

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 06-Jul-2010

Revision Date 27-Feb-2024

Revision Number 4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier			
Product Description: Cat No. : Synonyms Molecular Formula	<u>Hydrofluoric acid, 40%</u> 10989 Hydrofluoric acid solution; Fluohydric acid; Fluoric acid H F		
Unique Formula Identifier (UFI)	FRA3-058A-3X0R-R52Q		
1.2. Relevant identified uses of the	substance or mixture and uses advised against		
Recommended Use Uses advised against	Laboratory chemicals. No Information available		
1.3. Details of the supplier of the sa	fety data sheet		
Company	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608		
E-mail address	begel.sdsdesk@thermofisher.com		
1.4. Emergency telephone number	For information US call: 001-800-227-6701 / Europe call: +32 14 57 52 11 Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99 CHEMTREC Tel. No. US: 001-800-424-9300 / Europe: 001-703-527-3887		
Poison Centre - Emergency information services	Ireland : National Poisons Information Centre (NPIC) - 01 809 2166 (8am-10pm, 7 days a week) Malta : +356 2395 2000 Cyprus : +357 2240 5611		

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

Hydrofluoric acid, 40%

Substances/mixtures corrosive to metal

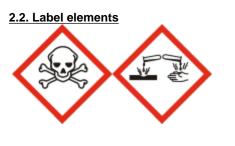
Health hazards

Acute oral toxicity Acute dermal toxicity Acute Inhalation Toxicity - Vapors Skin Corrosion/Irritation Serious Eye Damage/Eye Irritation

Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16



Signal Word

Danger

Hazard Statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H300 + H310 + H330 - Fatal if swallowed, in contact with skin or if inhaled

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P262 - Do not get in eyes, on skin, or on clothing

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

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

P310 - Immediately call a POISON CENTER or doctor/physician

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

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Water	7732-18-5	231-791-2	60	-
Hydrogen fluoride	7664-39-3	EEC No. 231-634-8	40	Met. Corr. 1 (H290) Acute Tox. 2 (H300) Acute Tox. 1 (H310)

Category 1 (H290)

Category 2 (H300) Category 1 (H310) Category 2 (H330) Category 1 A (H314) Category 1 (H318)

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	Acute Tox. 2 (H330) Skin Corr. 1A (H314) Eye Dam. 1 (H318)
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Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Hydrogen fluoride	Skin Corr. 1A :: C>=7% Skin Corr. 1B :: 1%<=C<7% Eye Irrit. 2 :: 0.1%<=C<1%	-	-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Immediate and specialised first aid and medical treatment is required. Speed is of the essence. Flush with plenty of water immediately. Continue flushing during transport to hospital or medical center.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. Dermal burns may be treated with calcium gluconate gel or slurry in water or glycerine. This compound binds the active fluorides in an insoluble form and limits burn extension and pain. Soaking or immersion with iced 0.13% Benzalkonium chloride solution may be used for skin burns and should be continued until the pain is relieved. Do not use in eyes.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Inhalation	If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Immediate medical attention is required. A nebulized solution of 2.5% Calcium gluconate may be administered with Oxygen by inhalation.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
4.2. Most important symptoms and	effects, both acute and delayed
	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
4.3. Indication of any immediate me	edical attention and special treatment needed
Notes to Physician	This product contains hydrogen fluoride. Generous application of calcium gluconate gel to the affected skin may be indicated. For dermal exposure, the use of 2.5-33% calcium gluconate or carbonate gel or slurry has been recommended. The gel is either placed into a surgical glove into which the affected extremity is then placed or applied directly on the burn. This compound binds with the active fluorides in an insoluble form and limits burn extension and pain. Calcium chloride should not be used. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Hydrofluoric acid, 40%

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons No information available.

5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Gaseous hydrogen fluoride (HF).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Do not store in metal containers.

