

**Section 1 Identification**

**Product identifiers**

90-1 Fre-Thin – Pattern Coating Thinner

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

Lacquer thinner for reducing pattern coatings. For industrial / professional use only.

**Details of the supplier of the safety data sheet:**

Freeman Manufacturing & Supply Company  
1101 Moore Road, Avon, OH 44011-4043 USA  
Telephone: +1 (440) 934-1902  
Email: contactus@freemansupply.com

**24 Hour Emergency Number**  
**CHEMTREC: 1 (800) 424-9300**

**Section 2 Hazards Identification**

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

Flammable Liquid, Category 2  
Skin Corrosion/Irritation, Category 3  
Eye Corrosion/Irritation, Category 2B  
Mutagen, Category 1B  
Carcinogen, Category 1B  
Reproductive Toxin, Category 1A  
Aspiration Hazard, Category 1

**Label elements**



**Danger**

**Hazard statements**

H225 Highly flammable liquid and vapor  
H304 May be fatal if swallowed and enters airways  
H316 Causes mild skin irritation  
H319 Causes serious eye irritation  
H340 May cause genetic defects  
H350 May cause cancer  
H360 May damage fertility or the unborn child

**Precautionary statements**

P201 Obtain special instructions before use  
P202 Do not handle until all safety precautions have been read and understood  
P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P233 Keep container tightly closed  
P240 Ground/bond container and receiving equipment  
P241 Use explosion-proof electrical/ventilating/lighting/equipment  
P242 Use only non-sparking tools  
P243 Take precautionary measures against static discharge  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P281 Use personal protective equipment as required  
P331 Do NOT induce vomiting  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

### Section 2 Hazards Identification

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing .  
 Rinse skin with water/shower  
 P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes.  
 Remove contact lenses if present and easy to do - continue rinsing  
 P308+P313 IF exposed or concerned: Get medical advice/attention  
 P332+P313 If skin irritation occurs: Get medical advice/attention  
 P337+P313 Get medical advice/attention  
 P370+P378 In case of fire: Use alcohol resistant foam, dry chemical, carbon dioxide (CO2), dry sand  
 P405 Store locked up  
 P403+P235 Store in a well ventilated place. Keep cool  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
 Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

### Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Weight Concentration %
Isopropyl alcohol	67-63-0	50-60
n-Butyl acetate	123-86-4	20-30
Naphtha, petroleum, hydrotreated light	64742-49-0	10-20
2-Pentanone, 4-methyl	108-10-1	1-10
Xylenes (o-, m-, p-isomers)	1330-20-7	1-5
Ethylbenzene	100-41-4	0.1-0.5

### Section 4 First Aid Measures

**Inhalation:** Immediately supply fresh air. Keep patient in restful and comfortable position for breathing. If required provide artificial respiration, although this may be dangerous. Consult doctor if symptoms persist.  
**Eye Contact:** Immediately rinse opened eye(s) for several minutes under running water. Use lukewarm water if possible. Remove contact lenses if worn. Get medical attention.  
**Skin Contact:** Remove contaminated clothing and shoes. Immediately wash with water and soap, rinse thoroughly. If skin irritation continues, consult a doctor.  
**Ingestion:** Immediately get medical attention. Call a poison center or physician. Rinse out mouth and then drink small amounts of water. Do not induce vomiting as this may be dangerous. Aspiration hazard if swallowed, can enter lungs and cause damage. If vomiting occurs, the head should be kept low to avoid vomit entering the lungs. Maintain an open airway.

### Section 5 Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media: Use alcohol-resistant foam, dry chemical, or carbon dioxide.

#### Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating and in case of fire. Mixture in sealed and heated containers may cause explosion hazard.

**Section 5 Fire-Fighting Measures**

**Advice for firefighters**

Clear fire area of unprotected personnel. Containers that are exposed to intense heat should be cooled with water. Avoid spreading burning liquid with the water used for cooling purposes. Do not enter fire area without protective gear. Fight fire from safe distance or a protected location. Wear self-contained respiratory protective device. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**Section 6 Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away. Keep away from ignition sources. Wear protective clothing. Keep from contacting skin or eyes. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. If any equipment is necessary, ensure that it is non-sparking and electrically-protected.

