







| <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><br><p>Signal word (CLP):</p> <p>Hazardous ingredients:</p> <p>Hazard statements (CLP):</p> <p>Precautionary statements (CLP):</p>   | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <br/>             GHS05         </div> <div style="text-align: center;"> <br/>             GHS07         </div> </div> <p>Danger</p> <p>Hydroxyethanoic acid</p> <p><b>H314</b> Causes severe skin burns and eye damage<br/> <b>H332</b> Harmful if inhaled</p> <p><b>P264</b> Wash hands thoroughly after handling<br/> <b>P280</b> Wear protective gloves/protective clothing/eye protection/face protection</p> <p><b>P303+P361+P353</b> IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower<br/> <b>P305+P351+P338</b> IF IN EYES. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</p> <p>No additional information available</p> |   |   |  |      |   |                       |
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| <p><b>2.3.) Other hazards</b></p>  |   |   |   |  |      |   |                       |
| <p><b>3.) <u>COMPOSITION/INFORMATION ON INGREDIENTS</u></b></p> <p><b>3.1.) Substance</b></p> <p><b>3.2.) Mixture</b></p> <p><b><u>Hydroxyethanoic acid</u></b></p> <table border="1" data-bbox="313 1459 1429 1591"> <thead> <tr> <th>Product identifier</th> <th>%</th> <th>Classification according to Regulation (EGC) no 1272/2008 (CLP)</th> </tr> </thead> <tbody> <tr> <td>(CAS no) 79-14-1<br/>(EC no) 201-180-5<br/>(REACH no) 01-2119485579-17</td> <td>1-15</td> <td>Acute Tox. 4 (Oral), <b>H302</b> Skin Corr. 1A, <b>H314</b></td> </tr> </tbody> </table> <p>Full text of H-statements: see section 16</p> | Product identifier  | %   | Classification according to Regulation (EGC) no 1272/2008 (CLP) | (CAS no) 79-14-1<br>(EC no) 201-180-5<br>(REACH no) 01-2119485579-17 | 1-15 | Acute Tox. 4 (Oral), <b>H302</b> Skin Corr. 1A, <b>H314</b> | <p>Not applicable</p> |
| Product identifier   | %   | Classification according to Regulation (EGC) no 1272/2008 (CLP) |   |  |      |   |                       |
| (CAS no) 79-14-1<br>(EC no) 201-180-5<br>(REACH no) 01-2119485579-17   | 1-15  | Acute Tox. 4 (Oral), <b>H302</b> Skin Corr. 1A, <b>H314</b>     |   |  |      |   |                       |
| <p><b>4.) <u>FIRST AID MEASURES</u></b></p> <p><b>4.1.) Description of first aid measures</b></p> <p>First aid measures after inhalation:</p> <p>First aid measures after skin contact:</p>  | <p>Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.</p> <p>Wash immediately with lots of water (15 minutes) shower. Do not apply (chemical) neutralizing agents.</p>   |   |   |  |      |   |                       |



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| <p>First aid measures after eye contact:</p> <p>First aid measures after ingestion:</p> <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>Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.</p> <p>Do not induce vomiting. Consult a doctor/medical service if you feel unwell.</p> <p><b><u>AFTER INHALATION OF DUST:</u></b></p> <p>Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.</p> <p><b><u>ON CONTINUOUS EXPOSURE/CONTACT:</u></b></p> <p>Respiratory difficulties. Possible inflammation of the respiratory tract.</p> <p>Caustic burns/corrosion of the skin.</p> <p>Corrosion of the eye tissue. Inflammation/damage of the eye tissue.</p> <p>Irritation of the gastric/intestinal mucosa. Nausea. Vomiting.</p> <p><b><u>AFTER ABSORPTION OF HIGH QUANTITIES:</u></b></p> <p>Headache. Abdominal pain. Diarrhoea. Possible esophageal perforation. Decreased renal function. Coordination disorders. Disturbances of consciousness.</p> <p><b><u>ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:</u></b></p> <p>Enlargement/affection of the liver. Affection of the renal tissue. Change in the haemogramme/blood composition.</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><b>5.2.) Special hazards arising from the substance or mixture</b></p> <p>Fire hazard:</p> <p>Explosion hazard:</p> <p><b>5.3.) Advice for firefighters</b></p> <p>Firefighting instructions:</p>  | <p>No specific fire-fighting instructions required.</p> <p>None.</p> <p>Not applicable.</p> <p>No specific fire-fighting instructions required.</p>   |



