Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name  ANSUL 3% FP (AFP3B)

1. Identification

1.1. Product Identifier
Product name  ANSUL 3% FP (AFP3B)

1.2. Other means of identification
Product code  443361
Synonyms  None
Chemical Family  No information available

1.3. Recommended use of the chemical and restrictions on use
Recommended use  Fire extinguishing agent.
Uses advised against  Consumer use.

1.4. Details of the Supplier of the Safety Data Sheet
Company Name  Tyco Fire Protection Products
                One Stanton Street
                Marinette, WI 54143-2542
                Telephone: 715-735-7411

Contact point  Product Stewardship at 1-715-735-7411
E-mail address  psra@tycofp.com

1.5. Emergency Telephone Number
Emergency telephone  CHEMTREC 001-800-424-9300 or 001-703-527-3887

2. Hazards Identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation - Category 2
Serious eye damage/eye irritation - Category 2A

2.2. Label Elements

Signal Word  WARNING

Hazard Statements
Causes skin irritation
Causes serious eye irritation
Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

2.3. Hazards Not Otherwise Classified (HNOC)
Not Applicable.

2.4. Other Information
Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

Unknown Acute Toxicity
35.6% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

3.1. Mixture
The following component(s) in this product are considered hazardous under applicable OSHA(USA)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>107-41-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Calcium Chloride</td>
<td>10043-52-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>7646-85-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Cumene sulfonate, sodium salt</td>
<td>28348-53-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1. Description of first aid measures
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. Get medical attention if irritation develops and persists.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. (Get medical attention immediately if symptoms occur.).

Ingestion Rinse mouth. Do not induce vomiting without medical advice. If swallowed, call a poison control center or physician immediately.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed
Symptoms No information available.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
Note to physicians Treat symptomatically.

5. Fire-fighting measures
5.1. Suitable Extinguishing Media
Product is extinguishing agent. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Unsuitable Extinguishing Media
None.

5.3. Specific Hazards Arising from the Chemical
None known.

Hazardous Combustion Products
Carbon oxides, Fluorinated oxides, Nitrogen oxides (NOx), Oxides of sulfur

5.4. Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

5.5. Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal Precautions
Ensure adequate ventilation, especially in confined areas.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental Precautions
Environmental Precautions
Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up
Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up
Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1. Precautions for Safe Handling
Advice on safe handling
Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible Materials

8. Exposure Controls/Personal Protection

8.1. Control Parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>STEL: 50 ppm vapor fraction</td>
<td>-</td>
<td>Ceiling: 25 ppm</td>
<td>25 ppm (Ceiling)</td>
</tr>
<tr>
<td>107-41-5</td>
<td>STEL: 10 mg/m³ inhalable</td>
<td></td>
<td>Ceiling: 125 mg/m³</td>
<td>125 mg/m³ (Ceiling)</td>
</tr>
<tr>
<td></td>
<td>particulate matter, aerosol only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 25 ppm vapor fraction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>STEL: 2 mg/m³ fume</td>
<td>-</td>
<td>IDLH: 50 mg/m³ fume</td>
<td>TWA 1 mg/m³ (VLE-PPT)</td>
</tr>
<tr>
<td>7646-85-7</td>
<td>TWA: 1 mg/m³ fume</td>
<td></td>
<td>TWA: 1 mg/m³ fume</td>
<td>STEL 2 mg/m³ (PPT-CT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 2 mg/m³ fume</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists) OSHA (Occupational Safety and Health Administration of the US Department of Labor) NIOSH IDLH Immediately Dangerous to Life or Health

8.2. Appropriate Engineering Controls

Engineering controls
Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection
Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory Protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Ventilation
Use local exhaust or general dilution ventilation to control exposure with applicable limits.

8.4. General hygiene considerations
Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
<td>Color</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
**10. Stability and Reactivity**

**10.1. Chemical Stability**

Stable under recommended storage conditions.

**10.2. Reactivity**

No data available

**10.3. Possibility of hazardous reactions**

None under normal processing.

- **Hazardous Polymerization**: Hazardous polymerization does not occur.

**10.4. Conditions to Avoid**

Extremes of temperature and direct sunlight.