**Environmental precautions:**

Do not allow product to reach sewage system or any water source. In case of seepage into the ground inform responsible authorities. Prevent from spreading (e.g. by damming-in or oil barriers). Keep contaminated washing water and dispose of appropriately.

**Methods and material for containment and cleaning up:**

Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste. Do not flush with water or aqueous cleansing agents. Send for recovery or disposal in suitable receptacles according to local, state and federal regulations.

**Section 7 Handling and Storage**

**Precautions for safe handling**

Apply proper ventilation, possibly combined with local exhaust. Do not eat, smoke or drink during use. For personal protection see Section 8. Keep away from sources of ignition. Keep material out of reach of children. Use only explosion proof equipment. Wash thoroughly after handling. Keep respiratory protective device available.

**Conditions for safe storage, including any incompatibilities**

Keep ignition sources away - Do not smoke. Protect against electrostatic charges by bonding and grounding product containers before and during material transfers. Store in a cool, well-ventilated place. Keep in original, closed packaging. Comply with governmental regulations. Keep container tightly closed. Store out of direct sunlight, between 40 and 90F.

### Section 8 Exposure Controls/Personal Protection

#### Components with workplace control parameters

Ingredient Name	OSHA Exposure Limits	ACGIH Exposure Limits
Isopropyl alcohol 67-63-0	400 ppm TWA; 890 mg/m <sup>3</sup> TWA	400 ppm STEL 200 ppm TWA
n-Butyl acetate 123-86-4	150 ppm TWA; 710 mg/m <sup>3</sup> TWA	200 ppm STEL 150 ppm TWA
2-Pentanone, 4-methyl 108-10-1	100 ppm TWA; 410 mg/m <sup>3</sup> TWA	75 ppm STEL 20 ppm TWA
Xylenes (o-, m-, p- isomers) 1330-20-7	100 ppm TWA; 435 mg/m <sup>3</sup> TWA	150 ppm STEL 100 ppm TWA
Ethylbenzene 100-41-4	100 ppm TWA; 435 mg/m <sup>3</sup> TWA	20 ppm TWA

#### Appropriate engineering controls

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910 .94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

#### Personal protective equipment (PPE)

**Respiratory Protection:** In outdoor or open areas use (NIOSH/MSHA approved) mechanical filter respirator to remove solid airborne particles of overspray during spray application. In restricted ventilation areas use (NIOSH/MSHA approved) chemical-mechanical filters designed to remove a combination of particulate and gas and vapor. In confined areas use (NIOSH/MSHA approved) airline type respirators or hoods. Respiratory protection may also be necessary in any later manufacturing operations in which the product may become airborne in the form of vapor or dust.

**Protective Gloves:** Protective gloves are required for prolonged or repeated contact. Wear resistant gloves such as natural rubber, neoprene, buna N or nitrile. An apron should be worn to avoid skin contact. (Consult your safety equipment supplier.)

**Eye Protection:** Avoid contact with eyes. Wear goggles if there is a likelihood of contact with eyes. (Consult your safety equipment supplier.) Eyewash stations and safety showers should be readily available in use and handling areas. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

**Body Protection:** Chemically resistance gloves, apron and safety goggles are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.

#### 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

<b>Appearance</b>	Clear Liquid
<b>Odor</b>	Solvent
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available

**Section 9 Physical and Chemical Properties**

<b>Coating VOC</b>	6.69 lb./gal. (EPA calculation)
<b>Boiling range</b>	82-141°C (179-286°F)
<b>Flash point</b>	12°C (54°F)
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper Explosive Limit (UEL)</b>	No data available
<b>Lower Explosive Limit (LEL)</b>	1.00
<b>Vapor pressure</b>	24.9 mmHg
<b>Vapor density</b>	No data available
<b>Specific gravity</b>	0.803
<b>Weight per gallon</b>	6.7 at 77°F
<b>Water Solubility</b>	Negligible
<b>Coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Viscosity</b>	No data available

**Section 10 Stability and Reactivity**

**Reactivity:** No data available  
**Chemical stability:** Stable under recommended storage conditions.  
**Possibility of hazardous reactions:** None.  
**Conditions to avoid:** Heat and open flames.  
**Incompatible materials:** Oxidizing agents, peroxides  
**Hazardous decomposition:** Thermal oxidative decomposition can produce carbon monoxide and carbon dioxide various hydrocarbons, etc.