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| <p>6.) <b><u>ACCIDENTAL RELEASE MEASURES</u></b></p> <p>6.1.) <b>Personal precautions, protective equipment and emergency procedures</b></p> <p>6.1.1.) <b>For non-emergency personnel</b></p> <p>Protective equipment:</p> <p>Emergency procedures:</p> <p>6.1.2.) <b>For emergency responders</b></p> <p>6.2.) <b>Environmental precautions</b></p> <p>6.3.) <b>Methods and material for containment and cleaning up</b></p> <p>Methods for cleaning up:</p> <p>6.4.) <b>Reference to other sections</b></p> | <p>Gloves. Face-shield. Corrosion-proof suit. See „Material-Handling“ to select protective clothing.</p> <p>Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.</p> <p>No additional information available.</p> <p>Prevent soil and water pollution. Prevent spreading in sewers.</p> <p>Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone.</p> <p>No additional information available.</p>  |
| <p>7.) <b><u>HANDLING AND STORAGE</u></b></p> <p>7.1.) <b>Precautions for safe handling</b></p> <p>Hygiene measures:</p> <p>7.2.) <b>Conditions for safe storage, including any incompatibilities</b></p> <p>Storage conditions:</p> <p>Maximum storage period:</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>Observe normal hygiene standards.</p> <p>Always wash hands and face immediately after handling this product, and once again before leaving the workplace.</p> <p>Store in original container.</p> <p>2 year</p> <p>5 – 30 °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/>oxidizing agents, (strong) bases, metals, water/moisture</p> <p>Keep container tightly closed.</p> <p><b><u>SPECIAL REQUIREMENTS:</u></b><br/>closing, watertight. dry, clean. correctly labelled. meet the legal requirements. Secure fragile packaging's in solid containers.</p> <p><b><u>SUITABLE MATERIAL:</u></b><br/>synthetic material. glass, polyethylene.</p> <p><b><u>MATERIAL TO AVOID:</u></b><br/>metal, steel. Iron, aluminium, tin, zinc.</p> |



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| <p><b>7.3.) Specific end use(s)</b></p> <p><b><u>REACH DISCLAIMER:</u></b></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>8.2.) Exposure controls</b></p> <p>Personal protective equipment:</p> <p>Hand protection:</p> <p>Eye protection:</p> <p>Skin and body protection:</p> <p>Respiratory protection:</p>   | <p>No additional information available.</p> <p>Gloves. (Nitrile rubber): Recommended thickness. &gt; 0,4 mm. Safety glasses.</p>   <p>The selected protective gloves must meet the specifications of EU Directive 89/686/EEC and EN 374, derived therefrom.</p> <p>Safety glasses. Eye protection designed to protect against liquid splashes should be worn.</p> <p>Not required for normal conditions of use.</p> <p>Work under local exhaust/ventilation.</p> |
| <p><b>9.) <u>PHYSICAL AND CHEMICAL PROPERTIES</u></b></p> <p><b>9.1.) Information on basic physical and chemical properties</b></p> <p>Physical state:<br/>Appearance:<br/>Colour:<br/>Odour:<br/>Odour threshold:<br/>pH:</p> <p>Melting point:<br/>Freezing point:<br/>Boiling point:<br/>Flash point:<br/>Relative evaporation rate (butylacetate=1):<br/>Flammability (solid, gas):<br/>Explosive limits</p> <p>Vapour pressure:<br/>Relative vapour density at 20 °C:<br/>Relative density:</p> | <p>Liquid.<br/>Liquid.<br/>Colourless<br/>Mild odour.<br/>No data available.<br/>3</p> <p>Not applicable.<br/>No data available.<br/>&gt; 100 °C<br/>None.</p> <p>No data available.<br/>No data available.<br/>None.<br/>None.<br/>No data available.<br/>No data available.<br/>1 – 1,1 g/ml</p>  |



