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| <p><b>Other information</b></p> <p>NFPA-Code:</p> <p><b>2.2.) Label elements</b></p> <p><b>Labelling according to Regulation (EC) No. 1272/2008 [CLP]</b></p> <p>Hazard pictograms (CLP):</p> <p>Signal word (CLP):</p> <p>Hazard statements (CLP):</p> <p>Precautionary statements (CLP):</p> <p><b>2.3.) OTHER HAZARDS</b></p> | <p>2-3-0</p> <br>  <p><b>GHS02</b>                      <b>GHS07</b></p> <p>Danger</p> <p><b>H225</b>    Highly flammable liquid and vapour</p> <p><b>H319</b>    Causes serious eye irritation</p> <p><b>P210</b>    Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p><b>P260</b>    Do not breathe dust/fume/gas/mist/vapours/spray</p> <p><b>P280</b>    Wear protective gloves/protective clothing/eye protection/face protection</p> <p><b>P305+P351+P338</b></p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p><b>P403+P233</b></p> <p>Store in a well-ventilated place. Keep container tightly closed.</p> <p>No additional information available.</p> |
| <p><b>3.) <u>COMPOSITION/INFORMATION ON INGREDIENTS</u></b></p> <p><b>3.1.) Substances</b></p>   | <p>Not applicable.</p>  |



27.12.2018

### 3.2.) Mixture

| Name                | Product identifier  | %     | Classification according to Directive 67/548/EEC |
|---------------------|---|-------|--|
| denaturated ethanol | (CAS-No) 64-17-5<br>(EC-No) 200-578-6<br>(EC index-No) 603-002-00-5<br>(REACH-No) mixture, not applicable | 80-90 | F; R11   |
| hexanedioic acid    | (CAS-No) 124-04-9<br>(EC-No) 204-673-3<br>(EC index-No) 607-144-00-9<br>(REACH-No) 01-2119457561-38       | 5-10  | Xi; R36  |

| Name             | Product identifier   | %     | Classification according to Regulation (EC) no 1272/2008 (CLP) |
|------------------|--|-------|--|
| ethanol          | (CAS-No) 64-17-5<br>(EC-No) 200-578-6<br>(EC index-No) 603-002-00-5<br>(REACH-No) 01-2119457610-43   | 80-90 | Flam. Liq. 2, H225   |
| hexanedioic acid | (CAS-No) 124-04-9<br>(EC-No) 204-673-3<br>(EC index-No.) 607-144-00-9<br>(REACH-No) 01-2119457561-38 | 5-10  | Eye Irrit. 2, H319   |
| 2-propanol       | (CAS-No) 67-63-0<br>(EC-No) 200-661-7<br>(EC index-No) 603-117-00-0<br>(REACH-No) 01-2119457558-25   | 1-3   | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336    |

Full text of R-, H- and EUH-phrases: see section 16

### 4.) FIRST AID MEASURES

#### 4.1.) Description of first aid measures

First aid measures general:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warning up). Depending on the victim's condition: doctor/hospital.

First aid measures after inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First aid measures after skin contact:

Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First aid measures after eye contact:

Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.

First aid measures after ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.



