

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE MSDS

CAS No: 7664-39-3 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Mixture
Trade name	: HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE
CAS No	: 7664-39-3
Product code	: 00176
Formula	: HF
Synonyms	: Hydrogen Fluoride

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial;For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

T+; R26/27/28

C; R35

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

2.2. Label elements

Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard symbols :



T+ - Very toxic



C - Corrosive

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	50 - 75	Not classified	Not classified
Hydrofluoric acid - solution	(CAS No) 7664-39-3 (EC no) 231-634-8 (EC index no) 009-003-00-1	25 - 50	T+; R26/27/28 C; R35	Acute Tox. 1 (Dermal), H310 Acute Tox. 3 (Inhalation), H331 Acute Tox. 1 (Oral), H300 Skin Corr. 1A, H314 Eye Dam. 1, H318

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Gently wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : If eye irritation persists: Get medical advice/attention. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
- First-aid measures after ingestion : If you feel unwell, seek medical advice. Rinse mouth out with water.

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

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

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after skin contact	: Fatal in contact with skin.
Symptoms/injuries after ingestion	: Fatal if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry chemical, CO ₂ , or water spray or regular foam.
Unsuitable extinguishing media	: Carbon dioxide (CO ₂).

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin, eyes and clothing.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep container tightly closed. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear Colorless.
Odour	: acrid odor.
Odour threshold	: No data available
pH	: 1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < -360 °C
Freezing point	: No data available
Boiling point	: 1080 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 25 mm Hg at 200C
Relative vapour density at 20 °C	: 1.97
Relative density	: No data available
Density	: 1.15 - 1.18
Solubility	: Water: Infinitely soluble
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Irritation : Not classified
pH: 1

Corrosivity : Not classified
pH: 1

Sensitisation : Not classified

Repeated dose toxicity : Not classified

Carcinogenicity : Not classified

Mutagenicity : Not classified

Toxicity for reproduction : Not classified

Potential adverse human health effects and symptoms : Fatal if swallowed. Fatal in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Ecology - waste materials : Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1790
UN-No. (IMDG) : 1790
UN-No.(IATA) : 1790
UN-No.(ADN) : 1790
UN-No. (RID) : 1790

14.2. UN proper shipping name

Proper Shipping Name (ADR) : HYDROFLUORIC ACID
Proper Shipping Name (IMDG) : HYDROFLUORIC ACID
Proper Shipping Name (IATA) : HYDROFLUORIC ACID
Proper Shipping Name (ADN) : HYDROFLUORIC ACID
Proper Shipping Name (RID) : HYDROFLUORIC ACID
Transport document description (ADR) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II, (E)
Transport document description (IMDG) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II
Transport document description (IATA) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II
Transport document description (ADN) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II
Transport document description (RID) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (6.1)

Danger labels (ADR) : 8, 6.1



HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

IMDG

Transport hazard class(es) (IMDG) : 8 (6.1)

Danger labels (IMDG) : 8, 6.1



IATA

Transport hazard class(es) (IATA) : 8 (6.1)

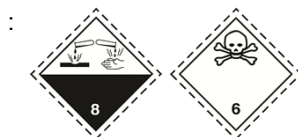
Hazard labels (IATA) : 8, 6.1



ADN

Transport hazard class(es) (ADN) : 8 (6.1)

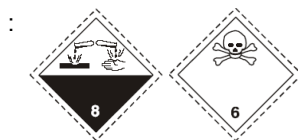
Danger labels (ADN) : 8, 6.1



RID

Transport hazard class(es) (RID) : 8 (6.1)

Danger labels (RID) : 8, 6.1



14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : CT1

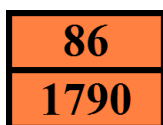
Limited quantities (ADR) : 1L

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4DH
Tank special provisions (ADR)	: TU14, TE21
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Hazard identification number (Kemler No.)	: 86

Orange plates



Tunnel restriction code (ADR)	: E
EAC code	: 2W
APP code	: B

- Transport by sea

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
Packing provisions (IMDG)	: PP81
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW1, SW2, H2
MFAG-No	: 157

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 8P

- Inland waterway transport

Classification code (ADN)	: CT1
Special provisions (ADN)	: 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

- Rail transport

Classification code (RID)	: CT1
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T8
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4DH
Special provisions for RID tanks (RID)	: TU14, TE17, TE21, TT4
Transport category (RID)	: 2
Special provisions for carriage – Loading and unloading (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 86

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

HYDROFLUORIC ACID 48% (EL) ELECTRONIC GRADE

Safety Data Sheet

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H300	Fatal if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
R35	Causes severe burns
C	Corrosive
T+	Very toxic

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product