

Section 1 Identification

Product identifiers

Product name: Freeman F-Bond Accelerator

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Solvent

Details of the supplier of the safety data sheet:

Freeman Manufacturing and Supply Company
1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902
FAX (440) 934-7200

| HMIS | |
|--------|---|
| H | 2 |
| F | 3 |
| R | 0 |
| PPE | |
| Sec. 8 | |

24 Hour Emergency Phone Number: (800) 424-9300 CHEMTREC

Section 2 Hazards Identification

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

- Flammable Liquids, Category 2
- Eye Irritation, Category 2A
- Specific Target Organ Toxicity, Single Exposure, Category 3 (Central nervous system)
- Acute Toxicity, Oral, Category 3
- Acute Toxicity, Inhalation, Category 3
- Acute Toxicity, Dermal, Category 3
- Acute Aquatic Toxicity, Category 3
- Chronic Aquatic Toxicity, Category 3

GHS Label elements



Signal word

Danger

Hazard statements

- Highly flammable liquid and vapor.
- Toxic if swallowed, in contact with skin, or if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause damage to organs through prolonged or repeated exposure.
- May cause drowsiness or dizziness.
- Harmful to aquatic life.
- Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Take precautionary measures against static discharge.
- Keep container tightly closed when not in use.

Freeman F-Bond Accelerator

Section 2 Hazards Identification continued

Do not breathe fumes or vapors.
 Wash skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only in a well-ventilated area.
 Avoid release to the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin: Immediately remove all contaminated clothing. Rinse skin with water/shower.
 If inhaled: Remove person to fresh air and call doctor/physician if not feeling well.
 If in eyes: Rinse continuously with water for at least 15 minutes.
 Remove contact lenses, if present and easy to do.
 If swallowed, immediately call a POISON CENTER or a physician. Do NOT induce vomiting.
 If skin irritation occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Take off contaminated clothing and wash before reuse.
 In case of fire, use alcohol resistant foam, dry chemical, carbon dioxide (CO₂) or dry sand to extinguish.

Storage

Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

None known

Section 3 Composition/Information on Ingredients

| Ingredient Name | CAS Number | Weight Concentration % |
|-------------------------|------------|------------------------|
| Acetone | 67-64-1 | ≥ 95 |
| N,N-Dimethyl-p-toludine | 99-97-8 | ≤ 1 |

Section 4 First Aid Measures

Description of first aid measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. Get medical attention.

In case of skin contact

Wash off with soap and plenty of water. If skin irritation continues, get medical assistance.

In case of eye contact

Remove contact lenses, if worn. Flush opened eyes thoroughly with water. If irritation persists, get medical assistance.

If swallowed

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water and then drink with plenty of water. Call for medical help immediately.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5 Fire-Fighting Measures

Extinguishing media

Use alcohol-resistant foam, dry chemical or carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating and in case of fire.

Hazardous combustion products

Carbon oxides.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Avoid contact with skin and eyes. Remove all sources of ignition. Ensure adequate ventilation. Remove all non-essential people from the area. Ensure adequate ventilation. For personal protection see section 8. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Absorb with liquid binding material. Sweep up and shovel, using non-sparking tools. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

Precautions for safe handling

Use normal precautions when handling flammable materials. Do not breathe fumes or vapor. Do not allow material to contact skin. Provide appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in tightly closed containers. This material can catch fire if overheated. Do not heat this material above the flash point. Keep away from flame and open electrical coils. Do not store with oxidizing and acidic materials.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

| Ingredient | OSHA | | ACGIH | |
|------------|----------|----------|---------|---------|
| | PEL | STEL | TWA | STEL |
| Acetone | 1000 ppm | 1000 ppm | 500 ppm | 750 ppm |

Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits.

Personal protective equipment

Eye/face protection

Use safety glasses equipped with side shields. If splashes are likely to occur, wear goggles.

