

## (E)-1,1,1,3-Tetrafluorobut-2-ene

### Apollo Scientific

Part Number: PC2061

Version No: 1.1

Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

Chemwatch Hazard Alert Code: 0

Issue Date: 16/05/2022

Print Date: 31/07/2023

S.REACH.GBR.EN

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

### 1.1. Product Identifier

|                               |                                  |
|-------------------------------|----------------------------------|
| Product name                  | (E)-1,1,1,3-Tetrafluorobut-2-ene |
| Chemical Name                 | E-1,1,1,3-tetrafluoro-2-butene   |
| Synonyms                      | Not Available                    |
| Chemical formula              | Not Available                    |
| Other means of identification | Not Available                    |
| CAS number                    | 791616-87-0*                     |

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

|                          |  |
|--------------------------|--|
| Relevant identified uses | Not Available                                    |
| Uses advised against     | No specific uses advised against are identified. |

### 1.3. Details of the manufacturer or supplier of the safety data sheet

|                         |   |
|-------------------------|---|
| Registered company name | Apollo Scientific   |
| Address                 | Whitefield Road, Bredbury SK62QR United Kingdom                                     |
| Telephone               | 01614060505   |
| Fax                     | 0161 406 0506   |
| Website                 | <a href="http://www.apolloscientific.co.uk/">http://www.apolloscientific.co.uk/</a> |
| Email                   | sales@apolloscientific.co.uk  |

### 1.4. Emergency telephone number

|                                   |               |
|-----------------------------------|---------------|
| Association / Organisation        | Not Available |
| Emergency telephone numbers       | Not Available |
| Other emergency telephone numbers | Not Available |


## SECTION 2 Hazards identification

### 2.1. Classification of the substance or mixture

|   |  |
|---|--|
| Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1] | H280 - Gases Under Pressure (Liquefied Gas)  |
| Legend:   | 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

(E)-1,1,1,3-Tetrafluorobut-2-ene

## 2.2. Label elements

|                     |   |
|---------------------|---|
| Hazard pictogram(s) |  |
|---------------------|---|

|             |         |
|-------------|---------|
| Signal word | Warning |
|-------------|---------|

## Hazard statement(s)

|      |   |
|------|---|
| H280 | Contains gas under pressure; may explode if heated. |
|------|---|

## Supplementary statement(s)

Not Applicable

## Precautionary statement(s) Prevention

Not Applicable

## Precautionary statement(s) Response

Not Applicable

## Precautionary statement(s) Storage

|           |  |
|-----------|--|
| P410+P403 | Protect from sunlight. Store in a well-ventilated place. |
|-----------|--|

## Precautionary statement(s) Disposal

Not Applicable

## 2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 Composition / information on ingredients

### 3.1.Substances

| 1. CAS No<br>2.EC No<br>3.Index No<br>4.REACH No | %[weight] | Name                                 | Classification according to regulation<br>(EC) No 1272/2008 [CLP] and<br>amendments | SCL /<br>M-Factor | Nanoform Particle<br>Characteristics |
|--|-----------|--------------------------------------|---|-------------------|--------------------------------------|
| Not Available                                    | 100       | (E)-1,1,1,3-<br>Tetrafluorobut-2-ene | Not Applicable  | Not<br>Applicable | Not Available                        |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; \* EU IOELVs available; [e] Substance identified as having endocrine disrupting properties

### 3.2.Mixtures

See 'Information on ingredients' in section 3.1

## SECTION 4 First aid measures

### 4.1. Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | If this product comes in contact with eyes:<br>▶ Wash out immediately with water.<br>▶ If irritation continues, seek medical attention.<br>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| <b>Skin Contact</b> | If skin or hair contact occurs:<br>▶ Flush skin and hair with running water (and soap if available).<br>▶ Seek medical attention in event of irritation.   |
| <b>Inhalation</b>   | ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.<br>▶ Other measures are usually unnecessary.  |
| <b>Ingestion</b>    | ▶ Immediately give a glass of water.<br>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.  |

#### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.

