

**Section 1 Identification**

**1.1 Product identifiers**

Product name: Ferris® 2283-A Water Soluble Wax

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

Identified uses: Investment casting

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

Freeman Manufacturing and Supply Company  
 1101 Moore Road, Avon, OH 44011  
 (440) 934-1902  
 contactus@freemansupply.com

**1.4 Emergency telephone number**

CHEMTREC (800) 424-9300

**Section 2 Hazards Identification**

**2.1 Classification of the substance or mixture**

Not classified according to OSHA 29 CFR 1910.1200 HCS

**2.2 GHS Label elements, including precautionary statements**

No label element(s) required

**2.3 Hazards not otherwise classified**

Molten product can cause serious burns.

**Section 3 Composition/Information on Ingredients**

**3.1 Mixture of Substances**

Proprietary mixture of synthetic waxes, and dye(s).

No components need to be disclosed according to the applicable regulations.

**Section 4 First Aid Measures**

**4.1 Description of first aid measures**

**Inhalation** Get medical assistance if irritation develops or persists. If breathing is difficult, move the person to fresh air. Give artificial respiration if person is not breathing.

**Skin contact** For thermal burns, flush or submerge effected area in cold water to dissipate heat. Cover with clean bandage material. Do not peel material from skin. Get medical attention. For contact at ambient temperatures, wash with soap and water.

**Eye contact** Immediately flush with plenty of water for at least 15 minutes. If irritation persists, get medical attention immediately, preferably an ophthalmologist.

**Ingestion** If swallowed, rinse mouth with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Consult a physician if necessary.

**Section 5 Fire Fighting Measures**

**5.1 Extinguishing media**

**Suitable extinguishing media:** Water fog, dry chemical, foam, carbon dioxide.

**Unsuitable extinguishing media:** Do not use a solid water stream as it may scatter and spread fire.

**5.2 Special hazards arising from the substance or mixture**

**Unusual Fire and Explosion Hazards:** Product is a waxy solid and is not expected to form dust. Organic dusts at sufficient concentration may form explosive mixtures in air. During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide, nitrogen oxides, irritating smoke

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## Ferris® 2283-A Water Soluble Wax

### Section 6 Accidental Release Measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear appropriate personal protective equipment.

#### 6.2 Environmental precautions

Should not be released into the environment. Prevent product from entering drains.

#### 6.3 Methods and materials for containment and cleaning up

Do not walk through spilled material. Contain spillage and use clean non-sparking tools to collect material. Shovel spillage into suitable container for disposal. Flush any residue with water.

### Section 7 Handling and Storage

#### 7.1 Precautions for safe handling

Do not heat material above 200°F. Do not breathe vapours/dust. Do not get in eyes or mouth or on skin. Keep away from sources of ignition. Use normal precautions when handling hot molten liquid solutions. Avoid creating dust. Provide appropriate exhaust ventilation.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store at temperatures not exceeding 30°C (86°F) in closed containers. Avoid prolonged exposure to heat or air. Keep away from flame and open electrical coils. Incompatibilities: Strong oxidizing agents, strong acids, strong bases

### Section 8 Exposure Controls/Personal Protection

#### 8.1 Control parameters

**Exposure Limits/Guidelines:** Not established

#### 8.2 Exposure controls

##### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, very hot processing, mechanical generation of dusts, etc.

#### 8.3 Personal protective equipment

##### Eye/Face

Use a full-face shield and safety glasses if handling heated material. With product at ambient temperatures, use safety glasses equipped with side shields.

##### Hands

Use gloves chemically resistant to this material when prolonged or frequent repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: neoprene, polyvinyl chloride (PVC) or butyl rubber gloves. When handling product at elevated temperatures, use heat-resistant gloves.

##### Skin/Body

Prevent skin contact, wear long sleeves and/or coveralls.

##### Respiratory

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, use an N95 dust mask for limited exposure. For prolonged exposure use an air-purifying respirator. 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.

