

## 2. MANUFACTURE AND USES

### 2.1. Manufacture

Table 2.2. Manufacture

	Manufacture
M-1	<p><b>Manufacture of the substance</b>  <u>Further description of manufacturing process:</u>            Contributing activity/technique for the environment :            - (ERC1)            Contributing activity/technique for the workers :            - PROC 1            - PROC 2            - PROC 3            - PROC 4            - PROC 5            - PROC 7            - PROC 8a            - PROC 8b            - PROC 9</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant            Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>

### 2.2. Identified uses

Table 2.3. Formulation

	Formulation
F-2	<p><b>Formulation into mixtures and re-packing</b>  <u>Further description of the use:</u>            Contributing activity/technique for the environment :            - (ERC2)            Contributing activity/technique for the workers :            - PROC 1            - PROC 2            - PROC 3            - PROC 4            - PROC 5            - PROC 8a            - PROC 8b            - PROC 10            - PROC 13            - PROC 14            - PROC 19            - PROC 22            - PROC 26</p> <p><b>Product Category formulated:</b>            PC 7: Base metals and alloys ;            PC 9a: Coatings and paints, thinners, paint removes ;            PC 9b: Fillers, putties, plasters, modelling clay ;            PC 14: Metal surface treatment products, including galvanic and electroplating products ;            PC 15: Non-metal-surface treatment products ;            PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Technical function of the substance:</b>            alloying element ;</p>

	<p>corrosion inhibitor ; density modifier ; hardener ; plating agent ; processing aid ; surface modifier</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such ; in a mixture <i>Related assessment: use assessed in a joint CSR</i></p>
F-3	<p><b>Formulation into solid matrices and re-packing</b> <u>Further description of the use:</u> Contributing activity/technique for the environment : - (ERC3) Contributing activity/technique for the workers : - PROC 1 - PROC 2 - PROC 3 - PROC 4 - PROC 5 - PROC 8a - PROC 8b - PROC 9 - PROC 10 - PROC 13 - PROC 14 - PROC 19 - PROC 22 - PROC 26</p> <p><b>Product Category formulated:</b> PC 7: Base metals and alloys ; PC 9a: Coatings and paints, thinners, paint removes ; PC 9b: Fillers, putties, plasters, modelling clay ; PC 14: Metal surface treatment products, including galvanic and electroplating products ; PC 15: Non-metal-surface treatment products ; PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Technical function of the substance:</b> alloying element ; corrosion inhibitor ; density modifier ; hardener ; plating agent ; processing aid ; surface modifier</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such ; in a mixture <i>Related assessment: use assessed in a joint CSR</i></p>

Table 2.4. Uses at industrial sites

	Uses at industrial sites
IW-4	<p><b>Industrial use as additive/auxiliary in glass fabrication</b> <u>Further description of the use:</u> Contributing activity/technique for the environment : - (ERC5)</p>

	<p>Contributing activity/technique for the workers :</p> <ul style="list-style-type: none"> <li>- PROC 5</li> <li>- PROC 8a</li> <li>- PROC 8b</li> <li>- PROC 9</li> <li>- PROC 13</li> <li>- PROC 19</li> <li>- PROC 22</li> <li>- PROC 23</li> <li>- PROC 26</li> </ul> <p><b>Product Category used:</b>  PC 9a: Coatings and paints, thinners, paint removers ;  PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Technical function of the substance:</b>  density modifier ;  hardener ;  processing aid  Tonnage of substance for that use: tonnes/year  Substance supplied to that use: as such ; in a mixture  <i>Related assessment: use assessed in a joint CSR</i></p>
IW-5	<p><b>Industrial use as additive/auxillary in metal and non-metal production inkl. dental technology</b></p> <p><u>Further description of the use:</u>  Contributing activity/technique for the environment :  - (ERC5)</p> <p>Contributing activity/technique for the workers :</p> <ul style="list-style-type: none"> <li>- PROC 5</li> <li>- PROC 8a</li> <li>- PROC 8b</li> <li>- PROC 9</li> <li>- PROC 10</li> <li>- PROC 13</li> <li>- PROC 19</li> <li>- PROC 22</li> <li>- PROC 23</li> <li>- PROC 26</li> </ul> <p><b>Product Category used:</b>  PC 7: Base metals and alloys ;  PC 9b: Fillers, putties, plasters, modelling clay ;  PC 14: Metal surface treatment products, including galvanic and electroplating products ;  PC 15: Non-metal-surface treatment products ;  PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Sector of end use:</b>  SU 14: Manufacture of basic metals, including alloys ;  SU 15: Manufacture of fabricated metal products, except machinery and equipment ;  SU 20: Health services</p> <p><b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid  use registered according to REACH Article 10; total tonnage manufactured/imported &gt;=10tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  Substance supplied to that use: as such ; in a mixture  <i>Related assessment: use assessed in a joint CSR</i></p>

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Table 2.5. Uses by professional workers

