






**Safety Data Sheet dated 19/9/2017, version 1**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- 1.1. Product identifier  
Mixture identification:  
Trade name: F 33
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Identified use:  
Special Disinfectant for Removal of Ferro - Siliceous Residues - Sulfates.  
Uses advised against:  
Any other use different from the identified uses.
- 1.3. Details of the supplier of the safety data sheet  
Company:  
BARCHEMICALS SRL  
VIA S.ALLENDE 14  
CASTELNUOVO RANGONE (MO)  
ITALY  
PHONE. +39 059/536502  
FAX. +39 059/536742  
www.barchemicals.it  
Competent person responsible for the safety data sheet:  
barani.corrado@barchemicals.it
- 1.4. Emergency telephone number  
Barani Dr.Corrado - MOBILE PHONE. +39 335/6109383

**SECTION 2: Hazards identification**

- 2.1. Classification of the substance or mixture  
EC regulation criteria n°1272/2008 (CLP)
-  Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.
  -  Danger, Eye Dam. 1, Causes serious eye damage.
  -  Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements:

P102 Keep out of reach of children.

P260 Do not breathe vapours.

P264 Wash hands thoroughly after handling.

**Safety Data Sheet**  
**F 33**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ 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.

Special Provisions:

None

Contains

hydrochloric acid ... %  
ammonium bifluoride; ammonium hydrogen difluoride

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards





**SECTION 3: Composition/information on ingredients**

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 25% - < 30%	hydrochloric acid ... %	Index number: CAS: EC: REACH No.: 017-002-01-X 7647-01-0 231-595-7 01-2119484862-27	 3.2/1B Skin Corr. 1B H314  3.8/3 STOT SE 3 H335
>= 1% - < 3%	ammonium bifluoride; ammonium hydrogen difluoride	Index number: CAS: EC: REACH No.: 009-009-00-4 1341-49-7 215-676-4 01-2119489180-38	 3.1/3/Oral Acute Tox. 3 H301  3.2/1B Skin Corr. 1B H314

**SECTION 4: First aid measures**

4.1. Description of first aid measures

In case of skin contact:

After contact with skin, wash immediately with soap and plenty of water.  
Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.  
Protect uninjured eye.

In case of Ingestion:

Rinse well your mouth  
Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

**Safety Data Sheet**  
**F 33**

Remove casualty to fresh air and keep warm and at rest.

In case of breathing difficult, bring the injured person into the open air and store it in a comfortable position for breathing. Consult a physician.

If breathing is irregular or stopped, administer artificial respiration.

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

Contact with the eyes produces redness, pain, severe deep burns and loss of vision.

Ingestion causes severe irritation or chemical burns in the mouth, throat, esophagus and stomach.

Inhalation produces a burning sensation, coughing, difficulty breathing and sore throat.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

If swallowed, seek immediate medical attention. Do not induce vomiting to the danger of perforation. Keep the patient at rest.

Remove the victim from the contaminated area and into the fresh air. If breathing is irregular or stopped administer artificial respiration.

Immediately remove contaminated clothing. vigorously wash the contaminated areas with plenty of cold or lukewarm water and a 5% sodium bicarbonate solution. Rinse with plenty of water.

### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Water spray, heavy alcohol foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Immediately isolate the area by removing all persons from the area of the accident in the event of a fire. No action shall be taken involving any personal risk or without proper training. Firefighters must wear protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask on the working face at positive pressure. Fire extinguishers (including helmets, protective boots and gloves) conforming to European Standard EN469 will provide basic protection for chemical accidents.

### **SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Remove persons to safety.

Evacuate the surrounding areas.

Prevent entry of foreign and unprotected personnel.

Do not touch or walk on spilled material.

Provide adequate ventilation.

Avoid breathing vapors or mists.

Wear personal protection equipment.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

6.3. Methods and material for containment and cleaning up

**Safety Data Sheet**  
**F 33**

Stop the escape if there is no risk. Move the containers from the spill area. Get closer to the source of overwhelming emission. Prevent spills in sewage systems, waterways, basements or restricted areas. Wash and convey the spilled amounts in a waste treatment plant.

- 6.4. Reference to other sections  
See also section 8 and 13

## **SECTION 7: Handling and storage**

- 7.1. Precautions for safe handling  
Avoid contact with skin and eyes, inhalation of vapours and mists.  
Use localized ventilation system.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.  
See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities  
Store at room temperature and away from direct sunlight.  
Protect from contamination. Store in original container. Keep in a cool, dry place. Protect from freezing.  
Avoid contact with glassy material.  
Keep away from food, drink and feed.  
Incompatible materials:  
See the next paragraph 10.  
Instructions as regards storage premises:  
Adequately ventilated premises.
- 7.3. Specific end use(s)  
See section 1.2.

## **SECTION 8: Exposure controls/personal protection**

- 8.1. Control parameters  
hydrochloric acid ... % - CAS: 7647-01-0  
EU - TWA(8h): 8 mg/m<sup>3</sup>, 5 ppm - STEL: 15 mg/m<sup>3</sup>, 10 ppm  
ACGIH - STEL: Ceiling 2 ppm - Notes: A4 - URT irr  
ammonium bifluoride; ammonium hydrogen difluoride - CAS: 1341-49-7  
ACGIH - TWA(8h): 2.5 mg/m<sup>3</sup> - Notes: NON CLASSIFICATO COME  
CANCEROGENO NEGLI ESSERI UMANI
- DNEL Exposure Limit Values  
hydrochloric acid ... % - CAS: 7647-01-0  
Worker Professional: 15 03 - Exposure: Human Inhalation - Frequency: Short Term, local effects  
Worker Professional: 8 03 - Exposure: Human Inhalation - Frequency: Long Term, local effects  
ammonium bifluoride; ammonium hydrogen difluoride - CAS: 1341-49-7  
Worker Professional: 2.3 03 - Consumer: 0.045 03 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects - Endpoint: Repeated dose toxicity  
Worker Professional: 3.8 03 - Exposure: Human Inhalation - Frequency: Long Term, local effects - Endpoint: Irritation (respiratory tract)  
Consumer: 0.015 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects - Endpoint: Repeated dose toxicity  
Consumer: 0.015 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects
- PNEC Exposure Limit Values  
hydrochloric acid ... % - CAS: 7647-01-0  
Target: Fresh Water - Value: 0.036 mg/l  
Target: Marine water - Value: 0.036 mg/l

**Safety Data Sheet**  
**F 33**

Target: Microorganisms in sewage treatments - Value: 0.036 mg/l  
 ammonium bifluoride; ammonium hydrogen difluoride - CAS: 1341-49-7  
 Target: Fresh Water - Value: 1.3 mg/l  
 Target: Microorganisms in sewage treatments - Value: 76 mg/l  
 Target: Soil (agricultural) - Value: 22 mg/kg

**8.2. Exposure controls**
**Eye/face protection:**

Eye glasses with side protection. EN166

**Protection for skin:**

Clothing resistant to corrosive products CLASS I, EN 340

**Protection for hands:**

Gloves resistant to chemicals. EN 374

**Suitable material:**

CR (polychloroprene, chloroprene rubber).

**Respiratory protection:**

Full face mask with filter for acids.

Mask with filter for gases and vapors (EN 14387).

**Thermal Hazards:**

Not applicable (the product is handled at room temperature)

**Environmental exposure controls:**

None

**Appropriate engineering controls:**

None

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid Orange	--	--
Odour:	Pungent	--	--
Odour threshold:	Not Relevant	--	--
pH:	0	--	at 20 °C
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	Not Available	--	--
Flash point:	Not inflammable	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	Not applicable	--	--
Upper/lower flammability or explosive limits:	Not applicable	--	--
Vapour pressure:	Not Available	--	--
Vapour density:	Not Available	--	--
Relative density:	1.16 Kg/l	--	at 20 °C
Solubility in water:	Complete	--	--
Solubility in oil:	Not applicable	--	--
Partition coefficient (n-octanol/water):	Not applicable	--	--
Auto-ignition temperature:	not pyrophoric	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	Non Explosive Product	--	--

**Safety Data Sheet**  
**F 33**

Oxidizing properties:	Not oxidizing product	--	--
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9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Complete	--	--
Fat Solubility:	Nessuna	--	--
Conductivity:	Not Available	--	--
Substance Groups relevant properties	N.A.	--	--

**SECTION 10: Stability and reactivity**

10.1. Reactivity

May be corrosive to metals.

10.2. Chemical stability

Stable under recommended storage and handling. Please refer to section 7 of the MSDS.

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with dithiocarbamates, mercaptans and other organic sulphides, elementary metals (alkalis, alkaline earth, powder alloys, vapours), and powerful reducing agents.

It may generate toxic gases on contact with inorganic fluorides, halogenated organic substances, sulphides, nitrides, nitriles, organophosphates, and powerful oxidising agents.

It may catch fire on contact with dithiocarbamates, elementary metals (alkali, alkaline earth, powder alloys, vapours, sheets or bars), and nitrides.

10.4. Conditions to avoid

Avoid direct sunlight.

10.5. Incompatible materials

concentrated alkali.

Oxidizing agents.

Products containing chlorine.

10.6. Hazardous decomposition products

Hydrochloric acid.

