Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name • Electrical Joint Compound No. 2
Synonyms • EJC No. 2

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s) • Corrosion inhibitor.

1.3 Details of the supplier of the safety data sheet
Manufacturer • AFL Telecommunications
170 Ridgeview Circle
Duncan, SC 29334
United States
www.aflglobal.com
Telephone (General) • 1-864-433-0333

1.4 Emergency telephone number
Manufacturer • 1-800-424-9300 - CHEMTREC

Section 2: Hazards Identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture
OSHA HCS 2012 • Skin Corrosion 1B - H314
Serious Eye Damage 1 - H318

2.2 Label elements
OSHA HCS 2012

DANGER

Hazard statements • Causes severe skin burns and eye damage. - H314
Causes serious eye damage - H318

Precautionary statements
Prevention • Do not breathe mist, vapours or spray. - P260
Wash thoroughly after handling. - P264
Wear protective gloves- Gloves, clothing - Full Body Suit, and eye/face protection - Face
Shield & Eye Protection, - Face Shield & Eye Protection. - P280
Response • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
Wash contaminated clothing before reuse. - P363
Immediately call a POISON CENTER or doctor/physician. - P310
Specific treatment, see supplemental first aid information. - P321
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P005+P351+P338
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. - P301+P330+P331

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

Canada
According to WHMIS

2.1 Classification of the substance or mixture
WHMIS • Other Toxic Effects - D2A
Corrosive - E

2.2 Label elements
WHMIS

• Other Toxic Effects - D2A
Corrosive - E

2.3 Other hazards
WHMIS • In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

EU/EEC
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture
CLP • Acute Toxicity Dermal 2 - H310
Skin Corrosion 1B - H314
Serious Eye Damage 1 - H318
Hazardous to the aquatic environment Acute 1 - H400
Hazardous to the aquatic environment Chronic 1 - H410

DSD/DPD • Toxic (T)
Corrosive (C)
R24, R34
2.2 Label Elements

CLP

DANGER

Hazard statements • H310 - Fatal in contact with skin
    H314 - Causes severe skin burns and eye damage.
    H318 - Causes serious eye damage
    H400 - Very toxic to aquatic life
    H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention • P260 - Do not breathe mist, vapours or spray.
                P262 - Do not get in eyes, on skin, or on clothing.
                P264 - Wash thoroughly after handling.
                P270 - Do not eat, drink or smoke when using this product.
                P273 - Avoid release to the environment.
                P280 - Wear protective gloves, clothing - Full Body Suit, and eye/face protection - Face Shield & Eye Protection.

Response • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
            P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.
            Rinse skin with water/shower.
            P363 - Wash contaminated clothing before reuse.
            P310 - Immediately call a POISON CENTER or doctor/physician.
            P321 - Specific treatment, see supplemental first aid information.
            P305+P351+P358 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
            P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
            P391 - Collect spillage.

Storage/Disposal • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Risk phrases • R24 - Toxic in contact with skin.
               R34 - Causes burns.

Safety phrases • S27 - Take off immediately all contaminated clothing.
                S36 - Wear suitable protective clothing.
                S37 - Wear suitable gloves.
                S39 - Wear eye/face protection.
                S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this material is considered dangerous.

See Section 12 for Ecological Information.
Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Hydrofluoric acid      | CAS:7664-39-3                | 5% | < 5% Inhalation-Rat LC50 • 1100 mg/m³ 60 Minute(s) | EU DSD/DPD: Annex VI, Table 3.2: T+; R26/27/28; C; R35  
EU CLP: Annex VI, Table 3.1: Acute Tox. 2, H330; Acute Tox. 1, H310; Acute Tox. 2, H300; Skin Corr. 1A, H314;  
OSHA HCS 2012: Acute Tox. 3 (inh); Skin Corr. 1A; Eye Dam. 1 | NDA      |
|                        | EC Number:231-634-8          |    |                    |                                                                                         |          |
|                        | EU Index:009-002-00-6        |    |                    |                                                                                         |          |

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

**Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Skin**
- IF ON SKIN: Wash with plenty of soap and water. Remove and isolate contaminated clothing. If irritation develops and persists, get medical attention.

**Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

**Ingestion**
- If swallowed, rinse mouth with water (only if the person is conscious) Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

**Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Topical therapy with 2.5% calcium gluconate gel should be used to treat patients with symptoms of hydrofluoric acid skin burns.

Section 5 - Firefighting Measures

5.1 Extinguishing media

**Suitable Extinguishing Media**
- LARGE FIRES: Dry chemical, CO2, alcohol-resistant foam or water spray.  
SMALL FIRES: Dry chemical, CO2 or water spray.

