



Safety Data Sheet

Section 1. Identification

Product name : Protector F1 Express 13 oz
Product code : 62673
Product type : Aerosol.
Date of issue/Date of revision : March 6 2024.

| Manufacturer - Supplier | Telephone no.: | Emergency phone: |
|---|---|--|
| FERNOX Americas 4100 6th Avenue Altoona, Pennsylvania 16602 www.fernox.com | Toll Free: (800) 289-3797 Main Phone: (814) 946-1611 | DOMESTIC NORTH AMERICA 202-464-2554 |

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : When using do not eat, drink or smoke.

Response : Get medical attention if you feel unwell.

Storage : Keep container tightly closed in a cool, well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % | CAS number |
|---------------------------|-------|------------|
| 2,2',2"-nitrilotriethanol | 30-40 | 102-71-6 |
| Metal Salt | 1-10 | - |
| Corrosion inhibitor. | 1-10 | - |
| Alcohol | 1-10 | - |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Continued on next page

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid breathing gas. Avoid breathing vapor or mist.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Storage temperature: 5 to 40°C (41 to 104°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

2,2',2"-nitrioltriethanol

ACGIH TLV (United States, 3/2017).TWA: 5 mg/m³ 8 hours.

Metal Salt

ACGIH TLV (United States, 3/2017). Notes: as MoTWA: 0.5 mg/m³, (as Mo) 8 hours. Form: Respirable fraction**OSHA PEL 1989 (United States, 3/1989). Notes: as Mo**TWA: 5 mg/m³, (as Mo) 8 hours. Form: Soluble**OSHA PEL (United States, 6/2016). Notes: as Mo**TWA: 5 mg/m³, (as Mo) 8 hours.

Alcohol

OARS WEEL (United States, 10/2011). Notes: 2004 Revised DocumentTWA: 10 mg/m³ 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid. [Aerosol.]
- Color** : Yellow. [Light]
- Odor** : Aromatic. [Slight]
- Odor threshold** : Not available.
- pH** : 8.4
- Melting point/freezing point** : 0°C (32°F)
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : Not available.
- Relative vapor density** : Not available.
- Relative density** : 1.167
- Solubility** : Soluble in the following materials: cold water and hot water.
- VOC** : 69.5 g/l
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Heat of combustion** : 0.4097 kJ/g
- Viscosity** : Not available.
- Flow time (ISO 2431)** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray

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Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Incompatibility with various substances** : Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials, acids and alkalis.
Non-reactive or compatible with the following materials: moisture.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|------------------------|----------|
| 2,2',2"-nitrilotriethanol Metal Salt | LD50 Oral | Rat | 7.39 g/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 4233 mg/kg | - |
| Corrosion inhibitor. | LC50 Inhalation Dusts and mists | Rat | 1910 mg/m ³ | 3 hours |
| | LD50 Dermal | Rabbit | >1000 mg/kg | - |
| Alcohol | LD50 Oral | Rat | 560 mg/kg | - |
| | LD50 Dermal | Rabbit | 20800 mg/kg | - |
| | LD50 Oral | Rat | 20 g/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---------------------------|------------------------|---------|-------|-------------------------------------|-------------|
| 2,2',2"-nitrilotriethanol | Eyes - Mild irritant | Rabbit | - | 10 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 20 milligrams | - |
| | Skin - Mild irritant | Human | - | 72 hours 15 milligrams Intermittent | - |
| Corrosion inhibitor. | Skin - Severe irritant | Mouse | - | 50 Percent | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 560 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |

Sensitization

Not available.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|-------------------------|------|---|----------|
| Corrosion inhibitor. | - | Experiment: In vitro Subject: Bacteria | Positive |

Carcinogenicity

Not available.

Additional information: : **Metal Salt:** listed as Molybdenum soluble compounds

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---------------------------|------|------|-----|
| 2,2',2"-nitrilotriethanol | - | 3 | - |

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Section 11. Toxicological information

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness
Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|--------|----------------|
| Oral | 13390.18 mg/kg |
| Dermal | 15594.07 mg/kg |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------|--------------------------------------|--|----------|
| 2,2',2"-nitrioltriethanol | Acute EC50 609.98 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 11800000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Chronic NOEC 16000 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| Corrosion inhibitor. | Acute EC50 15.4 mg/l | Algae | 96 hours |
| | Acute LC50 141.6 mg/l | Daphnia | 48 hours |
| | Acute LC50 39 mg/l | Fish | 96 hours |
| Alcohol | Acute EC50 >110 ppm Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 1020000 µg/l Fresh water | Crustaceans - Ceriodaphnia dubia | 48 hours |
| | Acute LC50 710000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------|--------------------|------|-----------|
| 2,2',2"-nitrioltriethanol | -1 | <3.9 | low |
| Corrosion inhibitor. | 1.44 | - | low |
| Alcohol | -1.07 | - | low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.







Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

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Section 13. Disposal considerations

Section 14. Transport information

| | DOT Classification | TDG Classification | Mexico Classification | UN | IMDG | IATA |
|----------------------------|--|--|--|---|--|--|
| UN number | UN1950 | UN1950 | UN1950 | UN1950 | UN1950 | UN1950 |
| UN proper shipping name | AEROSOLS, non-flammable | AEROSOLS, non-flammable | AEROSOLS, non-flammable | AEROSOLS, non-flammable | AEROSOLS, non-flammable | AEROSOLS, non-flammable |
| Transport hazard class(es) | 2.2  | 2.2  | 2.2  | 2.2  | 2.2  | 2.2  |
| Packing group | - | - | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. | No. | No. |

| | |
|---|----------|
| Additional information - DOT Classification | ERG# 126 |
|---|----------|

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.
TSCA 5(a)2 final significant new use rule (SNUR): No products were found.
TSCA 12(b) one-time export notification: No products were found.
TSCA 12(b) annual export notification: No products were found.

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification :  NOC - Defatting irritant

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

Canada

Canada inventory : Not determined.

International regulations

Inventory list

Continued on next page

Section 15. Regulatory information

| | |
|-----------------------------------|--|
| Australia | : Not determined. |
| China | : All components are listed or exempted. |
| Japan | : Not determined. |
| New Zealand | : Not determined. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : Not determined. |

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

| | |
|------------------|---|
| Health | 1 |
| Flammability | 0 |
| Physical hazards | 0 |
| | |

[Procedure used to derive the classification](#)

Not classified.

[History](#)

| | |
|--|-------------|
| Date of issue/Date of revision | : 3/6/2024 |
| Date of previous issue | : 9/19/2023 |
| Version | : 1 |

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[Key to abbreviations](#)

| |
|---|
| : ATE = Acute Toxicity Estimate |
| : BCF = Bioconcentration Factor |
| : GHS = Globally Harmonized System of Classification and Labelling of Chemicals |
| : IATA = International Air Transport Association |
| : IBC = Intermediate Bulk Container |
| : IMDG = International Maritime Dangerous Goods |
| : LogPow = logarithm of the octanol/water partition coefficient |
| : MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) |
| : N/A = Not available |
| : SGG = Segregation Group |
| : UN = United Nations |

[References](#)

: Not available.

Indicates information that has changed from previously issued version.

[Notice to reader](#)

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.