**10.5. Incompatible Materials**


**10.6. Hazardous decomposition products**


**11. Toxicological Information**

**11.1. Information on Likely Routes of Exposure**

**Product information**

- **Inhalation**: No data available.
- **Eye Contact**: Severely irritating to eyes.
- **Skin contact**: Irritating to skin.
- **Ingestion**: No data available.
Component Information

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>3700 mg/kg (Rat)</td>
<td>8560 µL/kg (Rabbit)</td>
<td>&gt; 310 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>107-41-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3 g/kg (Rat)</td>
<td>&gt; 10 g/kg (Rabbit)</td>
<td>&gt; 42 g/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>7647-14-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Chloride</td>
<td>1000 mg/kg (Rat)</td>
<td>&gt; 5000 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>10043-52-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>1100 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7646-85-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumene sulfonate, sodium salt</td>
<td>&gt; 7000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>28348-53-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11.2. Information on Toxicological Effects

Symptoms
No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin Corrosion/Irritation
Severe skin irritation.

Serious eye damage/eye irritation
Severely irritating to eyes.

Sensitization
No information available.

Germ Cell Mutagenicity
No information available.

Carcinogenicity
No information available.

Reproductive Toxicity
No information available.

STOT - Single Exposure
No information available.

STOT - Repeated Exposure
No information available.

Target organ effects
Central Nervous System, Central Vascular System (CVS), Eyes, Respiratory System, Skin.

Aspiration Hazard
No information available.

11.4. Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 18403 mg/kg
ATEmix (dermal) 75629 mg/kg

12. Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life with long lasting effects.

0.663% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>-</td>
<td>LC50 (96h) static = 10700 mg/L</td>
<td>EC50 (48h) 2700 - 3700 mg/L</td>
</tr>
<tr>
<td>107-41-5</td>
<td>-</td>
<td>Pimephales promelas LC50 (96h) flow-through = 8690 mg/L</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Urea</td>
<td>-</td>
<td>LC50 (96h) 16200 - 18300 mg/L</td>
<td>EC50 (24h) &gt; 10000 mg/L</td>
</tr>
<tr>
<td>57-13-6</td>
<td>-</td>
<td>Poecilia reticulata</td>
<td>Daphnia magna Straus EC50 (48h) Static = 3910 mg/L</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>-</td>
<td>LC50 (96h) static = 12946 mg/L</td>
<td>EC50 (48h) Static 340.7 - 469.2</td>
</tr>
</tbody>
</table>
12.2. Persistence and Degradability

**Chemical Oxygen Demand (mg/L)**
- Concentrate: 460,000
- 3% Solution: 12,000

**Concentrate Biological Oxygen Demand (mg/L)**
- Biological Oxygen Demand (5 Day): 100000
- %BOD/COD: 21.74
- Biological Oxygen Demand (10 Day): 230000
- %BOD/COD: 50
- Biological Oxygen Demand (15 Day): 250000
- %BOD/COD: 54.35
- Biological Oxygen Demand (20 Day): 270000
- %BOD/COD: 58.7

**3% Solution Biological Oxygen Demand (mg/L)**
- Biological Oxygen Demand (5 Day): 2400
- %BOD/COD: 20
- Biological Oxygen Demand (10 Day): 12000
- %BOD/COD: 60
- Biological Oxygen Demand (15 Day): 13000
- %BOD/COD: 65
- Biological Oxygen Demand (20 Day): 14000
- %BOD/COD: 70

12.3. Bioaccumulation
No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol</td>
<td>&lt;0.14</td>
</tr>
</tbody>
</table>
12.4. Other Adverse Effects
No information available

13. Disposal Considerations

13.1. Waste Treatment Methods
Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Do not reuse container.

14. Transport Information

DOT
NOT REGULATED

TDG
NOT REGULATED

MEX
NOT REGULATED

ICAO (air)
NOT REGULATED

IATA
NOT REGULATED

IMDG
NOT REGULATED

15. Regulatory Information

15.1. International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc chloride - 7646-85-7</td>
<td>1.0</td>
</tr>
</tbody>
</table>
SARA 311/312 Hazard Categories

- **Acute Health Hazard**: Yes
- **Chronic health hazard**: No
- **Fire Hazard**: No
- **Sudden Release of Pressure Hazard**: No
- **Reactive Hazard**: No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc chloride 7646-85-7</td>
<td>1000 lb</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc chloride 7646-85-7</td>
<td>1000 lb</td>
<td>-</td>
<td>RQ 1000 lb final RQ</td>
</tr>
</tbody>
</table>

15.3. US State Regulations

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-2,4-pentanediol 107-41-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zinc chloride 7646-85-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ferrous Chloride 7758-94-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>t-Butanol 75-65-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. Other information, including date of preparation of the last revision

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards 2</th>
<th>Flammability 0</th>
<th>Instability 0</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health Hazards 2</td>
<td>Flammability 0</td>
<td>Physical Hazards 0</td>
<td>Personal Protection X</td>
</tr>
</tbody>
</table>

Revision date 13-Dec-2017
Revision note SDS sections updated, 2, 11, 12.
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet