

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 1 of 9

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: **Fluoride Precipitator™ - ETI 949**

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

Reagent used in the removal of fluorides from neutralized HF Alkylation effluent.

1.3. Details of the supplier of the safety data sheet

Supplier: EnvTech INC.
 Address: 300 Edison Way, NV 89-502, Reno, USA
 Telephone No/Fax No: +1 (775) 856-2200 / +1 (775) 856-3303
 E-Mail: info@envtech.com



1.4. Emergency telephone number

24 hour Emergency Phone number – CHEMTREC +1 800 424 9300

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification	According to Directive 1999/45/EC:	According to Regulation (EC) no. 1272/2008
Hazard		
for physical-chemical properties:	Not classified	Not classified
for health hazards:	Irritating to eyes (R36). Irritating to skin (R38).	Eye Irrit. 2, H319: Causes serious eye irritation. Skin Irrit. 1, H315: Causes minor skin irritation.
for environmental hazards:	Not classified	Not classified

2.2. Label elements



GHS07

Hazard pictogram(s):

Signal word(s): **Warning**

Hazard statement(s):

H319 Causes serious eye irritation.

H315 Causes minor skin irritation.

Precautionary statement(s):

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Long term inhalation of high amounts of any nuisance dust may overload lung clearance mechanism. Itchiness and reddening of contacted skin. Burning sensation and reddening of skin in mouth and throat.

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR
1910.1200. Prepared to GHS Rev03.

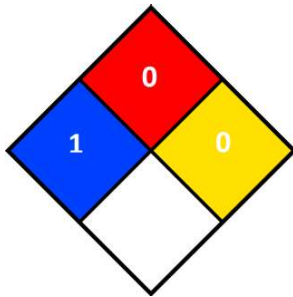
Compilation date: 06.12.2015

Revision: 3

ETI 949 Fluoride Precipitator™

Version: 1.0

Page 2 of 9



Classification system:

NFPA ratings (Scale 0-4)

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (Scale 0-4)

Health = 1

Fire = 0

Reactivity = 0

NFPA Rating Explanation Guide					
RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD	RATING SYMBOL	SPECIAL HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures	ALK	Alkaline
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock	ACID	Acidic
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures	COR	Corrosive
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable	OX	Oxidizing
0	No hazard	Will not burn	Stable	☢	Radioactive
				W	Reacts violently or explosively with water
				W OX	Reacts violently or explosively with water and oxidizing

This chart for reference only - For complete specifications consult the NFPA 704 Standard

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixtures

Substance name	% mass	Product identifier	Directive 67/548/EEC		Regulation (EC) No 1272/2008 (CLP)	
			Symbol letter	R-phrases	Hazard class	H-phrases
Component A**	>25%	CAS nr: EC nr:	Xi	R36	Eye Irrit. 2	H319
Component B**	>5%	CAS nr: EC nr:	Xi	R38	Skin Irrit. 1	H315

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 3 of 9

The text of the R-phrases and H-phrases is shown in section 16 of the safety data sheet.

** Componet A and B are a trade secret as defined by Apendix D of the Hazard communication standard, 29CFR 1910.1200

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Contact with skin:

Quickly and gently brush away excess solids. Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Contact with eyes:

Quickly and gently brush particles from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion:

If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

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

Contact with eyes: stinging and reddening of eyes and watering which may become copious.

Other symptoms may also become evident, but all should disappear once exposure has ceased.

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

As a general rule, in case of doubt or if symptoms persist, always call a doctor. Do not give anything to eat or drink to an unconscious person. Do not induce vomiting. Show the safety data sheet or label/ packaging to a person providing first aid.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media: Not Combustible. Use extinguishing media suited to burning materials.

Unsuitable Extinguishing Media: Not known.

5.2. Special hazards arising from the substance or mixture

Fire decomposition products from this product may be harmful: hydrogen chloride. Take appropriate protective measures.

5.3. Advice for firefighters

Prevent from entering contaminated water into sewers, rivers or other bodies of water. Dispose of waste water in compliance with current legislation. People should be properly trained and equipped with proper clothing and safety equipment. Use fire resistant protective clothing, breathing apparatus and eye protection.

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 4 of 9

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use adequate personal protective equipment as required in Section 8 of the safety data sheet. Wear full protective clothing including eye/face protection. All skin areas should be covered. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable Dust Mask. Use a P1 mask, designed for use against mechanically generated particles eg silica & asbestos. Otherwise, not normally necessary. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

6.2. Environmental precautions

In the event of a major spill, prevent spillage from entering drains or water courses. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill.

6.3. Methods and material for containment and cleaning up

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labeled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Recycle containers wherever possible after careful cleaning. After spills, wash area preventing runoff from entering drains. Contaminated area may be neutralized by washing with weak or dilute acid. Vinegar, citrus juice and most soft drinks may be suitable. Ensure legality of disposal by consulting regulations prior to disposal.

6.4. Reference to other sections

Refer to Sections 8 and 13 of the safety data sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Keep exposure to this product to a minimum. Use adequate personal protective equipment as required in Section 8 of the safety data sheet. The measures detailed below under sub-section 7.2 should be followed during handling in order to minimize risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

7.2. Conditions for safe storage, including any incompatibilities

Store packages of this product in a cool place, preferably below 30°C. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Make sure that the product does not come into contact with substances listed under sub-section 10.5. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

7.3. Specific end use(s)

Not further information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

OELs and NDSCh: not applicable

DNEL: Not available PNEC: Not available

8.2. Exposure controls

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Appropriate engineering controls:

No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimized.