### SECTION 5 Firefighting measures

#### 5.1. Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

#### 5.2. Special hazards arising from the substrate or mixture

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

#### 5.3. Advice for firefighters

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         |   |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▸ Non combustible.</li> <li>▸ Not considered a significant fire risk, however containers may burn.</li> </ul> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.</p> |

### SECTION 6 Accidental release measures

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

See section 8

#### 6.2. Environmental precautions

See section 12

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

|                     |  |
|---------------------|--|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▸ Clean up all spills immediately.</li> <li>▸ Avoid breathing vapours/ aerosols or dusts and avoid contact with skin and eyes.</li> <li>▸ Place in a suitable, labelled container for waste disposal.</li> </ul>  |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▸ Clear area of personnel and move upwind.</li> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ Control personal contact with the substance, by using protective equipment.</li> <li>▸ Prevent spillage from entering drains, sewers or water courses.</li> <li>▸ Recover product wherever possible.</li> <li>▸ Put residues in labelled containers for disposal.</li> <li>▸ If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

#### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

|                                      |   |
|--------------------------------------|---|
| <b>Safe handling</b>                 | <p><b>Contains low boiling substance:</b></p> <p>Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.</p> <ul style="list-style-type: none"> <li>▸ Check for bulging containers.</li> <li>▸ Vent periodically</li> <li>▸ Always release caps or seals slowly to ensure slow dissipation of vapours</li> </ul> |
| <b>Fire and explosion protection</b> | See section 5   |
| <b>Other information</b>             |   |

#### 7.2. Conditions for safe storage, including any incompatibilities

|                           |  |
|---------------------------|--|
| <b>Suitable container</b> | ▸ Polyethylene or polypropylene container. |
|---------------------------|--|

|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul> |
| <b>Storage incompatibility</b>   | Avoid contamination of water, foodstuffs, feed or seed.<br>None known   |
| <b>Hazard categories in accordance with Regulation (EC) No 1272/2008</b>   | Not Available   |
| <b>Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of</b> | Not Available   |

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 Exposure controls / personal protection

### 8.1. Control parameters

| Ingredient    | DNELs<br>Exposure Pattern Worker | PNECs<br>Compartment |
|---------------|----------------------------------|----------------------|
| Not Available | Not Available                    | Not Available        |

\* Values for General Population

### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

| Source        | Ingredient    | Material name | TWA           | STEL          | Peak          | Notes         |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |

Not Applicable

### Emergency Limits


| Ingredient                       | TEEL-1        | TEEL-2        | TEEL-3        |
|----------------------------------|---------------|---------------|---------------|
| (E)-1,1,1,3-Tetrafluorobut-2-ene | Not Available | Not Available | Not Available |

| Ingredient                       | Original IDLH | Revised IDLH  |
|----------------------------------|---------------|---------------|
| (E)-1,1,1,3-Tetrafluorobut-2-ene | Not Available | Not Available |

### 8.2. Exposure controls

|   |   |                      |            |   |                                |
|---|---|----------------------|------------|---|--------------------------------|
| <p><b>8.2.1. Appropriate engineering controls</b></p>                   | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Type of Contaminant:</td> <td>Air Speed:</td> </tr> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air)</td> <td>0.25-0.5 m/s<br/>(50-100 f/min)</td> </tr> </table> | Type of Contaminant: | Air Speed: | solvent, vapours, degreasing etc., evaporating from tank (in still air) | 0.25-0.5 m/s<br>(50-100 f/min) |
| Type of Contaminant:  | Air Speed:  |                      |            |   |                                |
| solvent, vapours, degreasing etc., evaporating from tank (in still air) | 0.25-0.5 m/s<br>(50-100 f/min)  |                      |            |   |                                |

Continued...