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| <p>Solubility:<br/>Log Pow:<br/>Log Kow:</p> <p>Auto-ignition temperature:<br/>Decomposition temperature:<br/>Viscosity, kinematic:<br/>Viscosity, dynamic:<br/>Explosive properties:<br/>Oxidising properties:</p> <p><b>9.2.) Other information</b></p> <p>VOC content::</p>  | <p>Water: completely soluble.<br/>No data available.<br/>No data available.</p> <p>Not applicable.<br/>No data available.<br/>No data available.<br/>No data available.<br/>No data available.<br/>No data available.</p> <p>0%</p>  |
| <p><b>10.) <u>STABILITY AND REACTIVITY</u></b></p> <p><b>10.1.) Reactivity</b></p> <p><b>10.2.) Chemical stability</b></p> <p><b>10.3.) Possibility of hazardous reactions</b></p> <p><b>10.4.) Conditions to avoid</b></p> <p><b>10.5.) Incompatible materials</b></p> <p><b>10.6.) Hazardous decomposition products</b></p>   | <p>No additional information available.</p> <p>Hygroscopic.</p> <p>No additional information available.</p> <p>No additional information available.</p> <p>Do not mix with oxidizing agents.</p> <p>No additional information available.</p>   |
| <p><b>11.) <u>TOXICOLOGICAL INFORMATION</u></b></p> <p><b>11.1.) Information on toxicological effects</b></p> <p>Acute toxicity:</p> <p><b><u>FL 911 Water Soluble Soldering Flux</u></b></p> <p>ATE CLP (gases)<br/>ATE CLP (vapours)<br/>ATE (dust, mist)</p> <p><b><u>Hydroxyethanoic acid (79-14-1)</u></b></p> <p>LD50 oral rat:</p> <p>LC50 inhalation rat (mg/l):</p> <p>ATE CLP (oral):</p> <p>Skin corrosion/irritation:</p> <p>Serious eye damage/irritation:</p> | <p>Inhalation: Harmful if inhaled.</p> <p>4500,000 ppmV/4h<br/>11,000 mg/l/4h<br/>1,500 mg/l/4h</p> <p>1950 mg/kg (Rat; Other; Literature study; 2040 mg/kg bodyweight; Rat; Experimental value)</p> <p>&gt;5,2 mg/l/4h (Rat; Experimental value; 3.6 mg/l/4h; Rat; Experimental value)</p> <p>1950,000 mg/kg bodyweight</p> <p>Causes severe skin burns and eye damage.<br/>pH-Wert: 3</p> <p>Serious eye damage, category 1, implicit<br/>pH-Wert: 3</p> |



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| <p>Respiratory or skin sensitisation:</p> <p>Germ cell mutagenicity:</p> <p>Carcinogenicity:</p> <p>Reproductive toxicity:</p> <p>Specific target organ toxicity (single exposure):</p> <p>Specific target organ toxicity (repeated exposure):</p> <p>Aspirations hazard:</p>   | <p>Not classified.</p> <p>Not classified.</p> <p>Not classified.</p> <p>Not classified.</p> <p>Not classified.</p> <p>Not classified.</p> <p>Not classified.</p>  |
| <p><b>12.) ECOLOGICAL INFORMATION</b></p> <p><b>12.1.) Toxicity</b></p> <p>Ecological – general:</p> <p>Ecological – air:</p> <p>Ecological – water:</p> <p><b><u>Hydroxyethanoic acid (79-14-1)</u></b></p> <p>EC50 Daphnia 1:</p> <p>LC50 Fish 2:</p> <p><b>12.2.) Persistence and degradability</b></p> <p><b><u>FL 911 Water Soluble Soldering Flux</u></b></p> <p>Persistence and degradability:</p> <p><b><u>Hydroxyethanoic acid (79-14-1)</u></b></p> <p>Persistence and degradability:</p> <p>Biochemical oxygen demand (BOD):</p> <p>ThOD:</p> <p>BOD (% des ThOD):</p> <p><b>12.3.) Bioaccumulative potential</b></p> <p><b><u>FL 911 Water Soluble Soldering Flux</u></b></p> <p>Bioaccumulative potential:</p> | <p>Classification concerning the environment: not applicable.</p> <p>Not classified as dangerous for the ozone layer (Regulation EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-air class 5.2.5/l.</p> <p>Ground water pollutant. Not harmful to fishes (LC50 (96 h.) &gt;1000 mg/l). Slightly harmful to invertebrates (Daphnia) (EC50 (48 h.): 100 – 1000 mg/l). Harmful to algae. Not harmful to bacteria.</p> <p>141 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test 48 h; Daphnia magna. Static system; Fresh water; Experimental value).</p> <p>&gt;5000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio)</p> <p>Readily biodegradable in water. Biodegradable in the soil.</p> <p>Readily biodegradable in water. Biodegradable in the soil.</p> <p>0,18 g O<sub>2</sub> /g substance</p> <p>0,63 g O<sub>2</sub> /g substance</p> <p>0,28</p> <p>Bioaccumulation: not applicable.</p> |