Nitrogen oxides.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

hydrochloric acid ... % - CAS: 7647-01-0

a) acute toxicity:

Test: LC50 - Route: Inhalation Mist - Species: Rat = 45.6 mg/l - Source: ECHA - Notes: PERIODO DEL TEST: 5 MIN

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Yes - Source: PUBBLICAZIONE 1985 (ECHA) - Notes: OECD GUIDELINE 404 (ACUTE DERMAL IRRITATION / CORROSION) (1981)

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Yes - Source: STUDY REPORT 1976 (ECHA) - Notes: OECD GUIDELINE 405 (ACUTE EYE IRRITATION / CORROSION)

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Mouse No - Source: PUBBLICAZIONE 1986 (ECHA) - Notes: OECD GUIDELINE 406 (SKIN SENSITISATION)

f) carcinogenicity:

**Safety Data Sheet**  
**F 33**

- Test: Carcinogenicity - Species: Rat No - Source: PUBBLICAZIONE 1985 (ECHA)
- h) STOT-single exposure:  
Test: Respiratory Tract Irritant Yes - Source: ECHA  
ammonium bifluoride; ammonium hydrogen difluoride - CAS: 1341-49-7
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat = 130 mg/kg - Source: STUDY REPORT 1990 (ECHA) - Notes: OECD GUIDELINE 401 (ACUTE ORAL TOXICITY)
- b) skin corrosion/irritation:  
Test: Skin Corrosive - Route: Skin Yes
- c) serious eye damage/irritation:  
Test: Eye Corrosive Yes
- d) respiratory or skin sensitisation:  
Test: Skin Sensitization Negative
- e) germ cell mutagenicity:  
Test: Mutagenesis Negative

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

No information is available on the mixture as a whole. This is the information on ecotoxicological effects of the individual components.

hydrochloric acid ... % - CAS: 7647-01-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 20.5 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 0.45 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 0.73 mg/l - Duration h: 72

c) Bacteria toxicity:

Endpoint: EC50 - Species: activated sludge = 0.23 mg/l - Notes: (PH 5.2) OECD TG 209

ammonium bifluoride; ammonium hydrogen difluoride - CAS: 1341-49-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 40 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 8 mg/l - Duration h: 72

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

### 12.6. Other adverse effects

Il prodotto è nocivo per la vita acquatica in quanto abbassa fortemente il pH.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

### SECTION 14: Transport information



#### 14.1. UN number

ADR-UN Number: 3264  
IATA-UN Number: 3264  
IMDG-UN Number: 3264

#### 14.2. UN proper shipping name

ADR-Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC,  
N.O.S.(hydrochloric acid ... %, ammonium bifluoride;  
ammonium hydrogen difluoride)  
IATA-Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC,  
N.O.S.(hydrochloric acid ... %, ammonium bifluoride;  
ammonium hydrogen difluoride)  
IMDG-Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC,  
N.O.S.(hydrochloric acid ... %, ammonium bifluoride;  
ammonium hydrogen difluoride)

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

ADR-Class: 8  
ADR - Hazard identification number: 88  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8

#### 14.4. Packing group

ADR-Packing Group: II  
IATA-Packing group: II  
IMDG-Packing group: II

#### 14.5. Environmental hazards

ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No

#### 14.6. Special precautions for user

ADR-Subsidiary risks: -  
ADR-S.P.: 274  
ADR-Transport category (Tunnel restriction code): (E)  
IATA-Passenger Aircraft: 850  
IATA-Subsidiary risks: -  
IATA-Cargo Aircraft: 854  
IATA-S.P.: A3 A803  
IATA-ERG: 8L  
IMDG-EmS: F-A , S-B  
IMDG-Subsidiary risks: -  
IMDG-Stowage and handling: Category B  
IMDG-Segregation: Clear of living quarters.

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

N.A.

### SECTION 15: Regulatory information



**Safety Data Sheet**  
**F 33**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
 Dir. 98/24/EC (Risks related to chemical agents at work)  
 Dir. 2000/39/EC (Occupational exposure limit values)  
 Regulation (EC) n. 1907/2006 (REACH)  
 Regulation (EC) n. 1272/2008 (CLP)  
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
 Regulation (EU) 2015/830  
 Regulation (EU) n. 286/2011 (ATP 2 CLP)  
 Regulation (EU) n. 618/2012 (ATP 3 CLP)  
 Regulation (EU) n. 487/2013 (ATP 4 CLP)  
 Regulation (EU) n. 944/2013 (ATP 5 CLP)  
 Regulation (EU) n. 605/2014 (ATP 6 CLP)  
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None

**SECTION 16: Other information**

**For professional use.**

Full text of phrases referred to in Section 3:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H301 Toxic if swallowed.

Hazard class and hazard category	Code	Description
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
 Commission of the European Communities

**Safety Data Sheet**  
**F 33**

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

Liability exclusion clause: The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

For professional use.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.