**Unsuitable Extinguishing Media**
- No data available

5.2 Special hazards arising from the substance or mixture

**Unusual Fire and**
- Non-combustible, substance itself does not burn but may decompose upon heating to
Explosion Hazards  produce corrosive and/or toxic fumes.
Hazardous Combustion Products  • May include, and are not limited to: oxides of carbon and hydrogen fluoride gas.

5.3 Advice for firefighters
• Structural firefighters’ protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
  Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
  Wear positive pressure self-contained breathing apparatus (SCBA).
  SMALL FIRES: Move containers from fire area if you can do it without risk.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal Precautions  • Wear appropriate protective clothing. Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
  Ventilate enclosed areas.
Emergency Procedures  • ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Do not get water inside container.

6.2 Environmental precautions
• Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up
Containment/Clean-up Measures  • Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container.
  Do not flush to sewer or allow to enter waterways.

6.4 Reference to other sections
• Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling
Handling  • Avoid contact with skin, eyes or clothing. Handle and open container with care. Do not taste or swallow. Use only with adequate ventilation. In accordance with good industrial hygiene practices, precautions should be taken to avoid contact. If contact occurs, wash hands, face and other potentially exposed areas immediately after handling material (especially before eating, drinking, or smoking).

7.2 Conditions for safe storage, including any incompatibilities
Storage  • Keep away from incompatible materials. Keep container/package tightly closed in a cool, well-ventilated place. Ventilate enclosed areas.

7.3 Specific end use(s)
• Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines</th>
<th>Result</th>
<th>ACGIH</th>
<th>Canada Ontario</th>
<th>Canada Quebec</th>
<th>Cyprus</th>
<th>Czech Republic</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Hydrofluoric acid (7664-39-3)</th>
<th>Ceilings</th>
<th>TWAs</th>
<th>STELs</th>
<th>MAKs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 ppm Ceiling (as F)</td>
<td>0.5 ppm TWA (as F)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>2 ppm Ceiling (as F)</td>
<td>0.5 ppm TWA (as F)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>3 ppm Ceiling (as F); 2.6 mg/m3 Ceiling (as F)</td>
<td>Not established</td>
<td>1.5 mg/m3 TWA</td>
<td></td>
</tr>
</tbody>
</table>

**Exposure Limits/Guidelines (Con’t.)**

<table>
<thead>
<tr>
<th>Result</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
<th>France</th>
<th>Germany DFG</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWAs</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
<td>1.8 ppm TWA [VME] (restrictive limit); 1.5 mg/m3 TWA [VME] (restrictive limit)</td>
<td>Not established</td>
</tr>
<tr>
<td>STELs</td>
<td>Not established</td>
<td>3 ppm STEL; 2.5 mg/m3 STEL</td>
<td>3 ppm STEL; 2.5 mg/m3 STEL</td>
<td>3 ppm STEL [VLCT] (restrictive limit); 2.5 mg/m3 STEL [VLCT] (restrictive limit)</td>
<td>Not established</td>
</tr>
<tr>
<td>Ceilings</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>MAKs</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Exposure Limits/Guidelines (Con’t.)**

<table>
<thead>
<tr>
<th>Result</th>
<th>Germany TRGS</th>
<th>Greece</th>
<th>Hungary</th>
<th>Ireland</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWAs</td>
<td>1 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 0.83 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)</td>
<td>3 ppm TWA; 2.5 mg/m3 TWA</td>
<td>1.5 mg/m3 TWA [AK]</td>
<td>1.8 ppm TWA (as F); 1.5 mg/m3 TWA (as F)</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
</tr>
<tr>
<td>STELs</td>
<td>Not established</td>
<td>3 ppm STEL; 2.5 mg/m3 STEL</td>
<td>2.5 mg/m3 STEL [CK]</td>
<td>3 ppm STEL (as F); 2.5 mg/m3 STEL (as F)</td>
<td>3 ppm STEL; 2.5 mg/m3 STEL</td>
</tr>
</tbody>
</table>

**Exposure Limits/Guidelines (Con’t.)**

<table>
<thead>
<tr>
<th>Result</th>
<th>Malta</th>
<th>Netherlands</th>
<th>NIOSH</th>
<th>OSHA</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td>STELs</td>
<td>3 ppm STEL; 2.5 mg/m3 STEL</td>
<td>1 mg/m3 STEL (as F)</td>
<td>Not established</td>
<td>Not established</td>
<td>2 mg/m3 STEL [NDSCh]</td>
</tr>
<tr>
<td>TWAs</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
<td>Not established</td>
<td>3 ppm TWA; 2.5 mg/m3 TWA</td>
<td>3 ppm TWA (as F)</td>
<td>0.5 mg/m3 TWA [NDS]</td>
</tr>
<tr>
<td>Ceilings</td>
<td>Not established</td>
<td>Not established</td>
<td>6 ppm Ceiling (15 min); 5 mg/m3 Ceiling (15 min)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Exposure Limits/Guidelines (Con’t.)**