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| <p><b><u>Hydroxyethanoic acid (79-14-1)</u></b></p> <p>Log Pow:</p> <p>Bioaccumulative potential:</p> <p><b>12.4.) Mobility in soil</b></p> <p><b>12.5.) Results of PBT- and vPvB-assessment</b></p> <p><b>12.6.) Other adverse effects</b></p>     | <p>-1,11 (Experimental value).</p> <p>Bioaccumulation: not applicable.</p> <p>No additional information available.</p> <p>No additional information available.</p> <p>No additional information available.</p>   |
| <p><b>13.) <u>DISPOSAL CONSIDERATIONS</u></b></p> <p><b>13.1.) Waste treatment methods</b></p> <p>Regional legislation (waste):</p> <p>Waste disposal recommendations:</p> <p>Additional information:</p> <p>Ecology – waste materials:</p>         | <p>Disposal must be done according to official regulations.</p> <p>Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types 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. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Do not discharge into drains or the environment. May be discharged to wastewater treatment installation.</p> <p>LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.</p> <p>Do not discharge into surface water. May be discharged to wastewater treatment installation.</p> |
| <p><b>14.) <u>TRANSPORT INFORMATION</u></b></p>   | <p>Not regulated for transport.</p> <p>Additional rules to be obtained at EDSYN GMBH EUROPA.</p> <p><b>Remark:</b><br/>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 to verify its validity at EDSYN GMBH EUROPA.</p>   |
| <p><b>15.) <u>REGULATORY INFORMATION</u></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>VOC content:</p> <p>EURAL (code):</p> | <p>Contains no substance on the REACH candidate list<br/>Contains no REACH Annex XIV substances</p> <p>0 %</p> <p>16 10 02</p>   |





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| <p><b>15.1.2.) National regulations</b></p> <p>Water hazard class (WGK):</p> <p>WGK remark:</p> <p><b>15.2.) Chemical safety assessment</b></p>                      | <p>1 – low hazard to waters</p> <p>Classification water polluting based on the R-phrases in compliance with Verwaltungsvorschriften wassergefährdender Stoffe (VwVwS) vom 27. July 2005 (Anhang 3)</p> <p>Chemical safety assessment for substances in this preparation were carried out.</p>  |
| <p><b>16.) OTHER INFORMATION</b></p> <p>Other information:</p> <p>Full text of H- and EUH-statements:</p> <p><b>16.1.) Revision date:</b></p> <p><b>Version:</b></p> | <p>Intrastat code 3402 13 00.</p> <p><b>Acute Tox. 4 (Inhalation)</b> Acute toxicity (inhal.), Category 4<br/> <b>Acute Tox. 4 (Oral)</b> Acute toxicity (oral), Category 4<br/> <b>Skin Corr. 1A</b> Skin corrosion/irritation. Category 1A</p> <p><b>H302</b> Harmful if swallowed<br/> <b>H314</b> Causes severe skin burns and eye damage<br/> <b>H332</b> Harmful if inhaled</p> <p>12.10.2015 / 19.04.2016 / 08.06.2016</p> <p>1.0</p> |

### SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purpose 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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