|   | <p>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</p> <p>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</p> <p>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</p> <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only</td> <td>2: Contaminants of high toxicity</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in motion</td> <td>4: Small hood - local control only</td> </tr> </tbody> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion | 4: Small hood - local control only | <p>0.5-1 m/s<br/>(100-200 f/min.)</p> <p>1-2.5 m/s<br/>(200-500 f/min)</p> <p>2.5-10 m/s<br/>(500-2000 f/min.)</p> |
|---|---|------------------------|------------------------|---|---------------------------------|---|----------------------------------|----------------------------------|-------------------------------|---|------------------------------------|--|
| Lower end of the range  | Upper end of the range  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| 1: Room air currents minimal or favourable to capture                               | 1: Disturbing room air currents   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| 2: Contaminants of low toxicity or of nuisance value only                           | 2: Contaminants of high toxicity  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| 3: Intermittent, low production.  | 3: High production, heavy use   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| 4: Large hood or large air mass in motion   | 4: Small hood - local control only  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>8.2.2. Individual protection measures, such as personal protective equipment</b> |   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>Eye and face protection</b>  | <ul style="list-style-type: none"> <li>▸ Safety glasses with side shields</li> <li>▸ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].</li> </ul>   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>Skin protection</b>  | See Hand protection below   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>Hands/feet protection</b>  | <ul style="list-style-type: none"> <li>▸ Insulated gloves:</li> </ul> <p>NOTE: Insulated gloves should be loose fitting so that may be removed quickly if liquid is spilled upon them. Insulated gloves are not made to permit hands to be placed in the liquid; they provide only short-term protection from accidental contact with the liquid.</p>   |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>Body protection</b>  | See Other protection below  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |
| <b>Other protection</b>   | <p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>▸ Overalls.</li> <li>▸ Barrier cream.</li> <li>▸ Eyewash unit.</li> </ul>  |                        |                        |   |                                 |   |                                  |                                  |                               |   |                                    |  |

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                        |               |  |               |
|------------------------|---------------|--|---------------|
| <b>Appearance</b>      | Not Available |  |               |
| <b>Physical state</b>  | Liquified Gas | <b>Relative density (Water = 1)</b>            | Not Available |
| <b>Odour</b>           | Not Available | <b>Partition coefficient n-octanol / water</b> | Not Available |
| <b>Odour threshold</b> | Not Available | <b>Auto-ignition temperature (°C)</b>          | Not Available |

Continued...

**(E)-1,1,1,3-Tetrafluorobut-2-ene**

|   |               |  |               |
|---|---------------|--|---------------|
| <b>pH (as supplied)</b>                             | Not Available | <b>Decomposition temperature (°C)</b>    | Not Available |
| <b>Melting point / freezing point (°C)</b>          | Not Available | <b>Viscosity (cSt)</b>                   | Not Available |
| <b>Initial boiling point and boiling range (°C)</b> | 16-18         | <b>Molecular weight (g/mol)</b>          | Not Available |
| <b>Flash point (°C)</b>                             | Not Available | <b>Taste</b>                             | Not Available |
| <b>Evaporation rate</b>                             | Not Available | <b>Explosive properties</b>              | Not Available |
| <b>Flammability</b>                                 | Not Available | <b>Oxidising properties</b>              | Not Available |
| <b>Upper Explosive Limit (%)</b>                    | Not Available | <b>Surface Tension (dyn/cm or mN/m)</b>  | Not Available |
| <b>Lower Explosive Limit (%)</b>                    | Not Available | <b>Volatile Component (%vol)</b>         | Not Available |
| <b>Vapour pressure (kPa)</b>                        | Not Available | <b>Gas group</b>                         | Not Available |
| <b>Solubility in water</b>                          | Not Available | <b>pH as a solution (1%)</b>             | Not Available |
| <b>Vapour density (Air = 1)</b>                     | Not Available | <b>VOC g/L</b>                           | Not Available |
| <b>Nanoform Solubility</b>                          | Not Available | <b>Nanoform Particle Characteristics</b> | Not Available |
| <b>Particle Size</b>                                | Not Available |  |               |

**9.2. Other information**

Not Available

**SECTION 10 Stability and reactivity**

|   |   |
|---|---|
| <b>10.1.Reactivity</b>                          | See section 7.2   |
| <b>10.2. Chemical stability</b>                 | Product is considered stable and hazardous polymerisation will not occur. |
| <b>10.3. Possibility of hazardous reactions</b> | See section 7.2   |
| <b>10.4. Conditions to avoid</b>                | See section 7.2   |
| <b>10.5. Incompatible materials</b>             | See section 7.2   |
| <b>10.6. Hazardous decomposition products</b>   | See section 5.3   |