27.12.2018

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| <p><b>4.2.) Most important symptoms and effects, both acute and delayed</b></p> <p>Symptoms/injuries after inhalation:</p> <p>Symptoms/injuries after skin contact:</p> <p>Symptoms/injuries after eye contact:</p> <p>Symptoms/injuries after ingestion:</p> <p>Chronic symptoms:</p> <p><b>4.3.) Indication of any immediate medical attention and special treatment needed</b></p>   | <p><b><u>EXPOSURE TO HIGH CONCENTRATIONS:</u></b> Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.</p> <p>Slight irritation.</p> <p>Liquid splashes in the eye may cause irritation.</p> <p><b><u>AFTER ABSORPTION OF HIGH QUANTITIES:</u></b> Central nervous system depression. Headache. Dilatation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Risk of aspiration pneumonia.</p> <p><b><u>ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:</u></b> Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.</p> <p>No additional information available.</p>  |
| <p><b>5.) <u>FIREFIGHTING MEASURES</u></b></p> <p><b>5.1.) Extinguishing media</b></p> <p>Suitable extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p><b>5.2.) Special hazards arising from the substance or mixture</b></p> <p>Fire hazard:</p> <p>Explosion hazard:</p> <p>Reactivity:</p> <p><b>5.3.) Advice for firefighters</b></p> <p>Precautionary measures fire:</p> <p>Firefighting instructions:</p> <p>Protection during firefighting:</p> | <p>Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide.</p> <p>Solid water jet ineffective as extinguishing medium.</p> <p><b><u>DIRECT FIRE HAZARD:</u></b> Highly flammable. Gas/vapour flammable with air within explosion limits.</p> <p><b><u>INDIRECT FIRE HAZARD:</u></b> May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.</p> <p><b><u>DIRECT EXPLOSION HAZARD:</u></b> Gas/vapour explosive with air within explosion limits.</p> <p><b><u>INDIRECT EXPLOSION HAZARD:</u></b> may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".</p> <p>Violent to explosive reaction with (strong) oxidizers. Upon combustion CO and CO<sub>2</sub> are formed.</p> <p>Exposure to fire/heat: consider evacuation.</p> <p>Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.</p> <p>Heat/fire exposure: compressed air/oxygen apparatus.</p> |



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| <p><b>6.) <u>ACCIDENTAL RELEASE MEASURES</u></b></p> <p><b>6.1.) Personal precautions, protective equipment and emergency procedures</b></p> <p>General measures:</p> <p><b>6.1.1.) For non-emergency personnel:</b></p> <p>Protective equipment:</p> <p>Emergency procedures:</p> <p><b>6.1.2.) For emergency responders</b></p> <p><b>6.2.) Environmental precautions</b></p> <p><b>6.3.) Methods and material for containment and cleaning up</b></p> <p>For containment:</p> <p>Methods for cleaning up:</p> <p><b>6.4.) Reference to other sections</b></p> | <p>Stop engines and no smoking. No naked flames or sparks. Spark- and explosion proof appliances and lighting equipment. Prevent spreading in sewers. Keep containers closed. Wash contaminated clothes.</p> <p>Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus. See "Material-Handling" to select protective clothing.</p> <p>Keep upwind. Mark the danger area. Consider evacuation. Stop engines and no smoking. No naked flames or sparks. Spark- and explosion proof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.</p> <p>No additional information available.</p> <p>Prevent soil and water pollution. Prevent spreading in sewers.</p> <p>Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.</p> <p>Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.</p> <p>No additional information available.</p> |
| <p><b>7.) <u>HANDLING AND STORAGE</u></b></p> <p><b>7.1.) Precautions for safe handling</b></p> <p>Precautions for safe handling:</p> <p>Hygiene measures:</p> <p><b>7.2.) Conditions for safe storage, including any incompatibilities</b></p> <p>Maximum storage period:</p>   | <p>Comply with the legal requirements. Do not discharge the waste into the drain. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Work under local exhaust/ventilation.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>1 year</p>  |