Technical Rules for Hazardous Substances (TRGS) 510Class 6.1BStorage Class (LGK) (Germany)Class 6.1B

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Hydrogen fluoride	STEL: 3 ppm 15 min	TWA: 1.8 ppm (8h)	TWA: 1.5 mg/m ³ 8 hr.
	STEL: 2.5 mg/m ³ 15 min	TWA: 1.5 mg/m ³ (8h)	TWA: 1.8 ppm 8 hr. F
	TWA: 1.8 ppm 8 hr	STEL: 3 ppm (15min)	STEL: 2.5 mg/m ³ 15 min
	TWA: 1.5 mg/m ³ 8 hr	STEL: 2.5 mg/m ³ (15min)	STEL: 3 ppm 15 min
	_		Skin

Biological limit values

List source(s):

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
	(Oral)	systemic (Oral)	(Oral)	systemic (Oral)
Hydrogen fluoride 7664-39-3 (40)		0.01 mg/kg/ bw/day		0.01 mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Hydrogen fluoride 7664-39-3 (40)	DNEL = 2.5mg/m ³	DNEL = 2.5mg/m ³	DNEL = 1.5µg/m³	DNEL = 1.5mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Microorganisms in sewage treatment	Soil (Agriculture)
Hydrogen fluoride 7664-39-3(40)	PNEC = 0.9mg/L		PNEC = 51mg/L	PNEC = 11mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Hydrogen fluoride 7664-39-3 (40)	PNEC = 0.9mg/L				

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

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Eye Protection

Goggles (European standard - EN 166)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Giove material	breakthrough time	Giove linckness	EU Stanuaru	Giove comments
Butyl rubber	> 480 minutes	0.35 - 0.7 mm	EN 374	As tested under EN374-3 Determination of
Neoprene	> 480 minutes	0.55 mm		Resistance to Permeation by Chemicals
Nitrile rubber	< 60 minutes	0.38 mm		
PVC	< 120 minutes			

Skin and body protection Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: Acid gases filter Type E Yellow conforming to EN14387 Particulates filter conforming to EN 143
Small scale/Laboratory use	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Colorless	
Odor	pungent	
Odor Threshold	No data available	
Melting Point/Range	-35 °C / -31 °F	
Softening Point	No data available	
Boiling Point/Range	105 °C / 221 °F	
Flammability (liquid)	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	·
Flash Point	No information available	Method - No information available
	No information available No data available	Method - No information available
Autoignition Temperature		Method - No information available
Autoignition Temperature Decomposition Temperature	No data available	Method - No information available
Autoignition Temperature	No data available No data available	Method - No information available
Autoignition Temperature Decomposition Temperature pH	No data available No data available < 1.0	Method - No information available
Autoignition Temperature Decomposition Temperature pH Viscosity	No data available No data available < 1.0 No data available	Method - No information available
Autoignition Temperature Decomposition Temperature pH Viscosity Water Solubility	No data available No data available < 1.0 No data available Miscible No information available	Method - No information available
Autoignition Temperature Decomposition Temperature pH Viscosity Water Solubility Solubility in other solvents	No data available No data available < 1.0 No data available Miscible No information available	Method - No information available

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No data available		
1.15-1.20		
Not applicable	Liquid	
2.21	(Air = 1.0)	
Not applicable (liquid)		
HF		
20		
	1.15-1.20 Not applicable 2.21 Not applicable (liquid) H F	

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available
10.2. Chemical stability	Stable under normal conditions.
10.3. Possibility of hazardous react	ions
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.
10.4. Conditions to avoid	Incompatible products. Excess heat.
10.5. Incompatible materials	Metals. Cyanides. Sulfides. Bases. Fluorine.

10.6. Hazardous decomposition products

Gaseous hydrogen fluoride (HF).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

Hydrofluoric acid, 40%

(a) acute toxicity; Oral Category 2 Dermal Category 1

Category 1
Category 2

Toxicology data for the components

Component	LD50 Oral	LD50 Oral LD50 Dermal LC50 Inhal	
Water	-	-	-
Hydrogen fluoride	-	-	LC50 = 0.79 mg/L (Rat)1 h

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization; Respiratory No data available

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Skin	No data available
(e) germ cell mutagenicity;	No data available
(f) carcinogenicity;	No data available
	There are no known carcinogenic chemicals in this product
(g) reproductive toxicity;	No data available
(h) STOT-single exposure;	No data available
(i) STOT-repeated exposure;	No data available
Target Organs	No information available.
(j) aspiration hazard;	Based on available data, the classification criteria are not met
Symptoms / effects,both acute and delayed	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
11.2. Information on other hazards	

Endocrine Disrupting Properties	Assess endocrine disrupting properties for human health.	This product does not contain any
	known or suspected endocrine disruptors.	