<table>
<thead>
<tr>
<th>Result</th>
<th>Portugal</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceilings</td>
<td>2 ppm Ceiling [VLE-CM] (as F)</td>
<td>Not established</td>
<td>Not established</td>
<td>2 ppm CLV; 1.7 mg/m3 CLV</td>
</tr>
<tr>
<td>TWAs</td>
<td>0.5 ppm TWA [VLEM-P] (as F)</td>
<td>1.8 ppm TWA; 1.5 mg/m3 TWA</td>
<td>1.8 ppm TWA [VLA-ED] (indicative limit value); 1.5 mg/m3 TWA [VLA-ED] (indicative limit value)</td>
<td>Not established</td>
</tr>
<tr>
<td>STELs</td>
<td>Not established</td>
<td>2.7 ppm STEL; 2.25 mg/m3 STEL</td>
<td>3 ppm STEL [VLA-EC]; 2.5 mg/m3 STEL [VLA-EC]</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Exposure Limits/Guidelines (Con’t.)**

<table>
<thead>
<tr>
<th>Result</th>
<th>Portugal</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrofluoric acid (7664-39-3)</td>
<td>2 ppm Ceiling [VLE-CM] (as F)</td>
<td>Not established</td>
<td>Not established</td>
<td>2 ppm CLV; 1.7 mg/m3 CLV</td>
</tr>
<tr>
<td>Biological Limit Values (BLV)</td>
<td>Not established</td>
<td>Not established</td>
<td>8 mg/L urine end of shift Fluorides (2,F,I)</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Exposure Control Notations**

**Hungary**
- Hydrofluoric acid (7664-39-3): **Skin**: (potential for cutaneous absorption)

**Finland**
- Hydrofluoric acid (7664-39-3): **Skin**: (Potential for cutaneous absorption)

**Ireland**
- Hydrofluoric acid (7664-39-3): **Skin**: (Potential for cutaneous absorption)

**Germany TRGS**
- Hydrofluoric acid (7664-39-3): **Skin**: (skin notation)

**Germany DFG**
- Hydrofluoric acid (7664-39-3): **Pregnancy**: (no risk to embryo/fetus if exposure limits adhered to)

### 8.2 Exposure controls

**Engineering Measures/Controls**
- Use only with adequate ventilation to keep exposures (airborne levels of dust, fume, vapor etc) below recommended exposure limits.

**Personal Protective Equipment**
- **Respiratory**
  - Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
- **Eye/Face**
  - Wear eye/face protection, - Face Shield & Eye Protection.
- **Hands**
  - Wear protective gloves appropriate for use with Hydrofluoric Acid.
- **Skin/Body**
  - Wear protective clothing - Full Body Suitapron or full body suit and boots depending on

**General Industrial Hygiene Considerations**
- Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes or on skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

**Environmental Exposure Controls**
- Follow best practice for site management and disposal of waste.

### Key to abbreviations

- **ACGIH** = American Conference of Governmental Industrial Hygiene
- **NIOSH** = National Institute of Occupational Safety and Health
- **OSHA** = Occupational Safety and Health Administration
- **STEL** = Short Term Exposure Limits are based on 15-minute exposures
- **TWA** = Time-Weighted Averages are based on 8h/day, 40h/week exposures
- **VME** = Valeur Moyenne d'Exposition is the maximum permissible concentration for a work day
- **VLA-EC** = Valor Límite Ambiental Exposición de Corta Duración is the short-term exposure limit based on 15-minute exposure

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Brown grease.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Brown</td>
<td>Odor</td>
<td>Light amine odor.</td>
</tr>
<tr>
<td><strong>Odor Threshold</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**General Properties**

| Boiling Point | - | Melting Point | 51 C(123.8 F) |
| Decomposition Temperature | - | pH | - |
| Specific Gravity/Relative Density | 0.95 Water=1 | Water Solubility | Negligible < 0.1 % |
| Viscosity | - | Explosive Properties | Not explosive. |
Oxidizing Properties: -

Vapour Pressures:
- Evaporation Rate

Flammability:
- Flash Point: 450 F(232.222 C) UEL -
- LEL -
- Flammability (solid, gas) Not flammable.