|   |  |  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
|---|--|--|-----------------------|---------|-------------------|---------|---------|---------------------------------------|-------------------|---------|------------------------|---------|--------|--------------------------|--|--------|-----------|---|--------------------------|-----------------|---------|--------------------------|------------------|---------|----------------|------------------------------|-----------------------|----------------|---------------|---------|----------------|-------------------------------|------------------------|----------------|----------------|---------|--|
| <p>Storage temperature:</p> <p>Heat and ignition sources:</p> <p>Prohibitions on mixed storage:</p> <p>Storage area:</p> <p>Special rules on packaging:</p> <p>Packaging materials:</p> <p><b>7.3.) Specific end use(s)</b></p> <p><b><u>REACH DISCLAIMER:</u></b></p>  | <p>5 – 35 °C</p> <p><b><u>KEEP SUBSTANCE AWAY FROM:</u></b><br/>heat sources, ignition sources.</p> <p><b><u>KEEP SUBSTANCE AWAY FROM:</u></b><br/>heat sources, ignition sources. oxidizing agents. (strong) acids. (strong) bases.</p> <p>Meet the legal requirements. Store in a cool area. Store in a dry area. Fireproof storeroom.</p> <p><b><u>SPECIAL REQUIREMENTS:</u></b><br/>Closing. Dry. Clean. Correctly labelled. Meet the legal requirements.</p> <p><b><u>SUITABEL MATERIAL:</u></b><br/>Stainless steel. HDPE drums.</p> <p>This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).</p> |  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| <p><b>8.) <u>EXPOSURE CONTROLS/PERSONAL PROTECTION</u></b></p> <p><b>8.1.) Control parameters</b></p> <p><b><u>2-propanol (67-63-0)</u></b></p> <table border="1"> <tr> <td>Belgium</td> <td>Limit value (mg/m<sup>3</sup>)</td> <td>500 mg/m<sup>3</sup></td> </tr> <tr> <td>Belgium</td> <td>Limit value (ppm)</td> <td>200 ppm</td> </tr> <tr> <td>Belgium</td> <td>Short time value (mg/m<sup>3</sup>)</td> <td>mg/m<sup>3</sup></td> </tr> <tr> <td>Belgium</td> <td>Short time value (ppm)</td> <td>400 ppm</td> </tr> <tr> <td>France</td> <td>VLE (mg/m<sup>3</sup>)</td> <td>Alcohol isopropylique, 980 mg/m<sup>3</sup>, France; Short time value; VL: Valeur non reglementaire indicative</td> </tr> <tr> <td>France</td> <td>VLE (ppm)</td> <td>Alcohol isopropylique, 400 ppm, France; Short time value; VL: Valeur non reglementaire indicative</td> </tr> <tr> <td>Italy-Portugal-USA-ACGIH</td> <td>ACGIH TWA (ppm)</td> <td>200 ppm</td> </tr> <tr> <td>Italy-Portugal-USA-ACGIH</td> <td>ACGIH STEL (ppm)</td> <td>200 ppm</td> </tr> <tr> <td>United Kingdom</td> <td>WEL TWA (mg/m<sup>3</sup>)</td> <td>999 mg/m<sup>3</sup></td> </tr> <tr> <td>United Kingdom</td> <td>WEL TWA (ppm)</td> <td>400 ppm</td> </tr> <tr> <td>United Kingdom</td> <td>WEL STEL (mg/m<sup>3</sup>)</td> <td>1250 mg/m<sup>3</sup></td> </tr> <tr> <td>United Kingdom</td> <td>WEL STEL (ppm)</td> <td>500 ppm</td> </tr> </table> | Belgium  | Limit value (mg/m <sup>3</sup> )   | 500 mg/m <sup>3</sup> | Belgium | Limit value (ppm) | 200 ppm | Belgium | Short time value (mg/m <sup>3</sup> ) | mg/m <sup>3</sup> | Belgium | Short time value (ppm) | 400 ppm | France | VLE (mg/m <sup>3</sup> ) | Alcohol isopropylique, 980 mg/m <sup>3</sup> , France; Short time value; VL: Valeur non reglementaire indicative | France | VLE (ppm) | Alcohol isopropylique, 400 ppm, France; Short time value; VL: Valeur non reglementaire indicative | Italy-Portugal-USA-ACGIH | ACGIH TWA (ppm) | 200 ppm | Italy-Portugal-USA-ACGIH | ACGIH STEL (ppm) | 200 ppm | United Kingdom | WEL TWA (mg/m <sup>3</sup> ) | 999 mg/m <sup>3</sup> | United Kingdom | WEL TWA (ppm) | 400 ppm | United Kingdom | WEL STEL (mg/m <sup>3</sup> ) | 1250 mg/m <sup>3</sup> | United Kingdom | WEL STEL (ppm) | 500 ppm |  |
| Belgium   | Limit value (mg/m <sup>3</sup> )   | 500 mg/m <sup>3</sup>  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| Belgium   | Limit value (ppm)  | 200 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| Belgium   | Short time value (mg/m <sup>3</sup> )  | mg/m <sup>3</sup>  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| Belgium   | Short time value (ppm)   | 400 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| France  | VLE (mg/m <sup>3</sup> )   | Alcohol isopropylique, 980 mg/m <sup>3</sup> , France; Short time value; VL: Valeur non reglementaire indicative |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| France  | VLE (ppm)  | Alcohol isopropylique, 400 ppm, France; Short time value; VL: Valeur non reglementaire indicative                |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| Italy-Portugal-USA-ACGIH  | ACGIH TWA (ppm)  | 200 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| Italy-Portugal-USA-ACGIH  | ACGIH STEL (ppm)   | 200 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| United Kingdom  | WEL TWA (mg/m <sup>3</sup> )   | 999 mg/m <sup>3</sup>  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| United Kingdom  | WEL TWA (ppm)  | 400 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| United Kingdom  | WEL STEL (mg/m <sup>3</sup> )  | 1250 mg/m <sup>3</sup>   |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |
| United Kingdom  | WEL STEL (ppm)   | 500 ppm  |                       |         |                   |         |         |                                       |                   |         |                        |         |        |                          |  |        |           |   |                          |                 |         |                          |                  |         |                |                              |                       |                |               |         |                |                               |                        |                |                |         |  |

