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

1.1. Product identifier
Product form : Mixture
Trade name : STAY-CLEAN PASTE SOLDERING FLUX

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Fluxing agent

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
Harris Euro S.L.
Arq. Ricard Giralt s/n Nave F 6
17600 Figueres - España
T +34 972 67 88 26 - F +34 972 50 51 43
ventas@harriseuro.com

1.4. Emergency telephone number
Emergency telephone number : +1 216 383 8962
24 h
365 days

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral) : H302
Skin Corr. 1B : H314
Eye Dam. 1 : H318
STOT SE 3 : H335
Aquatic Acute 1 : H400
Aquatic Chronic 1 : H410

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP) : GHS05, GHS07, GHS09

Signal word (CLP) : Danger
Hazardous ingredients : zinc chloride
Hazard statements (CLP) : H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove...
STAY-CLEAN PASTE SOLDERING FLUX
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

contact lenses, if present and easy to do. Continue rinsing
P501 - Dispose of contents/container to hazardous or special waste collection point, in
accordance with local, regional, national and/or international regulation

2.3. Other hazards
PBT: not yet assessed
vPvB: not yet assessed

SECTION 3: Composition/information on ingredients
3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc chloride</td>
<td>(CAS No) 7646-85-7 (EC no) 231-592-0 (EC index no) 030-003-00-2</td>
<td>&lt; 40</td>
<td>Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>ethanediol, ethylene glycol</td>
<td>(CAS No) 107-21-1 (EC no) 203-473-3 (EC index no) 603-027-00-1</td>
<td>&lt; 15</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td>ammonium chloride</td>
<td>(CAS No) 12125-02-9 (EC no) 235-186-4 (EC index no) 017-014-00-8</td>
<td>&lt; 10</td>
<td>Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

Specific concentration limits:

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>Specific concentration limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc chloride</td>
<td>(CAS No) 7646-85-7 (EC no) 231-592-0 (EC index no) 030-003-00-2</td>
<td>(C &gt;= 5) STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures
4.1. Description of first aid measures
First-aid measures general: Call a physician immediately.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: May cause respiratory irritation. Shortness of breath.
Symptoms/injuries after skin contact: Burns.
Symptoms/injuries after eye contact: Serious damage to eyes.

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

SECTION 5: Firefighting measures
5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust, vapours, fume. Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment: Collect spillage.
Methods for cleaning up: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe vapours, fume. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store locked up. Keep container tightly closed. Store in a cool, well-ventilated place.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>amonium chloride (12125-02-9)</th>
<th>Local name</th>
<th>WEL TWA (mg/m³)</th>
<th>WEL STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>Ammonium chloride</td>
<td>10 mg/m³ fume</td>
<td>20 mg/m³ fume</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zinc chloride (7646-85-7)</th>
<th>Local name</th>
<th>WEL TWA (mg/m³)</th>
<th>WEL STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>Zinc chloride</td>
<td>1 mg/m³ fume</td>
<td>2 mg/m³ fume</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethanol, ethylene glycol (107-21-1)</th>
<th>Local name</th>
<th>WEL TWA (mg/m³)</th>
<th>WEL STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>Ethylene glycol</td>
<td>52 mg/m³</td>
<td>104 mg/m³</td>
</tr>
<tr>
<td>EU</td>
<td>IOELV TWA (mg/m³)</td>
<td>20 ppm</td>
<td>40 ppm</td>
</tr>
<tr>
<td>EU</td>
<td>IOELV STEL (mg/m³)</td>
<td>104 mg/m³ vapour</td>
<td>40 ppm vapour</td>
</tr>
<tr>
<td>EU</td>
<td>Notes</td>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Ethane-1,2-diol</td>
<td>10 mg/m³ particulate</td>
<td>20 ppm vapour</td>
</tr>
</tbody>
</table>

Remark (WEL): Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protective equipment:
Avoid all unnecessary exposure.

