

# Safety Data Sheet

## 1. Identification

### 1.1. Product identifier

Code: T.FSTEELB  
Product name: AXI-THERM CLEAN F STEEL

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
Intended use: Cleaner for combustion chambers. Professional use only.

Identified Uses	Industrial	Professional	Consumer
	✓	✓	-

### 1.3. Details of the supplier of the safety data sheet

Name: Foridra S.r.l.  
Full address: SS 16 Adriatica 17/A  
District and Country: 60022 Castelfidardo (AN)  
Italia  
Tel. 0717211048  
Fax 0717819950

e-mail address of the competent person responsible for the Safety Data Sheet: [ufficiotecnico@foridra.it](mailto:ufficiotecnico@foridra.it)

#### 1.3.1. Details of the distributor

Name: AXIOM Industries Limited  
Full address: 3603 Burron Avenue  
District and Country: Saskatoon, SK S7P 0E4  
Canada

Tel. (306) 651-1815  
e-mail address: [info@axiomind.com](mailto:info@axiomind.com)

### 1.4. Emergency telephone number

For urgent inquiries refer to: PERS 1-800-633-8253

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in Canada's Hazardous Products Regulations (HPR) (WHMIS 2015). The product thus requires a safety datasheet. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Hazard pictograms:

Specific target organ toxicity - single exposure, category 3



Signal words: Danger

Hazard statements:

**H314** Causes severe skin burns and eye damage.  
**H335** May cause respiratory irritation.

Precautionary statements:

Prevention:

**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.  
**P264** Wash . . . thoroughly after handling.  
**P271** Use only outdoors or in a well-ventilated area.  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.

Response:

**P301+P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**P304+P340** IF INHALED: remove person to fresh air and keep comfortable for breathing.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P310** Immediately call a POISON CENTER / doctor / . . .  
**P312** Call a POISON CENTRE / doctor / . . . if you feel unwell.  
**P363** Wash contaminated clothing before reuse.

Storage:

**P403+P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.

Disposal:

**P501** Dispose of contents / container to . . .

2.2. Other hazards

Additional hazards

Information not available

### 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. % (w/w)	Classification:
<b>PHOSPHORIC ACID</b>		
CAS 7664-38-2	$5 \leq x < 100$	Skin corrosion, category 1B H314
<b>CITRIC ACID</b>		
CAS 77-92-9	$20 \leq x < 100$	Serious eye damage, category 1 H318, Skin irritation, category 2 H315, Specific target organ toxicity - single exposure, category 3 H335

The full wording of hazard (H) phrases is given in section 16 of the sheet.

### 4. First-aid measures

**4.1. Description of first aid measures**

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

**4.2. Most important symptoms and effects, both acute and delayed**

Specific information on symptoms and effects caused by the product are unknown.

**4.3. Indication of any immediate medical attention and special treatment needed**

Information not available

**5. Fire-fighting measures****5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

**5.3. Advice for firefighters**

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

**6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

**6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

Any information on personal protection and disposal is given in sections 8 and 13.

**7. Handling and storage**

**7.1. Precautions for safe handling**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

**7.3. Specific end use(s)**

Information not available

**8. Exposure controls/personal protection**

**8.1. Control parameters**

Regulatory References:

UOP	U.S.A.	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
EU	TLV-ACGIH	ACGIH 2017

**PHOSPHORIC ACID  
Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH	-	1		3	
OEL	EU	1		2	
OSHA	USA	1			

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

**HAND PROTECTION**

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (OSHA 29 CFR 1910.133, CSA Standard CAN/CSA-Z94.3-92).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## 9. Physical and chemical properties

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

Appearance	liquid
Colour	colourless
Odour	mild
Odour threshold	Not available
pH	1.3
Melting point / freezing point	Not available
Initial boiling point	> 90 °C (194 °F)
Boiling range	Not available
Flash point	Not applicable
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Vapour pressure	Not available
Vapour density	Not available
Relative density	1.27 g/cm <sup>3</sup>
Solubility	miscible
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

### 9.2. Other information

Information not available

## 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### PHOSPHORIC ACID

Decomposes at temperatures above 200°C/392°F.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

#### PHOSPHORIC ACID

Risk of explosion on contact with: nitromethane. May react dangerously with: alkalis, sodium borohydride.

### 10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

### 10.5. Incompatible materials

#### PHOSPHORIC ACID

Incompatible with: metals, strong alkalis, aldehydes, organic sulphides, peroxides.

### 10.6. Hazardous decomposition products

#### PHOSPHORIC ACID

May develop: phosphoryl oxides.

## 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on toxicological effects

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

##### PHOSPHORIC ACID

LD50 (Oral) 1530 mg/kg Rat

LD50 (Dermal) 2740 mg/kg Rabbit

LC50 (Inhalation) > 0.85 mg/l/1h Rat

##### CITRIC ACID

LD50 (Oral) 3000 mg/kg Rat

#### SKIN CORROSION / IRRITATION

Corrosive for the skin

#### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

#### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

#### STOT - SINGLE EXPOSURE

May cause respiratory irritation

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### 12.1. Toxicity

Information not available

#### 12.2. Persistence and degradability

##### PHOSPHORIC ACID

Solubility in water > 850000 mg/l

Degradability: information not available

##### CITRIC ACID

Solubility in water > 10000 mg/l

Rapidly degradable

#### 12.3. Bioaccumulative potential

##### CITRIC ACID

BCF 3.2

#### 12.4. Mobility in soil

Information not available

#### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

#### 12.6. Other adverse effects

Information not available

## 13. Disposal considerations

#### 13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

##### CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## 14. Transport information

#### 14.1. UN number

ADR / RID, IMDG, 1760

IATA:

#### 14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; CITRIC ACID)

IMDG: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; CITRIC ACID)

IATA: CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID; CITRIC ACID)

#### 14.3. Transport hazard class(es)



ADR / RID: Class: 8 Label: 8



IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8



**14.4. Packing group**

ADR / RID, IMDG, IATA: II

**14.5. Environmental hazards**

ADR / RID: NO

IMDG: NO

IATA: NO

**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special Instructions:	A3, A803	

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Information not relevant

**15. Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Substances subject to the Rotterdam Convention:

None

Canadian Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).

Safety Data Sheet according to WHMIS 2015.

Inventory Status of the contained substance/s.

## 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CLP: EC Regulation 1272/2008
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

### GENERAL BIBLIOGRAPHY:

- GHS rev. 5
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- Hazard Products Regulation (HPR)
- WHMIS 2015
- ONTARIO R.R.O. 1990, Regulation 883 (version July 2016)
- IARC website
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.