### ethanol (64-17-5)

|                 |                                    |   |
|-----------------|------------------------------------|---|
| Belgium         | Limit value (mg/m <sup>3</sup> )   | 1907 mg/m <sup>3</sup>  |
| Belgium         | Limit value (ppm)                  | 1000 ppm  |
| France          | VLE (mg/m <sup>3</sup> )           | Alcohol ethylique, 9500 mg/m <sup>3</sup> , France; Short time value; VL: Valeur non reglementaire indicative                         |
| France          | VLE (ppm)                          | Alcohol ethylique, 5000 ppm, France; Short time value; VL: Valeur non reglementaire indicative  |
| France          | VME (mg/m <sup>3</sup> )           | Alcohol ethylique, 1900 mg/m <sup>3</sup> , France; Time-weighted average exposure limit 8h;; VL: Valeur non reglementaire indicative |
| France          | VME (ppm)                          | Alcohol ethylique, 1000 ppm, France; time-weighted average exposure limmit 8h;; VL: Valeur non reglementaire indicative               |
| The Netherlands | MAC TGG 8H (mg/m <sup>3</sup> )    | Ethanol, 260 mg/m <sup>3</sup> , Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit valuet     |
| The Netherlands | MAC TGG 8H (ppm)                   | Ethanol, 136 ppm, Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value                     |
| The Netherlands | MAC TGG 15MIN (mg/m <sup>3</sup> ) | Ethanol, 1900 mg/m <sup>3</sup> , Netherlands; Short time value; Public occupational exposure limit value                             |
| The Netherlands | MAC TGG 15MIN (ppm)                | Ethanol, 992 ppm; Netherlands; Short time value; Public occupational exposure limit value   |
| United Kingdom  | WEL TWA (mg/m <sup>3</sup> )       | 1920 mg/m <sup>3</sup>  |
| United Kingdom  | WEL TWA (ppm)                      | 1000 ppm  |

### 8.2.) Exposure controls

Personal protective equipment:

Gloves. (Nitrile rubber): recommended thickness: >0,35mm, Protective goggles. Protective clothing. Wear gas mask if conc. in air >.



Materials for protective clothing:

**GIVE EXCELLENT RESISTANCE:** Butyl rubber. Viton.

**GIVE GOOD RESISTANCE:** neoprene. tetrafluorethylene.

**GIVE LESS RESISTANCE:** nitrile rubber. polyethylene.

**GIVE POOR RESISTANCE:** natural rubber. PVA. PVC.

Hand protection:

The selected protective gloves must meet the specifications of EU Directive 89/686/EEC and EN 374 derived therefrom.

Eye protection:

Eye protection designed to protect against liquid splashes should be worn.