Freeman F-Bond Accelerator

Section 8 Exposure Controls/Personal Protection continued

Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

| | |
|-------------------------------------|--|
| Appearance | Transparent colorless to slight amber liquid |
| Odor | Solvent |
| Odor Threshold | No data available |
| pH | Not applicable |
| Melting Point | -94°C (137°F) |
| VOC Content | No data available |
| Boiling point | 56°C (133°F) |
| Flash Point (closed cup) | -17°C (1.4°F) |
| Evaporation Rate | No data available |
| Flammability (solid, gas) | No data available |
| Lower Explosive Limit | 2% (V) |
| Upper Explosive Limit | 13% (V) |
| Vapor Pressure | 184 mmHg at 20°C |
| Vapor Density | No data available |
| Specific Gravity | 0.79 |
| Water Solubility | Completely miscible |
| Coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | 465°C (869°F) |
| Viscosity | No data available |
| Explosive Properties | No data available |
| Oxidizing Properties | No data available |
| % Volatile | No data available |

Freeman F-Bond Accelerator

Section 10 Stability and Reactivity

| | |
|---|---|
| Reactivity | No data available |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | Vapors may form explosive mixture with air. |
| Conditions to avoid | Heat and open flames. |
| Incompatible materials | Oxidizing agents, bases, reducing agents. |
| | Acetone reacts violently with phosphorous oxychloride. |
| Hazardous decomposition | Thermal oxidative decomposition can produce carbon monoxide and carbon dioxide. |

Section 11 Toxicological Information

Information on toxicological effects

| | |
|--|---|
| Acute Oral Toxicity | LD50 5,800 mg/kg (rat) |
| Acute Inhalation Toxicity | LC50 8hr 50,100 mg/m ³ (rat) |
| Acute Dermal Toxicity | LD50 7,426 mg/kg (guinea pig) |
| Respiratory or skin sensitization | Chronic exposure may cause dermatitis. |
| Skin corrosion / irritation | Mild skin irritation |
| Eye damage / irritation | Irritating to eyes |
| Germ cell mutagenicity | No data available |
| Carcinogenicity | |
| IARC | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| NTP | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| OSHA | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| Reproductive toxicity | No data available. |
| Specific target organ toxicity | |
| - single exposure | May cause drowsiness or dizziness |
| Specific target organ toxicity | |
| - repeated exposure | May cause damage to organs through prolonged or repeated exposure |
| Aspiration hazard | No data available |

Section 12 Ecological Information

| | |
|---|---|
| Ecotoxicity | LC50 - Oncorhynchus mykiss (rainbow trout) 5,540.00 mg/l - 96 h EC50 - Daphnia magna (Water flea) - 13,500.00 mg/l - 48 h |
| Persistence and degradability | No data available |
| Bioaccumulative potential | No data available |
| Mobility in soil | No data available |
| Results of PBT & vPvB assessment | No data available |

Section 13 Disposal Considerations

The product should not be allowed to enter drains, water courses, or the soil. Use safety containers for disposal. Contact a licensed waste management company for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 Transport Information

DOT: Shipping Name: Acetone
Hazard Class: 3
ID No.: UN 1090
Packing Group: II
IATA: Shipping Name: Acetone
Hazard Class: 3
ID No.: UN 1090
Packing Group: II
IMDG: Shipping Name: Acetone
Hazard Class: 3
ID No.: UN 1090
Packing Group: II
EMS No: F-E, S-D

Section 15 Regulatory Information

US Federal Regulations

SARA 311/312: Chronic Health Hazard, Fire Hazard, Acute Health Hazard
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
TSCA Inventory Status: All ingredients listed on TSCA inventory requirements

US State Regulations

California Proposition 65: ⚠️ **WARNING:** This product can expose you to chemicals including N,N-Dimethyl-p-toluidine, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Freeman F-Bond Accelerator - Aerosol

Section 1 Identification

Product identifiers

Product name: Freeman F-Bond Accelerator - Aerosol

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Solvent

Details of the supplier of the safety data sheet:

Freeman Manufacturing and Supply Company
1101 Moore Road, Avon, OH 44011
Phone (440) 934-1902
FAX (440) 934-7200

| HMIS | |
|--------|---|
| H | 2 |
| F | 4 |
| R | 1 |
| PPE | |
| Sec. 8 | |

24 Hour Emergency Phone Number: (800) 424-9300 CHEMTREC

Section 2 Hazards Identification

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

- Flammable Aerosols, Category 1
- Gases Under Pressure, Category Compressed Liquid
- Serious Eye Damage/Eye Irritation, Category 2A
- Acute Skin Toxicity, Category 3
- Specific Target Organ Toxicity, Single Exposure, Category 3
- Specific Target Organ Toxicity, Repeated Exposure, Category 2