Environmental:
- Octanol/Water Partition coefficient -

9.2 Other Information
- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity
- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability
- Stable

10.3 Possibility of hazardous reactions
- Hazardous polymerization will not occur.

10.4 Conditions to avoid
- Incompatible materials. Excess heat.

10.5 Incompatible materials
- Oxidizers

10.6 Hazardous decomposition products
- May include, and are not limited to: oxides of carbon and hydrogen fluoride gas.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>CAS</th>
<th>Acute Toxicity: Ingestion/Oral-Rat, adult female LD50 • &gt;2000 mg/kg • Comments: All animals survived</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDA</td>
<td>Acute Toxicity: Inhalation-Rat LC50 • 1276 ppm;</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>Irritation: Eye-Human • 50 mg • Severe irritation;</td>
</tr>
<tr>
<td></td>
<td>Skin-Rat • 50 % 3 Minute(s) • Severe irritation;</td>
</tr>
<tr>
<td></td>
<td>Reproductive: Inhalation-Rat TCLo • 470 µg/m³ 4 Hour(s)(1-22D preg);</td>
</tr>
<tr>
<td></td>
<td>Reproductive Effects:Effects on Fertility:Pre-implantation mortality; Reproductive Effects:Effects on Fertility:Post-implantation mortality</td>
</tr>
</tbody>
</table>

GHS Properties

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
</tbody>
</table>

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Potential Health Effects

Inhalation

Acute (Immediate) • An aerosol generation with the test item per se was not possible at room temperature, but also not at a temperature of 70°C, as the test item solidified immediately after contact with room temperature. The test item was insoluble in water and in dimethyl sulfoxide. Under the present test conditions no aerosol could be generated with the required mass median aerodynamic diameter (MMAD) ranging from 1 um to 4 um (as requested by the OECD guideline 403).

Chronic (Delayed) • Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.

Skin

Acute (Immediate) • Fatal in contact with skin. Causes severe skin burns and eye damage. In accordance to the OECD Guideline 431 the test item is considered to be corrosive to skin. The viability after 3 minutes was 68.77 %. After 60 minutes the viability was 3.42%.

Chronic (Delayed) • Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye

Acute (Immediate) • Causes serious eye damage.

Chronic (Delayed) • Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.

Ingestion

Acute (Immediate) • May cause irreversible damage to mucous membranes. The oral LD50 of No.2 EJC, Electrical Joint Compound in rats was found to be above 2000 mg/kg. The study was accomplished on two groups each consisting of three female animals. A starting dose level of 2000 mg/kg and a dose volume of 10 ml/kg were given to the two groups. All animals survived the administration of the dosing level of 2000 mg/kg and showed slight signs of toxicosis in form of piloerection during the first hours after the application.

Chronic (Delayed) • Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

Key to abbreviations

LC = Lethal Concentration
TC = Toxic Concentration
Section 12 - Ecological Information

12.1 Toxicity
- Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. This material was tested for its aquatic toxicity. The EC50 of the water accommodated fraction (WAF) corresponds to 28.3 mg/l of test item. Based on the measured concentrations tested, an EC50 of 0.49 mg/l is calculated. At WAF from 20 mg/l no effect was observed (NOEC). The NOEC based on the measured concentration corresponds to 0.33 mg/l.

12.2 Persistence and degradability
- Material data lacking.

12.3 Bioaccumulative potential
- Material data lacking.

12.4 Mobility in Soil
- Material data lacking.

12.5 Results of PBT and vPvB assessment
- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects
- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods
- Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT UN3260</td>
<td>Corrosive Solid, Acidic, Inorganic, N.O.S. (Hydrogen Fluoride &lt;5%)</td>
<td>8</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>TDG UN3260</td>
<td>CORROSIVE, SOLID, ACIDIC, N.O.S. (Hydrogen Fluoride &lt;5%)</td>
<td>8</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>IMO/IMDG UN3260</td>
<td>CORROSIVE, SOLID, ACIDIC, N.O.S. (Hydrogen Fluoride &lt;5%)</td>
<td>8</td>
<td>III</td>
<td>NDA</td>
</tr>
<tr>
<td>IATA/ICAO UN3260</td>
<td>Corrosive Solid, Acidic, Inorganic, N.O.S. (Hydrogen Fluoride &lt;5%)</td>
<td>8</td>
<td>III</td>
<td>NDA</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user
- None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>MA</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrofluoric acid</td>
<td>7664-39-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>EU EINECS</th>
<th>EU ELNICS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrofluoric acid</td>
<td>7664-39-3</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Bulgaria