**Section 11 Toxicological Information**

**Toxicity Values of Mixture**

**Oral LD50:** 2,912mg/kg  
**Inhalation LC50:** 68mg/L

**Toxicity Values of Components**

<b>Ingredient Name</b>	<b>Oral LD50</b>	<b>Inhalation LC50</b>	<b>Dermal LD50</b>
Isopropyl alcohol 67-63-0	1,870 mg/kg (Rat)	Not available	4,059 mg/kg (Rabbit)
2-Pentanone, 4-methyl 108-10-1	2,080 mg/kg (Rat)	8 mg/L (Rat)	3,000 mg/kg (Rabbit)
Ethylbenzene 100-41-4	3,500 mg/kg (Rat)	17 mg/L (Rat)	Not available

**Chronic effects**

**Carcinogenicity:** The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA.  
 2-Pentanone, 4-methyl-: IARC: Possible human carcinogen OSHA: listed.  
 Ethylbenzene: IARC: Possible human carcinogen OSHA: listed.  
 Naphtha, petroleum, hydrotreated light: EU REACH: Present (P)

### Section 12 Ecological Information

**Ecotoxicity of mixture:** No data available

Ingredient Name	Component Toxicity
Isopropyl alcohol	96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11130 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L 48 Hr EC50 Daphnia magna: 13299 mg/L 72 Hr EC50 Desmodemus subspicatus: >1000 mg/L
n-Butyl acetate	96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through] 72 Hr EC50 Desmodemus subspicatus: 674.7 mg/L
2-Pentanone, 4-methyl-	96 Hr LC50 Pimephales promelas: 496 - 514 mg/L [flow-through] 48 Hr EC50 Daphnia magna: 170 mg/L 96 Hr EC50 Pseudokirchneriella subcapitata: 400 mg/L
Xylenes (o-, m-, p- isomers)	96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L
Ethylbenzene	96 Hr LC50 Oncorhynchus mykiss: 11.0 - 18.0 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4.2 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 7.55 - 11 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 32 mg/L [static]; 96 Hr LC50 Pimephales promelas: 9.1 - 15.6 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 9.6 mg/L [static] 48 Hr EC50 Daphnia magna: 1.8 - 2.4 mg/L 72 Hr EC50 Pseudokirchneriella subcapitata: 4.6 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: >438 mg/L; 72 Hr EC50 Pseudokirchneriella subcapitata: 2.6 - 11.3 mg/L [static]; 96 Hr EC50 Pseudokirchneriella subcapitata: 1.7 - 7.6 mg/L [static]

**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

Disposal of this product and any by-products must at all times comply with local, state and Federal regulations for hazardous wastes. All entities that store, transport or handle hazardous waste must take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Section 14 Transport Information

#### DOT/IMDG/IATA

UN1263, Paint Related Material, II, 3

### Section 15 Regulatory Information

#### U.S. Federal Regulations

Ingredient Name	CERCLA HS RQ	CWA 311(j)(5) HS TQ	EPCRA 313 TRI
Butyl acetate 123-86-4	5,000 lb.	5,000,500	Not listed
Methyl isobutyl ketone 108-10-1	5,000 lb.	Not listed	Listed
Xylene (mixed isomers) 1330-20-7	100	100,000	Listed
Ethylbenzene 100-41-4	1,000	1,000,000	Listed

#### U.S. State Regulations

**California Proposition 65:** ⚠️ WARNING: This product can expose you to chemicals including 4-Methyl-2-Pentanone and Ethylbenzene, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### Inventories

USA Inventory - United States - Section 8(b) Inventory (TSCA), Listed

Canada DSL (Canadian Domestic Substance List), Listed

Europe EINECS (European Inventory of Existing Commercial Chemical Substances), Listed

### 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.

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