#### Safety Stations

Make emergency eyewash stations and washing facilities available in work area.

#### General Hygienic Practices

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

## Ferris® 2283-A Water Soluble Wax

### Section 9 Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

<b>Physical State:</b>	Waxy solid
<b>Color:</b>	Green
<b>Odor:</b>	Odorless
<b>Odor Threshold:</b>	No data available
<b>pH:</b>	4.0-8.0
<b>Melting Point:</b>	>140°F (>60°C)
<b>Boiling Point:</b>	>200°F (>93°C)
<b>Decomposition Temperature:</b>	No data available
<b>Flash Point:</b>	Approximately 475°F (246°C)
<b>Flammability:</b>	Not ignitable
<b>Lower Explosion Limit:</b>	No data available
<b>Upper Explosion Limit:</b>	No data available
<b>Vapor Density:</b>	No data available
<b>Specific Gravity:</b>	1.2
<b>Water Solubility:</b>	Soluble
<b>Partition Coefficient: n-octanol/water:</b>	No data available
<b>Autoignition Temperature:</b>	No data available
<b>Viscosity:</b>	Solid at room temperature

### Section 10 Stability and Reactivity

<b>10.1 Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>10.2 Chemical stability:</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions:</b>	No dangerous reactions known under conditions of normal use.
<b>10.4 Conditions to avoid:</b>	Do not heat material above 200°F. Avoid heat, sparks, open flame. Avoid dust formation.
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents. Strong acids. Strong bases.
<b>10.6 Hazardous decomposition products</b>	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes, alcohols, ethers, carbon dioxide, carbon monoxide, carboxylic acids, nitrogen oxides, polymer fragments

### Section 11 Toxicological Information

#### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>	No data available
<b>Acute inhalation toxicity</b>	No data available
<b>Acute dermal toxicity</b>	No data available
<b>Skin corrosion/irritation</b>	Prolonged exposure is not likely to cause significant skin irritation. May cause a more severe response if skin is abraded.
<b>Serious eye damage/irritation</b>	May cause slight temporary eye irritation.
<b>Respiratory and skin sensitization</b>	Not available
<b>Germ cell mutagenicity</b>	Not available
<b>Aspiration hazard</b>	No data available
<b>Carcinogenicity</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by IARC, NTP, or OSHA.
<b>Reproductive toxicity</b>	No data available
<b>Specific Target Organ Toxicity (STOT)</b>	
<b>single exposure</b>	No data available
<b>repeated exposure</b>	No data available

## Ferris® 2283-A Water Soluble Wax

### Section 12 Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	Not expected due to water solubility
12.5 Results of PBT & vPvB assessment	No data available

### Section 13 Disposal Considerations

13.1 Disposal	Follow applicable Federal, State, and local regulations.
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### Section 14 Transport Information

14.1 DOT, TDG, IMO/IMDG, IATA/ICAO:	Not regulated
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### Section 15 Regulatory Information

#### 15.1 Safety, health and environmental regulations/legislation specific for the product

**Inventories:** This product complies with the following inventories: USA TSCA

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements.

**SARA 311/312 Hazards Classifications:** None

**SARA 313 Components:** 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.

**RCRA:** In the form delivered, this product is not considered as hazardous waste, and is not subject to reporting under the Resource Conservation and Recovery Act.

**Pennsylvania Right To Know:** 1-Vinyl-2-Pyrrolidone, - Vinyl Acetate Polymer CAS 25086-89-9

**New Jersey Right To Know:** 1-Vinyl-2-Pyrrolidone, - Vinyl Acetate Polymer CAS 25086-89-9

**California Proposition 65:** ⚠️ WARNING: This product may expose you to chemicals including acetaldehyde, which is known to the State of California to cause cancer.

For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name	CAS Number	Concentration (%)	No Significant Risk Level (NSRL)
Acetaldehyde	75-07-0	<0.01	90 µg/day (Inhalation)

### Section 16 Other Information

#### 16.1 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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