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| <p>Skin and body protection:</p> <p>Respiratory protection:</p> <p><b>Other information:</b></p>   | <p>Wear suitable protective clothing.</p> <p>Where exposure through inhalation may occur from use. Respiratory protection equipment is recommended. Wear gas mask with filter type A if conc. in air &gt; exposure limit.</p> <p>Do not eat, drink or smoke when using this product.</p>  |
| <p>9.) <b><u>PHYSICAL AND CHEMICAL PROPERTIES</u></b></p> <p>9.1.) <b>Information on basic physical and chemical properties</b></p> <p><b>Physical state:</b><br/> <b>Appearance:</b><br/> <b>Colour:</b><br/> <b>Odour:</b><br/> <b>Odour threshold:</b></p> <p><b>pH:</b></p> <p>Melting point:<br/> Freezing point:<br/> Boiling point:<br/> Flash point:</p> <p>Relative evaporation rate (butylacetat=1):<br/> Relative evaporation rate (ether=1):<br/> Flammability (solid, gas):<br/> Explosive limits:</p> <p>Vapour pressure:<br/> Relative vapour density at 20 °C:<br/> Relative density:<br/> Solubility water:<br/> Solubility ethanol:</p> <p>Log Pow:<br/> Log Kow:</p> <p>Self ignition temperature:<br/> Decomposition temperature:<br/> Viscosity, kinematic:<br/> Viscosity, dynamic:</p> <p>Explosive properties:<br/> Oxidising properties:</p> <p>9.2.) <b>Other information</b></p> <p>Other properties:</p> | <p>Liquid.<br/> Liquid.<br/> Colourless<br/> Mild odour of aliphatic alcohol.<br/> No data available.</p> <p>5 – 5,5</p> <p>-115° C<br/> No data available.<br/> 78° C<br/> 13° C</p> <p>No data available.<br/> 8,3<br/> No data available.<br/> 3,3 – 19,0 vol %</p> <p>59 hPa<br/> 1,6<br/> 0,845-0,860 g/ml<br/> Partially soluble.<br/> Soluble</p> <p>No data available.<br/> No data available.</p> <p>363° C<br/> No data available.<br/> No data available.<br/> 0,0012 Pa.s (20 °C)</p> <p>No data available.<br/> No data available.</p> <p>Gas/vapour heavier than air at 20° C. Clear. Volatile.</p> |
| <p>10.) <b><u>STABILITY AND REACTIVITY</u></b></p> <p>10.1.) <b>Reactivity</b></p>   | <p>Violent to explosive reaction with (strong) oxidizers. Upon combustion CO and CO<sub>2</sub> are formed.</p>   |