Eye/face protection:

Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 5 of 9

them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin protection:

Wear suitable impervious gloves (rubber, PVC), clothes and, preferably, apron. Make sure that all skin areas are covered.

Respiratory protection:

If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

Thermal hazards:

Not known.

Environmental exposure controls:

Precautions should be made against environmental contamination.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- | | |
|---|----------------------------------|
| a) Appearance | : White granular powder |
| b) Odour | : No specific odour |
| c) Odour threshold | : Not available |
| d) pH | : 7,0 – 8,5 (1% solution) |
| e) Melting point/freezing point | : 772°C |
| f) Initial boiling point and boiling range | : Not applicable |
| g) Flash point | : Not applicable |
| h) Evaporation rate | : Not available |
| i) Flammability (solid, gas) | : Does not burn |
| j) Upper/lower flammability or explosive limits | : Not available |
| k) Vapour pressure | : Not applicable |
| l) Vapour density | : Not available |
| m) Density | : 2,0 g/cm ³ |
| n) Solubility(ies) | : Soluble in water 450 g/l |
| o) Partition coefficient: n-octanol/water | : Not applicable |
| p) Auto-ignition temperature | : Not applicable - does not burn |
| q) Decomposition temperature | : Not available |
| r) Viscosity | : Not applicable |
| s) Explosive properties | : Not available |
| t) Oxidizing properties | : Not available |

9.2. Other information

Not known

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Mixture is not reactive.

10.2. Chemical stability

Mixture is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions

Not known.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Zinc, tin, aluminum and their alloys.

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 6 of 9

10.6. Hazardous decomposition products

Not known. Hazardous combustion products are listed in Section 5 of the safety data sheet.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Causes minor skin irritation.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitization:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

Based on available data, the classification criteria are not met.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Data not available

12.2. Persistence and degradability

Data not available

12.3. Bioaccumulative potential

BCF: not available.

12.4. Mobility in soil

Data not available

12.5. Results of PBT and vPvB assessment

Not known.

12.6. Other adverse effects

Not known.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Recycle or dispose of waste in compliance with current legislation. This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to separate the contamination in some way. Only if neither of these options is suitable, consider landfill.

Packaging: Recycle or dispose of waste in compliance with current legislation.

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 7 of 9

SECTION 14. TRANSPORT INFORMATION

- 14.1. UN number** None
DOT,ADR,IMDG AND IATA Non-Regulated Material
14.2. UN proper shipping name Not-Regulated for Transportation
DOT,ADR,AND,IMDG,IATA Non-Regulated Material

14.3. Transport hazard class(es) None
DOT,ADR,IMDG AND IATA Non-Regulated Material

14.4. Packing group None
DOT,ADR,IMDG AND IATA None-Regulated

14.5. Environmental hazards None
Marine pollutant No

14.6. Special precautions for user Not Applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not Applicable

SECTION 15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
Safety, health and environmental regulations/legislation specific for the substance or mixture.
 Sara N/A
Section 355 (extremely hazardous substances):
 Substance is not listed.

Section 313 (Specific toxic chemical listings):
 Substance is not listed.

TSCA (Toxic Substances Control Act):
 Substance is not listed.

Proposition 65
Chemicals known to cause cancer:
 Substance is not listed.

Chemicals known to cause reproductive toxicity for females:
 Substance is not listed.

Chemicals known to cause reproductive toxicity for males:
 Substance is not listed.

Chemicals known to cause developmental toxicity:
 Substance is not listed.

Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 8 of 9

Carcinogenic categories

EPA (Environmental Protection Agency):

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH):

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health):

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration):

Substance is not listed.

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07

Signal word Warning

Hazard statements

Causes skin irritation.

Precautionary statements

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Specific treatment (see on this label).

Take off contaminated clothing and wash before reuse.

If skin irritation occurs: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

National regulations:

Substance is not listed.

State Right to Know

Substance is not listed

15.2. Chemical safety assessment

Chemical safety assessment has not been carried out for the mixture. Classification is based on the information of the mixture's components.

<p style="text-align: center;">Safety Data Sheet (SDS) OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.</p>	Compilation date: 06.12.2015
	Revision: 3
ETI 949 Fluoride Precipitator™	Version: 1.0
	Page 9 of 9

SECTION 16. OTHER INFORMATION

Changes made in the safety data sheet during revision:

Not applicable

Legend to abbreviations and acronyms used in the safety data sheet:

OELs	Occupational Exposure Limits
NDSch	Short-term Occupational Exposure Limit (USA)
vPvB	Very persistent and very bioaccumulative (substance)
PBT	Persistent, bioaccumulative and toxic (substance)
PNEC	Predicted No Effect Concentration
DNEL	Derived No Effect Levels
BCF	Bioconcentration factor

Literature references and sources for data:

Regulations/legislations mentioned in sections 2 – 15 of safety data sheet. Information supplied by the manufacturer.

List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements, which are not written out in full under Sections 2 to 15:

- R36 Irritating to eyes.
- H319 Causes serious eye irritation.
- R38 Irritating to skin.
- H315 Causes skin irritation.

Advice on any training appropriate for workers to ensure protection of human health and the environment:

Workers that use the product should be trained and informed about personal protection, accident procedure, etc.

Information in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. Information provided herein serves only as guidelines for safe work, use, processing, storage, and waste management. It cannot be considered as a warranty or quality certificate. This information applies only to specific material designated and may not be suitable for such material used in combination with any other materials or in any other manner not described in this document.