GHS Label elements



Signal word

Danger

Hazard statements

- Extremely flammable aerosol.
- Contains gas under pressure, may explode if heated.
- Toxic in contact with skin.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

- Pressurized container. Do not pierce or burn, even after use.
- Keep container tightly closed.
- Do not spray on an open flame or other ignition source.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Do not breathe fumes or vapors.
- Wash skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.

Freeman F-Bond Accelerator - Aerosol
Section 2 Hazards Identification continued

Use only in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin: Wash with plenty of soap and water.

If inhaled: Remove person to fresh air and call doctor/physician if not feeling well.

If in eyes: Rinse continuously with water for at least 15 minutes.

Remove contact lenses, if present and easy to do.

If eye irritation persists: Get medical advice/attention.

Storage

Keep container tightly closed when not in use.

Protect from sunlight.

Store in a well-ventilated place.

Do not expose to temperatures exceeding 50°C (122°F).

Disposal

Dispose of contents and container to an appropriate waste site in accordance with local and national regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

None known

Section 3 Composition/Information on Ingredients

| Ingredient Name | CAS Number | Weight Concentration % |
|-------------------------|------------|------------------------|
| Acetone | 67-64-1 | 69.0 |
| Propane | 74-98-6 | 20.4 |
| n-Butane | 106-97-8 | 9.6 |
| N,N-Dimethyl-p-toludine | 99-97-8 | 1.0 |

Section 4 First Aid Measures
Description of first aid measures
If inhaled

Move person into fresh air. If not breathing, give artificial respiration. Get medical attention.

In case of skin contact

Wash off with soap and plenty of water. If skin irritation continues, get medical assistance.

In case of eye contact

Remove contact lenses, if worn. Flush opened eyes thoroughly with water. If irritation persists, get medical assistance.

If swallowed

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water and then drink with plenty of water. Call for medical help immediately.

Most important symptoms and effects, both acute and delayed

See Section 11 Information on toxicological effects.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Freeman F-Bond Accelerator - Aerosol

Section 5 Fire-Fighting Measures

Suitable extinguishing media

Use alcohol-resistant foam, dry chemical or carbon dioxide, water spray.

Unsuitable extinguishing media

Water spray may be unsuitable. However, if water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat.

Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous combustion products

Carbon oxides.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Avoid contact with skin and eyes. Remove all sources of ignition. Ensure adequate ventilation. For personal protection see section 8.

Environmental precautions

None known.

Methods and materials for containment and cleaning up

Absorb with liquid binding material. Sweep up and shovel, using non-sparking tools. Keep in suitable, closed containers for disposal.

Section 7 Handling and Storage

Precautions for safe handling

Vapors may ignite explosively. Prevent buildup of vapors. Keep from sparks, heat, flame or other heat sources. Do not smoke. Turn off pilot lights, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Do not puncture or incinerate/burn container.

Conditions for safe storage

Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F. Store in dry, well-ventilated area and in accordance with local, state, and federal regulations. Keep container tightly closed when not in use.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

| Ingredient | OSHA | | ACGIH | |
|------------|----------|--------------------|----------|------------------|
| | PEL | STEL | TWA | STEL |
| Acetone | 1000 ppm | 1000 ppm | 500 ppm | 750 ppm |
| Propane | 1000 ppm | None established | 1000 ppm | None established |
| N-Butane | 800 ppm | None established . | 800 ppm | None established |

Freeman F-Bond Accelerator - Aerosol

Section 8 Exposure Controls/Personal Protection continued

Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits.

Personal protective equipment

Eye/face protection

Use safety glasses equipped with side shields. If splashes are likely to occur, wear goggles.

Skin protection

Hand Protection

With product at ambient temperatures, use disposable nitrile gloves. Contaminated gloves should be replaced.

