOHOL solution | ISOPROPYL ALCOHOL solution |
| Transport hazard<br>class(es) | 3                          | 3                          | 3                          |
| Packing group                 | 11                         | 11                         | 11                         |
| Environmental<br>hazards      | No.                        | No.                        | No.                        |

Additional information

IMDG

ΙΑΤΑ

: Emergency schedules F-A, S-P

- Remarks Limited Quantity Exemption
- : Remarks Limited Quantity Exemption

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.



# Section 15. Regulatory information

# Singapore - hazardous chemicals under government control

None.

# Section 16. Other information

#### Procedure used to derive the classification

| Classification   | Justification   |
|--|---|
| Plug 2<br>FLAMMABLE LIQUIDS - Category 2<br>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY - SINGLE<br>EXPOSURE (Narcotic effects) - Category 3 | On basis of test data<br>Calculation method<br>Calculation method |
| Plug 3<br>FLAMMABLE LIQUIDS - Category 2<br>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY - SINGLE<br>EXPOSURE (Narcotic effects) - Category 3 | On basis of test data<br>Calculation method<br>Calculation method |
| Plug 4<br>ACUTE TOXICITY (oral) - Category 4   | Calculation method  |
| Wash 1<br>FLAMMABLE LIQUIDS - Category 2<br>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY - SINGLE<br>EXPOSURE (Narcotic effects) - Category 3 | On basis of test data<br>Calculation method<br>Calculation method |

#### **History**

| Date of issue<br>Date of previous issue<br>Version | : 2020/06/15<br>: 2018/08/15<br>: 2   |
|--|---|
| Prepared by  | : KMK Regulatory Services Inc.  |
| Key to abbreviations                               | : ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonised System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = International Air Transport Association<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the<br>Protocol of 1978. ("Marpol" = marine pollution)<br>UN = United Nations |

#### 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.