#### Environment

- **Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour**
  - Hydrofluoric acid
    - 7664-39-3
    - 0.005 mg/m³ MAHCL (listed under Fluor gaseous compounds)
- **Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute**
  - Hydrofluoric acid
    - 7664-39-3
    - 0.02 mg/m³ MAHCL (listed under Fluor gaseous compounds)
- **Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed

### Canada

#### Labor

- **Canada - WHMIS - Classifications of Substances**
  - Hydrofluoric acid
    - 7664-39-3
    - D1A, D2A, E; D1B, D2A, E (40%, 50%, 70%, listed under Hydrofluoric acid)
- **Canada - WHMIS - Ingredient Disclosure List**
  - Hydrofluoric acid
    - 7664-39-3
    - 1 %

#### Environment

- **Canada - 2004 NPRI (National Pollutant Release Inventory)**
  - Hydrofluoric acid
    - 7664-39-3
    - Part 1, Group 1 Substance
- **Canada - 2005 NPRI (National Pollutant Release Inventory)**
  - Hydrofluoric acid
    - 7664-39-3
    - Part 1, Group 1 Substance
- **Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
- **Canada - CEPA - Priority Substances List**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
- **Canada - DWQ (Drinking Water Quality) - IMACs**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed

#### Other

- **Canada - Accelerated Reduction/Elimination of Toxics (ARET)**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed

### Canada New Brunswick

#### Environment

- **Canada - New Brunswick - Ozone Depleting Substances - Schedule A**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
- **Canada - New Brunswick - Ozone Depleting Substances - Schedule B**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed

### Denmark

#### Environment

- **Denmark - Advisory List for Self-Classification of Dangerous Substances**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
- **Denmark - List of Undesirable Substances - Product Groups/Function**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
- **Denmark - List of Undesirable Substances - Reason for Selection**
  - Hydrofluoric acid
    - 7664-39-3
    - Not Listed
Europe

Other
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification
- Hydrofluoric acid 7664-39-3 T+; R26/27/28 C; R35
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits
- Hydrofluoric acid 7664-39-3 Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations
- Hydrofluoric acid 7664-39-3 Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

Germany

Environment
Germany - Water Classification (VwVwS) - Annex 1
- Hydrofluoric acid 7664-39-3 Not Listed
Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes
- Hydrofluoric acid 7664-39-3 Not Listed
Germany - Water Classification (VwVwS) - Annex 3
- Hydrofluoric acid 7664-39-3 ID Number 254, hazard class 2 - hazard to waters

United States

Labor
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
- Hydrofluoric acid 7664-39-3 1000 lb TQ; 1000 lb TQ (anhydrous)
U.S. - OSHA - Specifically Regulated Chemicals
- Hydrofluoric acid 7664-39-3 Not Listed

Environment
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
- Hydrofluoric acid 7664-39-3
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
- Hydrofluoric acid 7664-39-3 100 lb final RQ; 45.4 kg final RQ
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities
- Hydrofluoric acid 7664-39-3 Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs
- Hydrofluoric acid 7664-39-3 100 lb EPCRA RQ
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs
- Hydrofluoric acid 7664-39-3 100 lb TPQ
U.S. - CERCLA/SARA - Section 313 - Emission Reporting
- Hydrofluoric acid 7664-39-3 1.0 % de minimis concentration
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing
- Hydrofluoric acid 7664-39-3 Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261
- Hydrofluoric acid 7664-39-3 waste number U134
U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics
- Hydrofluoric acid 7664-39-3 waste number U134 (Corrosive waste, Toxic waste)

United States - California

Environment
U.S. - California - Proposition 65 - Carcinogens List
- Hydrofluoric acid 7664-39-3 Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity
- Hydrofluoric acid 7664-39-3 Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
• Hydrofluoric acid

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)
• Hydrofluoric acid 7664-39-3 Not Listed
• Hydrofluoric acid

U.S. - California - Proposition 65 - Reproductive Toxicity - Female
• Hydrofluoric acid 7664-39-3 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male
• Hydrofluoric acid 7664-39-3 Not Listed

United States - Pennsylvania

Labor
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
• Hydrofluoric acid 7664-39-3

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
• Hydrofluoric acid 7664-39-3 Not Listed

Section 16 - Other Information

Relevant Phrases (code & full text)
• H300 - Fatal if swallowed
  H330 - Fatal if inhaled
  R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed.

Last Revision Date 04/December/2014
Preparation Date 20/August/2012

Key to abbreviations
NDA = No data available

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