|  |  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
|--|--|-------------------------------|---|---------------------------------|---|------------------------------|--|----------------|------------------------------------|------------------|-------------|
| <p><b>12.) ECOLOGICAL INFORMATION</b></p> <p><b>12.1.) Toxicity</b></p> <p>Ecological – air:</p> <p>Ecological – water:</p>  | <p>TA-air class 5.2.5. Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009).</p> <p>Mild water pollutant (surface water). Slightly or not bioaccumulative. Readily biodegradable in water.</p>   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| <p><b><u>FL 110 No-Clean, Soldering Flux For Selective Soldering</u></b></p> <table border="1"> <tr> <td>LC50 fishes 1</td> <td>14200 mg/l (96 h; Pimephales promelas)</td> </tr> <tr> <td>EC50 Daphnia 1</td> <td>9300 mg/l (48 h; Daphnia magna)</td> </tr> <tr> <td>LC50 fish 2</td> <td>13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)</td> </tr> <tr> <td>EC50 Daphnia 2</td> <td>10800 mg/l (24 h; Daphnia magna)</td> </tr> </table>  |  | LC50 fishes 1                 | 14200 mg/l (96 h; Pimephales promelas)  | EC50 Daphnia 1                  | 9300 mg/l (48 h; Daphnia magna)           | LC50 fish 2                  | 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss) | EC50 Daphnia 2 | 10800 mg/l (24 h; Daphnia magna)   |                  |             |
| LC50 fishes 1  | 14200 mg/l (96 h; Pimephales promelas)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| EC50 Daphnia 1   | 9300 mg/l (48 h; Daphnia magna)  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| LC50 fish 2  | 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| EC50 Daphnia 2   | 10800 mg/l (24 h; Daphnia magna)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| <p><b><u>ethanol (64-17-5)</u></b></p> <table border="1"> <tr> <td>LC50 fishes 1</td> <td>14200 mg/l (96 h; Pimephales promelas)</td> </tr> <tr> <td>EC50 Daphnia 1</td> <td>9300 mg/l (48 h; Daphnia magna)</td> </tr> <tr> <td>LC50 fish 2</td> <td>13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)</td> </tr> <tr> <td>EC50 Daphnia 2</td> <td>10800 mg/l (24 h; Daphnia magna)</td> </tr> </table>  |  | LC50 fishes 1                 | 14200 mg/l (96 h; Pimephales promelas)  | EC50 Daphnia 1                  | 9300 mg/l (48 h; Daphnia magna)           | LC50 fish 2                  | 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss) | EC50 Daphnia 2 | 10800 mg/l (24 h; Daphnia magna)   |                  |             |
| LC50 fishes 1  | 14200 mg/l (96 h; Pimephales promelas)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| EC50 Daphnia 1   | 9300 mg/l (48 h; Daphnia magna)  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| LC50 fish 2  | 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| EC50 Daphnia 2   | 10800 mg/l (24 h; Daphnia magna)   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| <p><b>12.2.) Persistence and degradability</b></p>   | <p><b><u>FL 110 No-Clean, Soldering Flux For Selective Soldering</u></b></p> <table border="1"> <tr> <td>Persistence and degradability</td> <td>Readily biodegradable in water. Biodegradable in the soil.</td> </tr> <tr> <td>Biochemical oxygen demand (BOD)</td> <td>0,8 – 0,967 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>Chemical oxygen demand (COD)</td> <td>1,70 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>ThOD</td> <td>2,10 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>BOD (% of ThOD)</td> <td>0,43 % ThOD</td> </tr> </table> | Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil.  | Biochemical oxygen demand (BOD) | 0,8 – 0,967 g O <sup>2</sup> /g substance | Chemical oxygen demand (COD) | 1,70 g O <sup>2</sup> /g substance                     | ThOD           | 2,10 g O <sup>2</sup> /g substance | BOD (% of ThOD)  | 0,43 % ThOD |
| Persistence and degradability  | Readily biodegradable in water. Biodegradable in the soil.   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| Biochemical oxygen demand (BOD)  | 0,8 – 0,967 g O <sup>2</sup> /g substance  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| Chemical oxygen demand (COD)   | 1,70 g O <sup>2</sup> /g substance   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| ThOD   | 2,10 g O <sup>2</sup> /g substance   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| BOD (% of ThOD)  | 0,43 % ThOD  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| <p><b><u>2-propanol (67-63-0)</u></b></p> <table border="1"> <tr> <td>Persistence and degradability</td> <td>Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.</td> </tr> <tr> <td>Biochemical oxygen demand (BOD)</td> <td>1,19 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>Chemical oxygen demand (COD)</td> <td>2,23 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>ThOD</td> <td>2,40 g O<sup>2</sup>/g substance</td> </tr> <tr> <td>BOD (% des ThOD)</td> <td>0,49 % ThOD</td> </tr> </table> |  | Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available. | Biochemical oxygen demand (BOD) | 1,19 g O <sup>2</sup> /g substance        | Chemical oxygen demand (COD) | 2,23 g O <sup>2</sup> /g substance                     | ThOD           | 2,40 g O <sup>2</sup> /g substance | BOD (% des ThOD) | 0,49 % ThOD |
| Persistence and degradability  | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.  |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| Biochemical oxygen demand (BOD)  | 1,19 g O <sup>2</sup> /g substance   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| Chemical oxygen demand (COD)   | 2,23 g O <sup>2</sup> /g substance   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| ThOD   | 2,40 g O <sup>2</sup> /g substance   |                               |   |                                 |   |                              |  |                |                                    |                  |             |
| BOD (% des ThOD)   | 0,49 % ThOD  |                               |   |                                 |   |                              |  |                |                                    |                  |             |