	Uses by professional workers
PW-6	<p><b>Professional use as additive/auxiliary in in glass fabrication</b></p> <p><u>Further description of the use:</u>  Contributing activity/technique for the environment :  - <b>ERC8c</b>  - <b>ERC8f</b></p> <p>Contributing activity/technique for the workers :  - <b>PROC 5</b>  - <b>PROC 8a</b>  - <b>PROC 8b</b>  - <b>PROC 9</b>  - <b>PROC 10</b>  - <b>PROC 13</b>  - <b>PROC 19</b>  - <b>PROC 22</b>  - <b>PROC 23</b>  - <b>PROC 26</b></p> <p><b>Product Category used:</b>  PC 9a: Coatings and paints, thinners, paint removes ;  PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Sector of end use:</b>  SU 12: Manufacture of plastics products, including compounding and conversion</p> <p><b>Technical function of the substance:</b>  density modifier ;  hardener ;  processing aid  use registered according to REACH Article 10; total tonnage  manufactured/imported &gt;=10tonnes/year per registrant  Tonnage of substance for that use: tonnes/year</p>
PW-7	<p><b>Professional use as additive/auxiliary in metal and non-metal production inkl. dental technology</b></p> <p><u>Further description of the use:</u>  Contributing activity/technique for the environment :  - <b>ERC8a</b>  - <b>ERC8d</b></p> <p>Contributing activity/technique for the workers :  - <b>PROC 5</b>  - <b>PROC 8a</b>  - <b>PROC 8b</b>  - <b>PROC 9</b>  - <b>PROC 10</b>  - <b>PROC 13</b>  - <b>PROC 19</b>  - <b>PROC 22</b>  - <b>PROC 23</b>  - <b>PROC 26</b></p> <p><b>Product Category used:</b>  PC 7: Base metals and alloys ;  PC 9b: Fillers, putties, plasters, modelling clay ;  PC 14: Metal surface treatment products, including galvanic and electroplating products ;  PC 15: Non-metal-surface treatment products ;  PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p><b>Sector of end use:</b>  SU 14: Manufacture of basic metals, including alloys ;  SU 15: Manufacture of fabricated metal products, except machinery and equipment ;</p>

	<p>SU 20: Health services</p> <p><b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid ;  surface modifier</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>
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Table 2.6. Consumer uses

	Consumer uses
C-8	<p><b>Consumer use as additive/auxillary in metal and non-metal production inkl. dental technology</b></p> <p><u>Further description of the use:</u>  Contributing activity/technique for the environment:  - <b>ERC8a</b>  - <b>ERC8d</b></p> <p>Contributing activity/technique for consumers:  - <b>Product category (PC):</b>  - <b>PC 7</b>  - <b>PC 9b</b>  - <b>PC 14</b>  - <b>PC 15</b>  - <b>PC 20</b></p> <p><b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid ;  surface modifier</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>
C-9	<p><b>Consumer use as additive/auxiliary in in glass fabrication</b></p> <p><u>Further description of the use:</u>  Contributing activity/technique for the environment:  - <b>ERC8c</b>  - <b>ERC8f</b></p> <p>Contributing activity/technique for consumers:  - <b>Product category (PC):</b>  - <b>PC 9a</b>  - <b>PC 20</b></p> <p><b>Technical function of the substance:</b>  density modifier ;  hardener ;  processing aid</p> <p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math>tonnes/year per registrant  Tonnage of substance for that use: tonnes/year</p>

	<i>Related assessment: use assessed in a joint CSR</i>
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**Table 2.7. Article service life**

	<b>Article service life</b>
SL-10	<p><b>Service life industrial use and/or processing of articles containing the bound substance</b>  <u>Further description of the use:</u>  Article used by: workers  Substance intended to be released from article: no  <b>Article category related to subsequent service life (AC):</b>  AC1a: Vehicles covered by End of Life Vehicles (ELV) directive ;  AC1b: Other vehicles ;  AC 4: Stone, plaster, cement, glass and ceramic articles ;  AC 7: Metal articles ;  AC 13: Plastic articles  Contributing activity/technique for the environment:  - <b>(ERC12c)</b>  Contributing activity/technique for consumers:  Contributing activity/technique for the workers:  - <b>PROC 21</b>  - <b>PROC 24</b>  <b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid ;  surface modifier  use registered according to REACH Article 10; total tonnage  manufactured/imported <math>\geq 10</math>tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>
SL-11	<p><b>Service life professional use and/or processing of articles containing the bound substance</b>  <u>Further description of the use:</u>  Article used by: workers  Substance intended to be released from article: no  <b>Article category related to subsequent service life (AC):</b>  AC1a: Vehicles covered by End of Life Vehicles (ELV) directive ;  AC1b: Other vehicles ;  AC 4: Stone, plaster, cement, glass and ceramic articles ;  AC 7: Metal articles ;  AC 13: Plastic articles  Contributing activity/technique for the environment:  - <b>ERC10a</b>  - <b>ERC11a</b>  Contributing activity/technique for consumers:  Contributing activity/technique for the workers:  - <b>PROC 21</b>  - <b>PROC 24</b>  <b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid ;  surface modifier</p>

	<p>use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math> tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>
SL-12	<p><b>Service life consumer use and/or processing of articles containing the bound substance</b>  <u>Further description of the use:</u>  Article used by: consumers  Substance intended to be released from article: no  <b>Article category related to subsequent service life (AC):</b>  Contributing activity/technique for the environment:  - <b>ERC10a</b>  - <b>ERC11a</b>  Contributing activity/technique for consumers:  - <b>Article Category (AC):</b>  - <b>AC1a</b>  - <b>AC1b</b>  - <b>AC 4</b>  - <b>AC 7</b>  - <b>AC 13</b>  Contributing activity/technique for the workers:  <b>Technical function of the substance:</b>  alloying element ;  corrosion inhibitor ;  density modifier ;  hardener ;  plating agent ;  processing aid ;  surface modifier  use registered according to REACH Article 10; total tonnage manufactured/imported <math>\geq 10</math> tonnes/year per registrant  Tonnage of substance for that use: tonnes/year  <i>Related assessment: use assessed in a joint CSR</i></p>