

Hydrofluoric acid 7-60%

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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name:	HYDROFLUORIC ACID 7-60%
REACH registration number:	01-2119458860-33-0007
CAS-No.:	7664-39-3
EU index No.:	009-003-00-1
EC (EINECS) No.:	231-634-8
Application PC14:	Metal surface treatment products, including galvanic and electroplating products.
Company name:	Nexchem Ltd
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	Elm Tree Avenue
	Glenfield
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	Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification (67/548): Classification (EC 1272/2008)	T+;R26/27/28. C;R35.		
	Physical and Chemical Hazards: Not classified.		
	Human health: Acute Tox. 2 - H300; Acute Tox. 1 - H310; Acute Tox. 2 - H330; Skin Corr. 1A -		
	H314		
	Environment: Not classified.		
	Label in accordance with (EC) No. 1272/2008		
Signal word:	Danger		
Hazard statements:	H300 Fatal if swallowed.		
	H310 Fatal in contact with skin.		
	H314 Causes severe skin burns and eye damage.		
	H330 Fatal if inhaled.		
Precautionary statements:	P501 Dispose of contents/container in accordance with national regulations.		

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Supplementary precautionary statements: P262 Do not get in eyes, on skin, or on clothing.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

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

P284 Wear respiratory protection.

P260 Do not breathe vapour/spray.

P264 Wash contaminated skin thoroughly after handling.

P320 Specific treatment is urgent (see medical advice on this label).

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P330 Rinse mouth.

P361 Remove all contaminated clothing.

P403+233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

3. COMPOSITION / INFORMATION ON INGREDIENTS

EU index No.:	009-003-00-1
EC (EINECS) No.:	231-634-8
CAS-No.:	7664-39-3
Composition comments:	The data shown are in accordance with the latest EC Directives.
	The Full Text for all R-Phrases is
	Displayed in Section 16

4. FIRST AID MEASURES (SYMPTOMS)

 General information:
 Other considerations:

 Delayed burns:
 (i) At lower concentrations, hydrofluoric acid can result in delayed symptoms causing late onset of effects, casualties should be managed as stated. It is recommended that where hydrofluoric acid is used calcium gluconate (HF antidote gel) should be readily available. Hydrofluoric acid workers should be made aware of the potential for delayed effects and the need to seek appropriate medical support.

 (ii) All persons working with hydrofluoric acid shall receive a tube of calcium gluconate gel to take home and receive training in recognising delayed burns. Disposal of contaminated material

(i) All potentially contaminated equipment and clothing should be disposed of. [cont...]

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Notes to the physician:	
Emergency first aid for HF	⁻ burns and injury:
Primary Response:	It is essential for the safety of the rescuers to prevent inhalation and to avoid contact with HF during the rescue operation. Appropriate personal protective equipment for use with HF must be worn. The immediate priority after rescue is initial decontamination: this takes precedence over first aid or transfer to medical facilities. First aiders involved in rescue or decontamination must use appropriate PPE.
Inhalation:	(i) Remove to fresh air.
	After completion of primary response (decontamination) if inhalation is suspected apply 100%
	oxygen. If breathing has stopped resuscitate casualty by basic and/or advanced life support
	techniques - a bag valve mask must be used with 100% oxygen in place of 'mouth-to-mouth'.
	(ii) Obtain medical attention; immediately arrange hospital admission.
	(iii) Keep casualty at rest in comfortable position and continue with the above measures until
	medical attention at the site or in a hospital, has been obtained.
Ingestion:	(i) After completion of primary response (decontamination) seek urgent hospital admission. Do
	not induce vomiting. Mouth and lips may be rinsed with water, only if casualty is conscious.
Skin contact:	(i) Do not delay.
	Flush any remaining acid from the skin with copious amounts of cold water for at least five
	minutes and then apply calcium gluconate gel (HF Antidote Gel) and massage into the burnt
	area wearing gloves appropriate to the level of decontamination. Continue to massage while
	repeatedly applying gel until 15 minutes after the pain in the burnt area is relieved. If skin
	contamination is more extensive and clothing affected, be aware of the possibility of inhalation

(ii) If calcium gluconate gel is not available CONTINUE TO FLUSH with water until it is.

(iii) Obtain medical attention, but do not delay the above management until medical attention is available.

Eye contact: (i) Do not delay.

injury.

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Flush the eyes with copious amounts of water or eye wash solution (sterile isotonic saline solution) until the ambulance arrives. Do not attempt to remove contact lenses. Irrigation should be continued while en route to hospital.

(ii) Obtain medical attention immediately, but do not delay the above management until medical attention is available.

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5. FIRE-FIGHTING MEASURES		
Extinguishing Media:	The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.	
Special fire fighters procedures:	Keep run-off water out of sewers and water sources. Dike for water control. Move container	
	from fire area if it can be done without risk. Cool containers exposed to flames with water until	
	well after the fire is out. Use water spray to reduce vapours. If risk of water pollution occurs,	
	notify appropriate authorities.	
Unusual fire & explosion hazards: May develop highly toxic or corrosive fumes if heated.		
Specific hazards:	Fire creates: Toxic gases/vapours/fumes of: Hydrogen fluoride (HF).	
Protective measures in fire:	Wear self-contained breathing apparatus and protective clothing (including fire-fighting helmet,	
	coat, trousers, boots and gloves).	

