

Safety Data Sheet

according to UK REACH Regulation

Backside Etch 1

Revision date: 28.09.2022

Product code: 34212

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

1.1. Product identifier

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

Use of the substance/mixture

Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Company name:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Met. Corr. 1; H290
Acute Tox. 2; H310
Acute Tox. 3; H301
Acute Tox. 3; H331
Skin Corr. 1A; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

nitric acid
Hydrofluoric acid

Signal word: Danger

Pictograms:



Hazard statements

H290	May be corrosive to metals.
H301+H331	Toxic if swallowed or if inhaled.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.

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Precautionary statements

P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation wear respiratory protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Special labelling of certain mixtures

EUH071	Corrosive to the respiratory tract.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (GB CLP Regulation)	
7697-37-2	nitric acid	25 - < 30 %
	231-714-2	007-030-00-3
	01-2119487297-23	
	Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A; H272 H290 H331 H314 EUH071	
7664-38-2	phosphoric acid	10 - < 15 %
	231-633-2	015-011-00-6
	01-2119485924-24	
	Met. Corr. 1, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H290 H302 H314 H318	
7664-39-3	hydrofluoric acid ... %	5 - < 10 %
	231-634-8	009-003-00-1
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A; H310 H330 H300 H314	
7664-93-9	sulphuric acid	5 - < 10 %
	231-639-5	016-020-00-8
	01-2119458838-20	
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7697-37-2	231-714-2	nitric acid	25 - < 30 %
		inhalation: ATE 2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20	
7664-38-2	231-633-2	phosphoric acid	10 - < 15 %
		oral: ATE = 500 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25	
7664-39-3	231-634-8	hydrofluoric acid ... %	5 - < 10 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 1610 ppm (gases); dermal: ATE = 5 mg/kg; oral: ATE = 5 mg/kg Skin Corr. 1A; H314: >= 7 - 100 Skin Corr. 1B; H314: >= 1 - < 7 Eye Irrit. 2; H319: >= 0,1 - < 1	
7664-93-9	231-639-5	sulphuric acid	5 - < 10 %
		oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15	

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SECTION 4: First aid measures

4.1. Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

SECTION 6: Accidental release measures

SECTION 7: Handling and storage

7.1. Precautions for safe handling

7.2. Conditions for safe storage, including any incompatibilities

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7664-39-3	Hydrogen fluoride (as F)	1.8	1.5		TWA (8 h)	WEL
		3	2.5		STEL (15 min)	WEL
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL
7664-38-2	Orthophosphoric acid	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-38-2	phosphoric acid			
Worker DNEL, acute		inhalation	local	2 mg/m ³
Worker DNEL, long-term		inhalation	local	2,92 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	4,57 mg/m ³
Consumer DNEL, long-term		inhalation	local	0,36 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,1 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	10,7 mg/m ³
7664-93-9	sulphuric acid			
Worker DNEL, long-term		inhalation	local	0,05 mg/m ³

PNEC values

CAS No	Substance	Environmental compartment	Value
7664-93-9	sulphuric acid		
Micro-organisms in sewage treatment plants (STP)			8,8 mg/l

8.2. Exposure controls

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
 Colour: gelblich
 Odour: stechend
 pH-Value: <1
 Density: 1,47 g/cm³

SECTION 10: Stability and reactivity

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

ATEmix calculated

ATE (oral) 81,6 mg/kg; ATE (dermal) 83,3 mg/kg; ATE (inhalation vapour) 4,67 mg/l; ATE (inhalation dust/mist) 0,833 mg/l

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7697-37-2	nitric acid				
	inhalation vapour	ATE 2,65 mg/l			
7664-38-2	phosphoric acid				
	oral	ATE 500 mg/kg			
7664-39-3	hydrofluoric acid ... %				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			
	inhalation (1 h) gas	LC50 1610 ppm	Rat		
7664-93-9	sulphuric acid				
	oral	LD50 2140 mg/kg	Rat	Am Ind Hyg Assoc J. 1969 Sep-Oct; 30(5):	The study was performed as part of a ser

SECTION 12: Ecological information

12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7697-37-2	nitric acid					
	Acute fish toxicity	LC50 mg/l	1559	96 h	Topeka shiner	Environmental Toxicology and Chemistry, other: ASTM E729-26
	Fish toxicity	NOEC	268 mg/l	30 d	juvenile Topeka shiner and with juvenile Fathead m	Study report (2009) Growth tests estimated the test chemical
	Algae toxicity	NOEC	> 419 mg/l	10 d	several benthic diatoms; see results	Marine Biology 43:307-315 (1977) Ten cultures of benthic diatoms were iso
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	Activated sludge	Study report (2008) OECD Guideline 209
7664-38-2	phosphoric acid					
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2010) EU Method C.3
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2010) OECD Guideline 202
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	activated sludge of a predominantly domestic sewage	Study report (2010) OECD Guideline 209
7664-93-9	sulphuric acid					
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Desmodesmus subspicatus	Study report (2009) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2009) OECD Guideline 202
	Fish toxicity	NOEC mg/l	0,025	65 d	Jordanella floridae	Water Research Vol. 11, 612 - 626, 1977 Groups of sexually mature flagfish

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

SECTION 14: Transport information

Land transport (ADR/RID)

- 14.1. UN number or ID number:** UN 2922
- 14.2. UN proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, nitric acid, sulphuric acid)
- 14.3. Transport hazard class(es):** 8
- 14.4. Packing group:** II
- Hazard label: 8+6.1
- Classification code: CT1
- Special Provisions: 274
- Limited quantity: 1 L
- Excepted quantity: E2

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Transport category: 2
Hazard No: 86
Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2922
14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, nitric acid, sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8+6.1
Classification code: CT1
Special Provisions: 274 802
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2922
14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, nitric acid, sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8+6.1
Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2922
14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, nitric acid, sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8+6.1
Special Provisions: A3 A803
Limited quantity Passenger: 0.5 L
Passenger LQ: Y840
Excepted quantity: E2
IATA-packing instructions - Passenger: 851
IATA-max. quantity - Passenger: 1 L
IATA-packing instructions - Cargo: 855
IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 3, Entry 75

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

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SECTION 16: Other information

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 2; H310	Calculation method
Acute Tox. 3; H301	Calculation method
Acute Tox. 3; H331	Calculation method
Skin Corr. 1A; H314	
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H301+H331	Toxic if swallowed or if inhaled.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
EUH071	Corrosive to the respiratory tract.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)