**SECTION 11 Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 Information on toxicological effects**

|                     |  |
|---------------------|--|
| <b>Inhaled</b>      | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.<br>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation. |
| <b>Ingestion</b>    | The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.   |
| <b>Skin Contact</b> | The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.  |
| <b>Eye</b>          | Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).   |
| <b>Chronic</b>      | Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.   |

|   |                 |                   |
|---|-----------------|-------------------|
| <b>(E)-1,1,1,3-Tetrafluorobut-2-ene</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|   | Not Available   | Not Available     |

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Continued...

(E)-1,1,1,3-Tetrafluorobut-2-ene

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✗ | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✗ | Reproductivity           | ✗ |
| Serious Eye Damage/Irritation     | ✗ | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗ | Aspiration Hazard        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
✔ – Data available to make classification

## 11.2 Information on other hazards

### 11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

### 11.2.2. Other information

See Section 11.1

## SECTION 12 Ecological information

### 12.1. Toxicity

| (E)-1,1,1,3-Tetrafluorobut-2-ene | Endpoint   | Test Duration (hr) | Species       | Value         | Source        |
|----------------------------------|--|--------------------|---------------|---------------|---------------|
|                                  | Not Available  | Not Available      | Not Available | Not Available | Not Available |
| <b>Legend:</b>                   | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                    |               |               |               |

### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil               | Persistence: Air                      |
|------------|---------------------------------------|---------------------------------------|
|            | No Data available for all ingredients | No Data available for all ingredients |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation                       |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

### 12.4. Mobility in soil

| Ingredient | Mobility                              |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

### 12.5. Results of PBT and vPvB assessment

|                         | P             | B             | T             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT                     | ✗             | ✗             | ✗             |
| vPvB                    | ✗             | ✗             | ✗             |
| PBT Criteria fulfilled? | No            |               |               |
| vPvB                    | No            |               |               |

### 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

### 12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

## SECTION 13 Disposal considerations

### 13.1. Waste treatment methods

|                                     |  |
|-------------------------------------|--|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>▸ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▸ Consult State Land Waste Management Authority for disposal.</li> <li>▸ Bury residue in an authorised landfill.</li> <li>▸ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul> |
| <b>Waste treatment options</b>      | Not Available  |
| <b>Sewage disposal options</b>      | Not Available  |

## SECTION 14 Transport information

### Labels Required

|                         |                |
|-------------------------|----------------|
| <b>Marine Pollutant</b> | NO             |
| <b>HAZCHEM</b>          | Not Applicable |

### Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

|   |                                |                |
|---|--------------------------------|----------------|
| <b>14.1. UN number or ID number</b>       | Not Applicable                 |                |
| <b>14.2. UN proper shipping name</b>      | Not Applicable                 |                |
| <b>14.3. Transport hazard class(es)</b>   | Class                          | Not Applicable |
|   | Subsidiary risk                | Not Applicable |
| <b>14.4. Packing group</b>                | Not Applicable                 |                |
| <b>14.5. Environmental hazard</b>         | Not Applicable                 |                |
| <b>14.6. Special precautions for user</b> | Hazard identification (Kemler) | Not Applicable |
|   | Classification code            | Not Applicable |
|   | Hazard Label                   | Not Applicable |
|   | Special provisions             | Not Applicable |
|   | Limited quantity               | Not Applicable |
|   | Tunnel Restriction Code        | Not Applicable |

### Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

|   |   |                |
|---|---|----------------|
| <b>14.1. UN number</b>                    | Not Applicable  |                |
| <b>14.2. UN proper shipping name</b>      | Not Applicable  |                |
| <b>14.3. Transport hazard class(es)</b>   | ICAO/IATA Class   | Not Applicable |
|   | ICAO / IATA Subrisk                                       | Not Applicable |
|   | ERG Code  | Not Applicable |
| <b>14.4. Packing group</b>                | Not Applicable  |                |
| <b>14.5. Environmental hazard</b>         | Not Applicable  |                |
| <b>14.6. Special precautions for user</b> | Special provisions  | Not Applicable |
|   | Cargo Only Packing Instructions                           | Not Applicable |
|   | Cargo Only Maximum Qty / Pack                             | Not Applicable |
|   | Passenger and Cargo Packing Instructions                  | Not Applicable |
|   | Passenger and Cargo Maximum Qty / Pack                    | Not Applicable |
|   | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |
|   | Passenger and Cargo Limited Maximum Qty / Pack            | Not Applicable |



