AFL HI-TUC
Safety Data Sheet
Date of issue: 06/16/2017 Revision date: 06/16/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification
Product name : AFL HI-TUC

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Corrosion inhibitor

1.3. Details of the supplier of the safety data sheet
Supplier
AFL TELECOMMUNICATIONS LLC
170 RIDGEVIEW CIRCLE
DUNCAN, SC  29334 USA
T  864-433-0333
WWW.AFLGLOBAL.COM

1.4. Emergency telephone number
Emergency number : CHEMTREC: 800-424-9300

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
GHS classification
Skin Sens. 1
Carc. 2
STOT RE 1

2.2. Label elements
GHS labelling
Hazard pictograms (GHS) :

GHS07
GHS08

Signal word (GHS) : Danger
Hazard statements (GHS) : May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure
Precautionary statements (GHS) : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Store locked up. 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
No additional information available

2.4. Unknown acute toxicity
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>(CAS-No.) 7429-90-5</td>
<td>7.00</td>
</tr>
<tr>
<td>Nickel</td>
<td>(CAS-No.) 7440-02-0</td>
<td>7.00</td>
</tr>
<tr>
<td>Zinc oxide (ZnO)</td>
<td>(CAS-No.) 1314-13-2</td>
<td>1.24</td>
</tr>
</tbody>
</table>
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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Not a normal route of exposure. If symptoms develop, remove to fresh air. Get medical attention if condition worsens.

First-aid measures after skin contact: IF ON SKIN: Wash with plenty of Water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. This compound contains abrasive particles. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation: Not a normal route of exposure.

Symptoms/effects after skin contact: May cause skin irritation. Symptoms may include redness, drying, and cracking of the skin. May cause an allergic skin reaction.

Symptoms/effects after eye contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical. Foam. Carbon dioxide.

Unsuitable extinguishing media: Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Products of combustion may include, and are not limited to: oxides of carbon.

Reactivity: No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

Protection during firefighting: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Spilled material may present a slipping hazard.

6.4. Reference to other sections

For further information refer to section 8: “Exposure controls/personal protection”

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with skin and eyes. Do not swallow. Do not breathe dust, fume, gas, mist, spray, vapours. Handle and open container with care. When using do not eat, drink or smoke.
Hygiene measures: Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep out of the reach of children. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (7429-90-5)</td>
<td>1 mg/m³ (respirable particulate matter)</td>
<td>15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)</td>
<td>10 mg/m³ (total dust) 5 mg/m³ (respirable dust)</td>
</tr>
<tr>
<td>Nickel (7440-02-0)</td>
<td>1.5 mg/m³ (inhalable particulate matter)</td>
<td>1 mg/m³</td>
<td>0.015 mg/m³</td>
</tr>
<tr>
<td>Zinc oxide (ZnO) (1314-13-2)</td>
<td>2 mg/m³ (respirable particulate matter)</td>
<td>10 mg/m³ (respirable particulate matter)</td>
<td>5 mg/m³ (fume) 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US IDLH (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.
Hand protection: Wear suitable gloves resistant to chemical penetration.
Eye protection: Safety glasses or goggles are recommended when using product.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: None necessary under normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls: Avoid release to the environment.
Other information: Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

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 / thick grease</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</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>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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Relative evaporation rate (butylacetate=1) : No data available
Flammability (solid, gas) : Not flammable
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Solubility : No data available
Partition coefficient n-octanol/water : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive limits : No data available
Explosive properties : No data available
Oxidising properties : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No dangerous reactions known under normal conditions of use.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Heat. Incompatible materials.

10.5. Incompatible materials
Oxidizing materials.

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

Nickel (7440-02-0)
LD50 oral rat > 9000 mg/kg

Zinc oxide (ZnO) (1314-13-2)
LD50 oral rat > 5000 mg/kg

Skin corrosion/irritation : Not classified.
Serious eye damage/irritation : Not classified.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified.
Carcinogenicity : Suspected of causing cancer.

Nickel (7440-02-0)
IARC group 2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status 3 - Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list Yes
Reproductive toxicity : Not classified.
STOT-single exposure : Not classified.
STOT-repeated exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified.

Symptoms/effects after inhalation: Not a normal route of exposure.

Symptoms/effects after skin contact: May cause skin irritation. Symptoms may include redness, drying, and cracking of the skin. May cause an allergic skin reaction.

Symptoms/effects after eye contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology – general: Very toxic to aquatic life with long lasting effects.

**Nickel (7440-02-0)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)</td>
<td></td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
<td></td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])</td>
<td></td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
<td></td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

AFL HI-TUC: Not established.

**12.3. Bioaccumulative potential**

AFL HI-TUC: Not established.

**12.4. Mobility in soil**

No additional information available

**12.5. Other adverse effects**

Effect on the global warming: No known effects from this product.

Other information: No other effects known.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

**SECTION 14: Transport information**

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated

**SECTION 15: Regulatory information**

**15.1. Federal regulations**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

**15.2. International regulations**

No additional information available

**15.3. US State regulations**

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm
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SECTION 16: Other information

| Revision date     | 06/16/2017 |
| Other information | None.      |

SDS HazCom 2012 - WHMIS 2015 (NexReg)

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