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity **Ecotoxicity effects**

Hydrofluoric acid, 40%

Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae
Hydrogen fluoride	LC50 = 660 mg/L, 48h (Leuciscus idus)	EC50 = 270 mg/L, 48h (Daphnia species)	

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Persistence Soluble in water, Persistence is unlikely, based on information available, Miscible with water. Not relevant for inorganic substances.

Degradability

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Hydrogen fluoride	-1.4	No data available

12.4. Mobility in soil The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB No data available for assessment. assessment

Hydrofluoric acid, 40%

<u>12.6. Endocrine disrupting</u> properties Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms. Solutions with low pH-value must be neutralized before discharge.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN1790 HYDROFLUORIC ACID 8 6.1 II
ADR	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN1790 HYDROFLUORIC ACID 8 6.1 II
IATA	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> Subsidiary Hazard Class <u>14.4. Packing group</u>	UN1790 HYDROFLUORIC ACID 8 6.1 II
14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required.
14.7. Maritime transport in bulk	Not applicable, packaged goods

according to IMO instruments

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	Х	Х	KE-35400	Х	-
Hydrogen fluoride	7664-39-3	231-634-8	-	-	Х	Х	KE-20198	Х	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Water	7732-18-5	Х	ACTIVE	Х	-	Х	Х	Х
Hydrogen fluoride	7664-39-3	Х	ACTIVE	Х	-	Х	Х	Х

Legend: X - Listed '-' - Not Listed KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Hydrogen fluoride	7664-39-3	-	Use restricted. See item 75. (see link for restriction details)	-

REACH links

https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Water	7732-18-5	Not applicable	Not applicable
Hydrogen fluoride	7664-39-3	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

Water endangering class = 2 (self classification)

Hydrogen fluoride WGK2	Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
	Hydrogen fluoride	WGK2	

Component	France - INRS (Tables of occupational diseases)
Hydrogen fluoride	Tableaux des maladies professionnelles (TMP) - RG 32

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Hydrogen fluoride	Prohibited and Restricted		
7664-39-3 (40)	Substances		

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H290 - May be corrosive to metals

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H330 - Fatal if inhaled

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

Legend

CAS - Chemical Abstracts Service TSCA - United States Toxic Substances Control Act Section 8(b) Inventory EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances Substances List **PICCS** - Philippines Inventory of Chemicals and Chemical Substances **ENCS** - Japanese Existing and New Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances AICS - Australian Inventory of Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances NZIOC - New Zealand Inventory of Chemicals TWA - Time Weighted Average WEL - Workplace Exposure Limit ACGIH - American Conference of Governmental Industrial Hygienists IARC - International Agency for Research on Cancer **DNEL** - Derived No Effect Level Predicted No Effect Concentration (PNEC) **RPE** - Respiratory Protective Equipment LD50 - Lethal Dose 50% LC50 - Lethal Concentration 50% EC50 - Effective Concentration 50% NOEC - No Observed Effect Concentration POW - Partition coefficient Octanol:Water PBT - Persistent, Bioaccumulative, Toxic vPvB - very Persistent, very Bioaccumulative ICAO/IATA - International Civil Aviation Organization/International Air ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road Transport Association IMO/IMDG - International Maritime Organization/International Maritime MARPOL - International Convention for the Prevention of Pollution from Dangerous Goods Code Ships **OECD** - Organisation for Economic Co-operation and Development ATE - Acute Toxicity Estimate BCF - Bioconcentration factor VOC - (Volatile Organic Compound) Key literature references and sources for data https://echa.europa.eu/information-on-chemicals Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Hydrofluoric acid, 40%

Physical hazards	On basis of test data
Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers. Chemical incident response training.

Prepared By	Health, Safety and Environmental Department
Creation Date	06-Jul-2010
Revision Date	27-Feb-2024
Revision Summary	New emergency telephone response service provider.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet