

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 24.01.2019

Version number 32

Revision: 24.01.2019

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

- **1.1 Product identifier**
- **Product name:** Fluoride
- **Catalog number:** EIN467481, IN467481
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:** Reagent for water analysis
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
Tintometer India Private Limited  
Door No. 7-2-C-14, 2nd, 3rd & 4th Floor  
Sanath Nagar Industrial Estate,  
Hyderabad TG 500018  
INDIA
- **Informing department:** indiaoffice@tintometer.com
- **1.4 Emergency telephone number:**  
040-23883300, Toll Free Number: 1800 599 3891 (sales)  
Languages: Hindi & English

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



corrosion

Met. Corr.1 H290 May be corrosive to metals.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
hydrochloric acid 11 %
- **Hazard statements**  
H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.
- **Precautionary statements**  
P261 Avoid breathing mist/vapours/spray.  
P280 Wear protective gloves / eye protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
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.  
P312 Call a POISON CENTER/doctor if you feel unwell.

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- **2.3 Other hazards** No further relevant information available.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution

- **Dangerous components:**

CAS: 7647-01-0 EINECS: 231-595-7 Index No: 017-002-01-X	hydrochloric acid	⚠ Skin Corr. 1B, H314; ⚠ STOT SE 3, H335	10–20%
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- **Additional information** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact**  
Instantly rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
- **After swallowing**  
Rinse out mouth and then drink 1-2 glasses of water.  
Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed:**  
irritations  
after inhalation:  
mucous membrane irritation  
coughing  
breathing difficulty  
after swallowing:  
gastric or intestinal trouble
- **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
Use fire fighting measures that suit the environment.  
CO<sub>2</sub>, sand, extinguishing powder.
- **For safety reasons unsuitable extinguishing agents**  
Water.  
--> exothermic reaction  
If possible use dry extinguishing agents.
- **5.2 Special hazards arising from the substance or mixture**  
The product is not combustible.  
Formation of toxic gases is possible during heating or in case of fire.  
Hydrogen chloride (HCl)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Wear full protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter drains.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
Ambient fire may liberate hazardous vapours.

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### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**  
Wear protective equipment. Keep unprotected persons away.  
Avoid substance contact.  
Ensure adequate ventilation
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Neutralize with diluted sodium hydroxide solution or by throwing on lime sand, lime or sodium carbonate.  
Absorb with liquid-binding material (sand, diatomite, universal binders).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Hygiene measures:**  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the skin.  
Avoid contact with the eyes.  
Take off immediately all contaminated clothing.  
Wash hands during breaks and at the end of the work.  
Do not eat, drink or smoke when using this product.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store in cool location.  
Store only in the original container.
- **Information about storage in one common storage facility:** Store away from metals.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Protect from the effects of light.  
Protect from humidity and keep away from water.
- **Recommended storage temperature:** 20°C +/- 5°C
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

#### · Components with limit values that require monitoring at the workplace:

**CAS: 7647-01-0 hydrochloric acid**

IOELV (European Union)	Short-term value: 15 mg/m <sup>3</sup> , 10 ppm Long-term value: 8 mg/m <sup>3</sup> , 5 ppm
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#### · Regulatory information IOELV (European Union): (EU) 2017/164

#### · Additional information: The lists that were valid during the compilation were used as basis.

#### · Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See item 7.

#### · Personal protective equipment

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter E

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**Protection of hands:**

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

**Material of gloves**

nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm**Penetration time of glove material**

Value for the permeation: Level = 1 ( &lt; 10 min )

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****Appearance:****Form / Physical state:** Fluid**Colour:** Red**Odour:** Odourless**Odour threshold:** Not applicable**pH-value at 20°C:** < 1**Melting point/Freezing point:** Not determined**Initial boiling point and boiling range:** Not determined**Flash point:** Not applicable**Flammability (solid, gas):** Not applicable.**Decomposition temperature:** Not determined.**Auto-ignition temperature:** Product is not self-igniting.**Explosive properties:** Product is not explosive.**Flammability or explosive limits:****Lower:** Not applicable**Upper:** Not applicable**Oxidising properties:** none**Vapour pressure:** Not determined.**Density at 20°C:** 1.06 g/cm<sup>3</sup>**Relative density:** Not determined.**Vapour density:** Not determined.**Evaporation rate:** Not determined.**Solubility(ies):****Water:** Fully miscible**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:** Not determined.**Solvent content:****Organic solvents:** 0.0 %**Water:** > 80 %**Solids content:** < 1 %**9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

**10.1 Reactivity** see section 10.3**10.2 Chemical stability** Stable at ambient temperature (room temperature).

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- **10.3 Possibility of hazardous reactions**  
Corrosive action on metals  
Reacts with metals forming hydrogen (--> Explosive!)  
Reacts with alkali (lyes)
- **10.4 Conditions to avoid** Heating.
- **10.5 Incompatible materials:**  
metals  
alkali metals  
aluminium
- **10.6 Hazardous decomposition products:** see section 5

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

<b>LD/LC50 values that are relevant for classification:</b>		
<b>CAS: 7647-01-0 hydrochloric acid</b>		
Inhalative	LC50	3124 ppm / 1h (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.

<b>Information on components:</b>		
<b>CAS: 7647-01-0 hydrochloric acid</b>		
Irritation of skin	OECD 404	(rabbit: burns)
Irritation of eyes	OECD 405	(rabbit: burns)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

<b>Information on components:</b>		
<b>CAS: 7647-01-0 hydrochloric acid</b>		
Sensitisation	OECD 406	(negative) (EPA OPP 81-6: Guinea pig maximisation test)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
- **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 (specific target organ toxicity) -single exposure**  
May cause respiratory irritation.  
May cause respiratory irritation.
- **STOT (specific target organ toxicity) -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**

<b>Aquatic toxicity:</b>		
<b>CAS: 7647-01-0 hydrochloric acid</b>		
EC50	20.5 mg/l/96h (bluegill)	(OECD 203)

- **Other information:**  
Toxic for fish:  
HCl > 25 mg/l
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.6 Other adverse effects**  
Harmful effect due to pH shift.  
Forms corrosive mixtures with water even if diluted.

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Avoid transfer into the environment.

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### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to disposers of hazardous waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### \* SECTION 14: Transport information

• <b>14.1 UN-Number</b> • <b>ADR, IMDG, IATA</b>	UN1789
• <b>14.2 UN proper shipping name</b> • <b>ADR</b> • <b>IMDG, IATA</b>	1789 HYDROCHLORIC ACID mixture HYDROCHLORIC ACID mixture
• <b>14.3 Transport hazard class(es)</b> • <b>ADR</b>	
	
• <b>Class</b> • <b>Label</b>	8 (C1) Corrosive substances. 8
• <b>IMDG, IATA</b>	
	
• <b>Class</b> • <b>Label</b>	8 Corrosive substances. 8
• <b>14.4 Packing group</b> • <b>ADR, IMDG, IATA</b>	II
• <b>14.5 Environmental hazards:</b>	Not applicable.
• <b>14.6 Special precautions for user</b> • <b>Kemler Number:</b> • <b>EMS Number:</b> • <b>Segregation groups</b> • <b>Stowage Category</b>	Warning: Corrosive substances. 80 F-A,S-B Acids E
• <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
• <b>Transport/Additional information:</b>	
• <b>ADR</b> • <b>Limited quantities (LQ)</b> • <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
• <b>Transport category</b> • <b>Tunnel restriction code</b>	2 E

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• <b>IMDG</b>	1L
• <b>Limited quantities (LQ)</b>	Code: E2
• <b>Excepted quantities (EQ)</b>	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

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

- **Abbreviations and acronyms:**

OECD: Organisation for Economic Co-operation and Development  
STOT: specific target organ toxicity  
SE: single exposure  
RE: repeated exposure  
EC50: half maximal effective concentration  
IC50: half maximal inhibitory concentration  
NOEL or NOEC: No Observed Effect Level or Concentration  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Met. Corr. 1: Corrosive to metals – Category 1  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources**

Data arise from safety data sheets, reference works and literature.  
RTECS (Registry of Toxic Effects of Chemical Substances )

- **\* Data compared to the previous version altered.**

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