27.12.2018

### ethanol (64-17-5)

|                                 |  |
|---------------------------------|--|
| Persistence and degradability   | Readily biodegradable in water. Biodegradable in the soil.<br>Highly mobile in soil. |
| Biochemical oxygen demand (BOD) | 0,8 – 0,967 g O <sup>2</sup> /g substance  |
| Chemical oxygen demand (COD)    | 1,70 g O <sup>2</sup> /g substance   |
| ThOD                            | 2,10 g O <sup>2</sup> /g substance   |
| BOD (% des ThOD)                | 0,43 % ThOD  |

### 12.3.) Bioaccumulative potential

#### 2-propanol (67-63-0)

|                           |  |
|---------------------------|--|
| Log Pow                   | 0,05 (Experimental value)                        |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

#### ethanol (64-17-5)

|                           |  |
|---------------------------|--|
| BCF fish 1                | 1 (72 h; Cyprinus carpio)                        |
| Log Pow                   | -0,31 (Experimental value)                       |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

### 12.4.) Mobility in soil

#### 2-propanol (67-63-0)

|                 |                   |
|-----------------|-------------------|
| Surface tension | 0,021 N/m (25 °C) |
|-----------------|-------------------|

#### ethanol (64-17-5)

|                 |                   |
|-----------------|-------------------|
| Surface tension | 0,022 N/m (20 °C) |
|-----------------|-------------------|

12.5.) **Results of PBT and vPvB-assessment** No additional information available.

12.6.) **Other adverse effects** No additional information available.

### 13.) DISPOSAL CONSIDERATIONS

#### 13.1.) Waste treatment methods

Regional legislation (waste):



Waste disposal recommendations:

Disposal must be done according to official regulations.

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. May be discharged to wastewater treatment installation.



27.12.2018

|  |   |
|--|---|
| <p>Ecology – waste materials:</p>  | <p>Other organic solvents, washing liquids and mother liquors. LWCA (the Netherlands): KGA category 03. Hazardous waste (91/689/EEC). Do not discharge into surface water. Packaging containing residues of or contaminated by dangerous substances.</p>  |
| <p><b>14.) <u>TRANSPORT INFORMATION</u></b></p> <p><b>International regulation</b></p> <p><b>14.1.) UN-number</b><br/>UN-No (ADR):</p> <p><b>14.2.) UN proper shipping name</b><br/>Proper shipping name (ADR):<br/>Transport document description (ADR):</p> <p><b>14.3.) Transport hazard class(es)</b><br/>Class (ADR):<br/>Hazard labels (ADR):</p> <p><b>14.4.) Packing group</b><br/>Packing group (UN):</p> <p><b>14.5.) Environmental hazards</b><br/>Other information:</p> <p><b>14.6.) Special precautions for user</b></p> <p><b>14.6.1.) Overland transport</b><br/>Hazard identification number (Kemler No.):<br/>Classification code (ADR):<br/>Orange plates:</p> <p><b>14.6.2.) Transport by sea</b><br/>EmS-No. (1):<br/>EmS-No. (2):</p> <p><b>14.6.3.) Air transport</b></p> | <p>In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA</p> <p>1170</p> <p>ethanol (ethyl alcohol)<br/>UN 1170 ethanol (ethyl alcohol), 3, II</p> <p>3<br/>3</p>  <p>II</p> <p>No supplementary information available.</p> <p>33<br/>F1</p>  <p>F-E<br/>S-D</p> <p>No additional information available.</p> |