Body Protection

Prevent skin contact when handling material.

Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General Hygienic Practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

| | |
|-------------------------------------|-------------------------------|
| Appearance | Aerosol – pressurized liquid |
| Odor | Characteristic solvent |
| Odor Threshold | No data available |
| pH | No data available |
| Melting Point | No data available |
| VOC Content | 40% by wt. |
| Boiling range | No data available |
| Flash Point (COC) | <-18°C (<-1°F) |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability | No data available |
| Vapor Pressure | Approximately 50 psig at 10°C |
| Vapor density | No data available |
| Relative density (g/cc) | 0.692 |
| Water Solubility | Negligible |
| Coefficient: n-octanol/water | No data available |
| Viscosity | No data available |
| Explosive Properties | No data available |
| Oxidizing Properties | No data available |

Freeman F-Bond Accelerator - Aerosol

Section 10 Stability and Reactivity

| | |
|---|---|
| Reactivity | No data available |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | None known |
| Conditions to avoid | Heat and open flames. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition | Thermal oxidative decomposition can produce carbon monoxide and carbon dioxide. |

Section 11 Toxicological Information

Information on toxicological effects

| | |
|--|---|
| Acute oral toxicity | No data available |
| Acute inhalation toxicity | No data available |
| Acute dermal toxicity | No data available |
| Respiratory or skin sensitization | Not a sensitizer |
| Skin corrosion / irritation | Mild skin irritation |
| Eye damage / irritation | Irritating to eyes |
| Germ cell mutagenicity | No data available |
| Carcinogenicity | |
| IARC | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| NTP | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| OSHA | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. |
| Reproductive toxicity | No data available. |
| Specific target organ toxicity | |
| - single exposure | No data available |
| Specific target organ toxicity | |
| - repeated exposure | Eyes, kidneys, liver, central nervous system, skin, respiratory system |
| Aspiration hazard | No data available |

Section 12 Ecological Information

| | |
|---|-------------------|
| Ecotoxicity | No data available |
| Persistence and degradability | No data available |
| Bioaccumulative potential | No data available |
| Mobility in soil | No data available |
| Results of PBT & vPvB assessment | No data available |

Section 13 Disposal Considerations

The product should not be allowed to enter drains, water courses, or the soil. Use safety containers for disposal. Contact a licensed waste management company for detailed recommendations. Follow applicable Federal, state, and local regulations.

Freeman F-Bond Accelerator - Aerosol

Section 14 Transport Information

DOT UN I.D. Number: UN1950
Proper Shipping Name: AEROSOLS ("FLAMMABLE" is optional to add after AEROSOLS)
Transport Hazard Class: 2.1
Packing Group: - (not applicable)
Hazard Label: Limited Quantity (LTD QTY) label -- see 49 CFR 172.315
Shipping Papers Format: UN1950, AEROSOLS, FLAMMABLE, 2.1 LTD QTY

IATA UN I.D. Number: UN1950
Proper Shipping Name: AEROSOLS, FLAMMABLE
Transport Hazard Class: 2.1
Packing Group: - (not applicable)
Hazard Labels: LTD QTY label with "Y" in it, and Flammable Gas Label
Packing Instruction: Y203
Shipping Papers Format: UN1950, AEROSOLS, FLAMMABLE, 2.1


IMDG UN I.D. Number: UN1950
Proper Shipping Name: AEROSOLS
Transport Hazard Class: 2.1
Hazard Label: LTD QTY label (see IMDG 3.4.5.1)
Packing Instruction: P003, LP02
Ems: F-D, S-U
Stowage and Segregation: Category A
Shipping Papers format: UN1950, AEROSOLS, 2.1, (-18 C c.c.), LTD QTY
Environmental Hazards: No component of this product is a listed Marine Pollutant

Section 15 Regulatory Information

US Federal Regulations

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
 TSCA Inventory Status: All ingredients listed on TSCA inventory requirements

US State Regulations

California Proposition 65:  **WARNING:** This product can expose you to chemicals including N,N-Dimethyl-p-toluidine, which is known to the State of California to cause cancer.
 For more information, go to www.P65Warnings.ca.gov.

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.