**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                    |                |
|------------------------------------|--------------------|----------------|
| 14.1. UN number                    | Not Applicable     |                |
| 14.2. UN proper shipping name      | Not Applicable     |                |
| 14.3. Transport hazard class(es)   | IMDG Class         | Not Applicable |
|                                    | IMDG Subrisk       | Not Applicable |
| 14.4. Packing group                | Not Applicable     |                |
| 14.5. Environmental hazard         | Not Applicable     |                |
| 14.6. Special precautions for user | EMS Number         | Not Applicable |
|                                    | Special provisions | Not Applicable |
|                                    | Limited Quantities | Not Applicable |

**Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                     |                |
|------------------------------------|---------------------|----------------|
| 14.1. UN number                    | Not Applicable      |                |
| 14.2. UN proper shipping name      | Not Applicable      |                |
| 14.3. Transport hazard class(es)   | Not Applicable      | Not Applicable |
| 14.4. Packing group                | Not Applicable      |                |
| 14.5. Environmental hazard         | Not Applicable      |                |
| 14.6. Special precautions for user | Classification code | Not Applicable |
|                                    | Special provisions  | Not Applicable |
|                                    | Limited quantity    | Not Applicable |
|                                    | Equipment required  | Not Applicable |
|                                    | Fire cones number   | Not Applicable |

**14.7. Maritime transport in bulk according to IMO instruments**

**14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

| Product name | Group |
|--------------|-------|
|--------------|-------|

**14.7.3. Transport in bulk in accordance with the IGC Code**

| Product name | Ship Type |
|--------------|-----------|
|--------------|-----------|

**SECTION 15 Regulatory information**

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

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

**Information according to 2012/18/EU (Seveso III):**

|                 |               |
|-----------------|---------------|
| Seveso Category | Not Available |
|-----------------|---------------|

**15.2. Chemical safety assessment**

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

**ECHA SUMMARY**

Not Applicable

**National Inventory Status**

| National Inventory                              | Status  |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Not Available   |
| Canada - DSL                                    | Not Available   |
| Canada - NDSL                                   | Not Available   |
| China - IECSC                                   | Not Available   |
| Europe - EINEC / ELINCS / NLP                   | Not Available   |
| Japan - ENCS                                    | Not Available   |
| Korea - KECI                                    | Not Available   |
| New Zealand - NZIoC                             | Not Available   |
| Philippines - PICCS                             | Not Available   |
| USA - TSCA                                      | Not Available   |
| Taiwan - TCSI                                   | Not Available   |
| Mexico - INSQ                                   | Not Available   |
| Vietnam - NCI                                   | Not Available   |
| Russia - FBEPH                                  | Not Available   |
| <b>Legend:</b>                                  | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

**SECTION 16 Other information**

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 16/05/2022 |
| <b>Initial Date</b>  | 16/05/2022 |

**Full text Risk and Hazard codes****Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

**Definitions and abbreviations**

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL :No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals  
DSL: Domestic Substances List  
NDSL: Non-Domestic Substances List  
IECSC: Inventory of Existing Chemical Substance in China  
EINECS: European INventory of Existing Commercial chemical Substances  
ELINCS: European List of Notified Chemical Substances  
NLP: No-Longer Polymers  
ENCS: Existing and New Chemical Substances Inventory  
KECI: Korea Existing Chemicals Inventory  
NZIoC: New Zealand Inventory of Chemicals  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
TSCA: Toxic Substances Control Act  
TCSI: Taiwan Chemical Substance Inventory  
INSQ: Inventario Nacional de Sustancias Químicas  
NCI: National Chemical Inventory  
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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