27.12.2018

|  |   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
|--|---|---|--------------|-------------------------------|-----------|--|------|------------------------------------|------|-------------------------------|------|-----------------------------------|-----|------------------|-----|--------------------|---|------------------|----|----------|-------------------|
| <p><b>14.7.) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC-Code</b></p> <p><b>Remark:</b></p>  | <p>Additional rules to be obtained at <b>EDSYN GMBH EUROPA</b></p> <p>Above mentioned regulations are in force at the moment of publication of this (SDS) safety data sheet. With reference to possible modifications in transport regulations of dangerous goods, we advise you to verify its validity at EDSYN GMBH EUROPA.</p>   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| <p><b>15.) REGULATORY INFORMATIONS</b></p> <p><b>15.1.) Safety, health and environmental regulations/legislation specific for the substance or mixture</b></p> <p><b>15.1.1.) EU- Regulations</b></p> <p>EURAL code:</p> <p><b>15.1.) National regulations</b></p> <p>Water hazard class (WGK):</p> <p>WGK-remark:</p> <p>Storage class (LGK):</p> <p>VbF class:</p> <p><b>15.2.) Chemical safety assessment</b></p>   | <p>Contains no REACH candidate substance</p> <p>14 06 03 *, 15 01 10*</p> <p>1 – slightly hazardous to water</p> <p>Classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) vom 27. Juli 2005</p> <p>LGK 3A – Flammable liquid materials (Flashpoint &lt; 55°C.</p> <p>B – Liquids with a flashpoint below 21 °C, but soluble in water at 15 °C or flammable ingredients that are soluble in water at 15 °C.</p> <p>Chemical safety assessment for substances in this preparation were carried out.</p> |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| <p><b>16.) OTHER INFORMATION</b></p> <p>Intrastat code:</p> <p>Full text of R-, H- and EUH-phrases:</p> <table border="1" data-bbox="313 1423 1409 1898"> <tr> <td>Eye Irrit. 2</td> <td>Serious eye damage/eye irritation, Category 2</td> </tr> <tr> <td>Flam. Liq. 2</td> <td>Flammable liquids, Category 2</td> </tr> <tr> <td>STOT SE 3</td> <td>Specific target organ toxicity – Single exposure, Category 3, Narcosis</td> </tr> <tr> <td>H225</td> <td>Highly flammable liquid and vapour</td> </tr> <tr> <td>H319</td> <td>Causes serious eye irritation</td> </tr> <tr> <td>H336</td> <td>May cause drowsiness or dizziness</td> </tr> <tr> <td>R11</td> <td>Highly flammable</td> </tr> <tr> <td>R36</td> <td>Irritating to eyes</td> </tr> <tr> <td>F</td> <td>Highly flammable</td> </tr> <tr> <td>Xi</td> <td>Irritant</td> </tr> </table> | Eye Irrit. 2  | Serious eye damage/eye irritation, Category 2 | Flam. Liq. 2 | Flammable liquids, Category 2 | STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Narcosis | H225 | Highly flammable liquid and vapour | H319 | Causes serious eye irritation | H336 | May cause drowsiness or dizziness | R11 | Highly flammable | R36 | Irritating to eyes | F | Highly flammable | Xi | Irritant | <p>3810 90 90</p> |
| Eye Irrit. 2   | Serious eye damage/eye irritation, Category 2   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| Flam. Liq. 2   | Flammable liquids, Category 2   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| STOT SE 3  | Specific target organ toxicity – Single exposure, Category 3, Narcosis  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| H225   | Highly flammable liquid and vapour  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| H319   | Causes serious eye irritation   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| H336   | May cause drowsiness or dizziness   |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| R11  | Highly flammable  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| R36  | Irritating to eyes  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| F  | Highly flammable  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |
| Xi   | Irritant  |   |              |                               |           |  |      |                                    |      |                               |      |                                   |     |                  |     |                    |   |                  |    |          |                   |

# EDSYN GMBH EUROPA

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

27.12.2018

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>16.1.) Revisions date:</b> | 29.01.2015 / 08.08.2016 / 28.09.2016 |
| <b>Version:</b>               | 14.0                                 |

### **SDS EU (REACH Annex II)**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

### **DISCLAIMER**

The information in this Safety Data Sheet (SDS) is believed to be correct as of the data issued. Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability or the accuracy of this information or the suitability of our products in any given situation. Users of our products should make their own tests to determine the suitability of each such product for their particular purposes. The products discussed are sold without such warranty, either expressed or implied.

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