Hand protection:
Standard EN 374 - Protective gloves against chemicals

Eye protection:
Safety goggles with side protection against splashes (UNE-EN 166:2002)

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation or if the occupational exposure limit is exceeded, wear suitable respiratory equipment

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Paste</td>
</tr>
<tr>
<td>Colour</td>
<td>Silver</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>37 - 60 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapour Pressure 20°C</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>&lt; 1 g/cm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Material nearly insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No oxidising</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available
STAY-CLEAN PASTE SOLDERING FLUX
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use. Reacts with (strong) oxidizers. Acids. Alkalis.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity
Oral: Harmful if swallowed.
ATE CLP (oral) 665.4 mg/kg bodyweight
ammonium chloride (12125-02-9) LD50 oral rat 1650 mg/kg bodyweight
zinc chloride (7646-85-7) LD50 oral rat 350 mg/kg bodyweight
ethanediol, ethylene glycol (107-21-1) LD50 dermal rat 9530 mg/kg

Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): May cause respiratory irritation.
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment

STAY-CLEAN PASTE SOLDERING FLUX
PBT: not yet assessed
vPvB: not yet assessed

12.6. Other adverse effects
No additional information available
STAY-CLEAN PASTE SOLDERING FLUX
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according to Regulation (EC) No. 1907/2006 (REACH)

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Waste disposal recommendations: Contaminated packaging material should be treated same as the residuals.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>UN number</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>141.</td>
<td>UN number</td>
<td>1759</td>
<td>1759</td>
<td>1759</td>
<td>1759</td>
</tr>
<tr>
<td>142.</td>
<td>UN proper shipping name</td>
<td>CORROSIVE SOLID, N.O.S.</td>
<td>CORROSIVE SOLID, N.O.S.</td>
<td>Corrosive solid, n.o.s.</td>
<td>CORROSIVE SOLID, N.O.S.</td>
</tr>
<tr>
<td>Transport document description</td>
<td>UN 1759 CORROSIVE SOLID, N.O.S. (zinc chloride), 8, II, (E), ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1759 CORROSIVE SOLID, N.O.S. (zinc chloride), 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1759 Corrosive solid, n.o.s. (zinc chloride), 8, II, ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1759 CORROSIVE SOLID, N.O.S. (zinc chloride), 8, II, ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1759 CORROSIVE SOLID, N.O.S. (zinc chloride), 8, II, ENVIRONMENTALLY HAZARDOUS</td>
</tr>
<tr>
<td>143.</td>
<td>Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Transport hazard class" /></td>
<td><img src="image" alt="Transport hazard class" /></td>
<td><img src="image" alt="Transport hazard class" /></td>
<td><img src="image" alt="Transport hazard class" /></td>
<td><img src="image" alt="Transport hazard class" /></td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Dangerous for the environment: Yes</td>
<td>Dangerous for the environment: Yes</td>
<td>Dangerous for the environment: Yes</td>
<td>Dangerous for the environment: Yes</td>
<td>Dangerous for the environment: Yes</td>
</tr>
<tr>
<td>No supplementary information available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

- Overland transport
  - Classification code (ADR): C10
  - Special provisions (ADR): 274
  - Limited quantities (ADR): 1kg
  - Excepted quantities (ADR): E2
  - Packing instructions (ADR): P002, IBC08
  - Special packing provisions (ADR): B4
  - Mixed packing provisions (ADR): MP10
  - Portable tank and bulk container instructions (ADR): T3
  - Portable tank and bulk container special provisions (ADR): TP33
  - Tank code (ADR): SGAN, L4BN
  - Vehicle for tank carriage: AT
  - Transport category (ADR): 2
  - Special provisions for carriage - Packages (ADR): V11
  - Hazard identification number (Kemler No.): 80
  - Orange plates: 80
  - Tunnel restriction code (ADR): E
  - EAC code: 2X

8/29/2016 EN (English)
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14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:
3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanediol, ethylene glycol</td>
</tr>
</tbody>
</table>

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Indication of changes:

Emergency number.

Abbreviations and acronyms:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>ADR</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and Very Bioaccumulative</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent Bioaccumulative Toxic</td>
</tr>
<tr>
<td>RID</td>
<td>Regulations concerning the International Carriage of Dangerous Goods by Rail</td>
</tr>
<tr>
<td>ADN</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment — Chronic Hazard, Category 1</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Eye Irr. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Met. Corr. 1</td>
<td>Corrosive to metals, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>H302</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>H314</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>H400</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>H410</td>
</tr>
</tbody>
</table>

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.