



Safety Data Sheet

Section 1. Identification

Product name : HVAC CLEANER F3 10L

Product code : 59701

Product type : Liquid.

Date of issue/Date of revision : November 21 2016.

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 800-424-9300 INTERNATIONAL, CALL +1 703-527-3887 (collect calls accepted) Ferno Chemtrec #5591

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 : ☒ Do not eat, drink or smoke when using this product.

Response : ☒ Get medical attention if you feel unwell.

Storage : Store in cool/well-ventilated place. Keep container tightly closed.

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
<input checked="" type="checkbox"/> Alcohol	10-20	-
Sodium Salt	1-10	-
Corrosion inhibitor.	1-10	-

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

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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 as hazardous to health or the environment 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 | : No specific data. |
| Inhalation | : No specific data. |
| 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. |



Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
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.
- 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. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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).
- 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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Alcohol	AIHA WEEL (United States, 10/2011). Notes: 2004 Revised Document TWA: 10 mg/m ³ 8 hours.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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

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

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.



Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Amber.
Odor	: Faint odor.
Odor threshold	: Not available.
pH	: 7
Melting point	: Not available.
Boiling point	: 100°C (212°F)
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.173
Solubility	: Easily soluble in the following materials: cold water and hot water.
VOC	: 209.2 g/l
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.

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	: Reactive or incompatible with the following materials: acids and alkalis. Slightly reactive or incompatible with the following materials: oxidizing materials, reducing materials and organic materials.
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

Routes of entry : Dermal contact. Inhalation. Ingestion.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Alcohol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
Sodium Salt	LC50 Inhalation Dusts and mists	Rat	>42000 mg/m ³	1 hours
	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Oral	Rat	3000 mg/kg	-
	LDLo Oral	Human	1000 mg/kg	-
	LDLo Oral	Rabbit	8000 mg/kg	-
Corrosion inhibitor.	LC50 Inhalation Dusts and mists	Rat	1910 mg/m ³	3 hours

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Section 11. Toxicological information

	LD50 Dermal LD50 Oral	Rabbit Rat	>1000 mg/kg 560 mg/kg	- -
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Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sodium Salt Corrosion inhibitor.	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-

Sensitization

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Sodium Salt	-	Experiment: In vitro Subject: Mammalian-Human Cell: Somatic	Equivocal
Corrosion inhibitor.	-	Experiment: In vitro Subject: Bacteria	Positive

Carcinogenicity

No applicable toxicity data

Additional 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 : Not available.

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** : ☒ No specific data.
- Inhalation** : No specific data.



Section 11. Toxicological information

- 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

- 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.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	18630.8 mg/kg
Dermal	55000 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Alcohol	Acute EC50 >110 ppm Fresh water Acute LC50 1020000 µg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Ceriodaphnia dubia	48 hours 48 hours
Sodium Salt	Acute LC50 710000 µg/l Fresh water Acute EC50 2430000 µg/l Fresh water Acute EC50 28.85 mg/dm3 Fresh water	Fish - Pimephales promelas Algae - Navicula seminulum Algae - Pseudokirchneriella subcapitata	96 hours 96 hours 72 hours
	Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1661 mg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours 48 hours 96 hours 3 weeks
Corrosion inhibitor.	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water Acute EC50 15.4 mg/l Acute LC50 141.6 mg/l	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult Algae Daphnia	96 hours 21 days 8 weeks 96 hours 48 hours

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Section 12. Ecological information

	Acute LC50 39 mg/l	Fish	96 hours
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Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Alcohol	-1.07	-	low
Corrosion inhibitor.	1.44	-	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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

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 : Immediate (acute) health hazard

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Canada inventory : At least one component is not listed in DSL but all such components are listed in NDSL.

International lists

National inventory

China : All components are listed or exempted.

Europe : All components are listed or exempted.

New Zealand : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	2
Flammability	0
Physical hazards	0

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

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Section 16. Other information

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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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.

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