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	In case of a major spillage, full protective equipment including a respirator or self-contained
	breathing apparatus must be worn.
Environmental precautions:	Do not allow to enter drains, sewers or water courses. If spillage does enter drains, sewers or
	water courses, immediately inform appropriate authorities.
Spill clean-up methods:	Clean-up personnel should use respiratory and/or liquid contact protection. Stop leak if
	possible without risk. DO NOT touch spilled material. Inform Authorities if large amounts are
	involved. Neutralise spilled material with crushed limestone, soda ash or lime. Absorb using an
	inert absorbent, transfer to labelled containers. Wash thoroughly after dealing with a spillage.
	Flush with plenty of water to clean spillage area.

7. HANDLING AND STORAGE

Usage precautions:	Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Wear full protective clothing for prolonged exposure and/or high concentrations.
Storage precautions:	Isolate from other materials. May attack some plastics, rubber and coatings. Will attack glass and most ceramics. Store in tightly closed original container in a dry, cool and well-ventilated place.
Storage class:	Toxic storage. Corrosive storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	STD	TWA - 8 H	rs	STEL - 1	5 Min	Notes
HYDROFLUORIC ACID 7-60% WEL = Workplace Exposure Limit.	WEL	1.8 ppm	1.5 mg/m3	3 ppm	2.5 mg/m3	
Ingredient comments:	WEL = Workplace Exposure Limits					
Engineering measures:	Provide corrosion-resistant local exhaust ventilation. Well-ventilated area.					
Respiratory equipment:	No specific recommendation made, but respiratory protection must be used if the general level					
	exceeds the reco	mmended o	ccupational exp	osure lim	it.	

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Boiling point (°C):	90-112 760 mm Hg
Melting point (°C):	-37 to -61°C
Relative density:	1.02 - 1.25 @16°C
pH-value, conc. solution:	<1

10. STABILITY AND REACTIVITY

Stability:	Stable under normal temperature conditions.	
Conditions to avoid:	Avoid contact with: Strong alkalis. In contact with metals generates hydrogen gas, which	
	together with air can form explosive mixtures.	
Materials to avoid:	Bases, alkalis (inorganic). Bases, alkalis (organic). Massive, solid metal. Powdered metal.	
Hazardous decomposition products: When heated, toxic and corrosive vapours/gases may be formed.		

11. TOXICOLOGICAL INFORMATION

Inhalation:	Toxic by inhalation. May cause damage to mucous membranes in nose, throat, lungs and
	bronchial system.
Ingestion:	Causes burns. Toxic if swallowed. May cause internal injury. May cause burns in mucous
	membranes, throat, oesophagus and stomach.
Skin contact:	Causes burns. Toxic in contact with skin. Contact with concentrated chemical may cause
	severe skin damage. May be absorbed through the skin.
Eye contact:	Causes burns. Contact with concentrated chemical may very rapidly cause severe eye
	damage, possibly loss of sight.
Health warnings:	Exposure; This chemical has good warning properties. This chemical may cause skin/eye
	irritation and burns (corrosive). Toxic through skin absorption (percutaneous). May cause
	temporary blindness and severe eye damage. Serious damage to the lining of nose, throat and
	lungs. Acute eczematous dermatitis, contact type erythema, oedema, papules, vesicles, bullae,
	crusts, desquamation. Contact with concentrated chemical may cause severe skin damage.
	Swallowing concentrated chemical may cause severe internal injury.

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Route of entry:	Inhalation. Ingestion. Skin and/or eye contact.	
Target organs:	Eyes Gastro-intestinal tract Respiratory system, lungs Skin Bone structure	
Medical symptoms:	Extreme irritation of eyes and mucous membranes, including burning and tearing. Severe pulmonary irritation. Severe skin irritation. Ingestion may cause: Severe abdominal pain. Nausea, vomiting. Diarrhoea.	
Medical considerations:	Skin disorders and allergies.	

12. ECOLOGICAL INFORMATION

10.6 EC 50, 48 Hrs, DAPHNIA, mg/l

13. DISPOSAL CONSIDERATIONS

Disposal methods:	Do not allow runoff to sewer, waterway or ground. Contact specialist disposal companies.
	Dispose of waste and residues in accordance with local authority requirements.

14. TRANSPORT INFORMATION



Hydrofluoric acid with not more than 60% hydrogen fluoride			
No.			
Hazardous substance/marine pollutant UN No. road: 1790			
8			
Class 8: Corrosive substances.			
II			
(E)			
86 Corrosive or slightly			
corrosive substance, toxic.			
86			
8 & 6.1			
1790			
8			
II			
F-A, S-B			
8			
6.1			

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15. REGULATORY INFORMATION

UK Regulatory references:	The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
EU Directives:	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 with amendments.
National Regulations:	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40) Control of Substances Hazardous to Health Regulations 2002 (as amended) The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007 (CDG 2007).
Note:	The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

General Information:	Only trained personnel should use this material.
Information sources:	The first adaption to Technical and Scientific Progress of the CLP Regulation , including the
	30th and 31st Adaption to Technical Progress to Directive 67/548/EEC was published in
	September 2009.
Revision comments:	Amend Classification of H330 to Acute Tox 2 as stated in EC 1272/2008
Legal disclaimer:	The information contained in this SDS does not constitute a risk assessment, and should not
	replace the user's own assessment of risks as required by other health and safety legislation.
	This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise
	provided by law. The information contained herein is based on the present state of our
	knowledge and is intended to describe our products from the point of view of safety
	requirements. It should not therefore be construed as guaranteeing specific properties.