

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 1 of 9

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : HYDROFLUORIC ACID 48% AR
Product code : 14885
Identification of the product : Hydrofluoric acid 48% AR
CAS No : 7664-39-3

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

Company identification : MOLYCHEM
Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor,
Mumbai – 400 002 (INDIA)
Tel:+91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.
Email : info@molychem.net
Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat
Textile Co.,Kulgaon, Badlapur (E), Dist.-Thane-421 503.

1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

2. Hazards identification –DSD

2.1. Classification of the substance or mixture

Acute toxicity, (Category 2) H300: Fatal if swallowed.
Acute toxicity, (Category 2) H330: Fatal if inhaled.
Acute toxicity, (Category 1) H310: Fatal in contact with skin.
Skin corrosion, (Sub-category 1A) H314: Causes severe skin burns and eye damage.
Serious eye damage, (Category 1) H318: Causes serious eye damage.

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Pictogram



Signal Word Danger

Hazard Statements

H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.

Precautionary Statements

P260 Do not breathe mist or vapors.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 2 of 9

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

2.3. Other hazards : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3.Composition/information on ingredients

3.1 Substances

Name : HYDROFLUORIC ACID 48%
CAS-No. : 7664-39-3

4. First aid measures

4.1. Description of first aid measures

General advice

Countermeasurements must be implemented at once. First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. Keep respiratory tract clear. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

After contact with skin: Rinse with plenty of water for at least 10 minutes. Immediately remove contaminated clothes. Apply calcium gluconate gel (preparation: boil 5 g of calcium gluconate in 85 ml of hot distilled water, add 10 g glycerol. Allow 5 g of Carmellose-sodium to swell in the hot solution. Stable for 6 months, store in a cool place) and massage into the skin until the pain subsides, in between rinse with water and apply fresh gel. Continue gel therapy for another 15 minutes after the pain has subsided. If no calcium gluconate gel is available, apply several dressings thoroughly moistened with 20 % calcium gluconate solution. Medical advice absolutely required.

In case of eye contact

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 3 of 9

After contact with eyes: Rinse with plenty of water keeping eyelids open, protecting the unaffected eye (at least 10 minutes). Seek medical advice immediately! Remove contact lenses.

If swallowed

After swallowing: Immediately give to drink plenty of water, add calcium (in the form of calcium gluconate or calcium lactate). Caution: In the case of vomiting risk of perforation! Administer more calcium gluconate solution. Laxative: Sodium sulfate (1 tablespoon/1/4 l water). Seek medical advice immediately. Ensure that injured persons remain calm and protect them against heat loss.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

Note for the doctor: It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid. If a systemic effect is suspected, monitoring and treatment in an intensive care unit is urgently required. Caution, ventricular fibrillation due to electrolyte imbalance.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Hydrogen fluoride

Not combustible.

Fire may cause evolution of:

Hydrogen fluoride

Ambient fire may liberate hazardous vapours.

5.3. Advice for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 4 of 9

6.3. Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® HF, Merck Art. No. 101591). Dispose of properly. Clean up affected area.

6.4. Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

In plastic containers.

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.
Respiratory protection : Wear approved mask.
Hand protection : Wear protective gloves.
Skin protection : Wear suitable protective clothing.
Eye protection : Chemical goggles or safety glasses.
Others : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : liquid
Color : colorless
Odor : stinging

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 5 of 9

Melting point/freezing point	Melting point: ca.-35 °C.
Initial boiling point and boiling range	ca.106 °C at 1.013 hPa
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	ca.2 at 20 °C
Viscosity	Viscosity, kinematic : No data available Viscosity, dynamic : No data available
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density	1.16 g/cm ³ at 20 °C
Relative density	No data available
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	None

9.2. Other information

No data available

10. Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3. Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Alkali metals

Fluorine

Organic Substances

vinyl acetate

Risk of explosion with:

potassium permanganate

alkali hydroxides

MOLYCHEM Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA)

Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442. Email : info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C., OPP.Shobhavat Textile Co.,

Kulgaon, Badlapur (E), Dist.-Thane-421 503

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 6 of 9

strong alkalis
fluorides
Potassium
Metals
sodium
methanesulfonic acid
Nitric acid
with
glycerol
Exothermic reaction with:
Acetic anhydride
Ammonia
ammonium hydroxide
Sodium hydroxide
fuming sulfuric acid
Oxides of phosphorus
silicon compounds
sulfuric acid
bismuth acid
ethanolamine

10.4. Conditions to avoid

Heating.
no information available

10.5. Incompatible materials

glass, Metals, quartzes/silicate ceramics Gives off hydrogen by reaction with metals.

10.6. Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Dermal: Fatal in contact with skin. Inhalation: Fatal if inhaled. Oral: Fatal if swallowed.
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: No data available

MOLYCHEM Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA)

Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442. Email : info@molychem.net

**Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co.,
Kulgaon, Badlapur (E), Dist.-Thane-421 503**

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 7 of 9

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : Fatal if swallowed. Fatal in contact with skin.

12. Ecological information

12.1. Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Endangers drinking-water supplies if allowed to enter soil or water. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Discharge into the environment must be avoided.

Components

Hydrofluoric acid

Toxicity to daphnia static test NOEC - Daphnia magna (Water flea) - 3,7 mg/l - 21
and other aquatic d
invertebrates(Chronic toxicity) Remarks: (ECHA)

13. Disposal considerations

13.1. Waste treatment methods

No data available

14. Transport information

14.1. UN number

ADR/RID: - 1790

IMDG : 1790

IATA: 1790

Material Safety Data Sheet



HYDROFLUORIC ACID 48% AR

VERSION : 04
DATE OF ISSUE : 01-08-2023
SUPERSEDES : 03

Product Code : 14885

Page 8 of 9

14.2. UN proper shipping name

ADR/RID : HYDROFLUORIC ACID
IMDG: HYDROFLUORIC ACID
IATA: Hydrofluoric acid

14.3. Transport hazard class(es)

ADR/RID : 8 (6.1) IMDG : 8 (6.1) IATA : 8 (6.1)

14.4. Packaging group

ADR/RID : II IMDG : II IATA : II

14.5 Environmental hazards

ADR/RID : no IMDG : Marine pollutant: no IATA : no

14.6 Special precautions for user

Tunnel restriction code : (E)
Further information : No data available

15. Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the H1 ACUTE TOXIC
European Parliament and of the Council
on the control of major-accident hazards
involving dangerous substances.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or
stricter national regulations where applicable.
Take note of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. Other information

Abbreviations and acronyms :

PBT : persistent, bioaccumulative and toxic.


vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its

Material Safety Data Sheet	
HYDROFLUORIC ACID 48% AR	VERSION : 04 DATE OF ISSUE : 01-08-2023 SUPERSEDES : 03
Product Code : 14885	Page 9 of 9

correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document

Prepared by: MOLYCHEM (INDIA)

For questions contact: MOLYCHEM

Office: Maker Tower 'E', 41-A2, 4th Floor, Above Maker Arcade,
Cuffe Parade, Mumbai 400 005 (INDIA)
Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email : info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co.,
Kulgaon, Badlapur (E), Dist.-Thane-421 503

(The statements contained herein are offered for informational purposes only and are based upon technical data that MOLYCHEM believes to be accurate. It is intended for use only by persons having the necessary technical skills and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.)