

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

### 1.1 Product identifier

**Product name:** KN025 PEN

**Product No.:** 000001015770

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

**Identified uses:** Correction pen

**Uses advised against:** Reserved for industrial and professional use.

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer

Agfa Graphics NV  
Septestraat 27  
2640 Mortsel  
Belgium

**Telephone:** +32 3 4442111  
**Fax:** +32 3 4447094

**E-mail:** electronic.sds@agfa.com

#### National Supplier

Agfa-Gevaert Ltd.  
Vantage West  
Great West Road  
Brentford, Middlesex TW8 9AX  
United Kingdom

**Telephone:** +44 (0)20 8 231 4616  
**Fax:** +44 (0)20 8 231 4951

**E-mail:** electronic.sds@agfa.com

### 1.4 Emergency telephone number:

Emergency telephone number (Belgium) : +32 3 4443333 (24h/24h)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

**Classification according to Regulation (EC) No 1272/2008 as amended.**

#### Health Hazards

Skin corrosion	Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Specific Target Organ Toxicity - Single Exposure	Category 3	H336: May cause drowsiness or dizziness.

### 2.2 Label Elements

**Contains:** benzylalcohol

1-Methoxy-2-propanol  
 ammonium bifluoride; ammonium hydrogen difluoride  
 hydrofluoric acid



**Signal Word:** Danger

**Hazard Statement(s):** H314: Causes severe skin burns and eye damage.  
 H336: May cause drowsiness or dizziness.

**Precautionary Statements**

**Prevention:** P261: Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P310: Immediately call a POISON CENTER/doctor/...  
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312: Call a POISON CENTER/doctor/ if you feel unwell.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.3 Other hazards** Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccumulative) criteria

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

**General information:** No data available.

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
benzylalcohol	25 - <50%	100-51-6	202-859-9	01-2119492630-38-XXXX	No data available.	
1-Methoxy-2-propanol	20 - <50%	107-98-2	203-539-1	01-2119457435-35-XXXX	No data available.	#
ammonium bifluoride; ammonium hydrogen difluoride	1 - <3%	1341-49-7	215-676-4	01-2119489180-38-XXXX	No data available.	#
hydrofluoric acid	0.1 - <1%	7664-39-3	231-634-8	01-2119458860-33-XXXX	No data available.	#

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by

volume.

# This substance has workplace exposure limit(s).

### Classification

Chemical name	Classification	Notes
benzylalcohol	Acute Tox.: 4: H302 Acute Tox.: 4: H332	No data available.
1-Methoxy-2-propanol	Flam. Liq.: 3: H226 STOT SE: 3: H336	No data available.
ammonium bifluoride; ammonium hydrogen difluoride	Skin Corr.: 1B: H314 Acute Tox.: 3: H301 Eye Dam.: 1: H318	No data available.
hydrofluoric acid	Skin Corr.: 1A: H314 Acute Tox.: 2: H300 Acute Tox.: 1: H310 Acute Tox.: 2: H330	Note B

The full text for all H-statements is displayed in section 16.

CLP: Regulation No. 1272/2008.

## SECTION 4: First aid measures

**General:** CAUTION! First aid personnel must be aware of own risk during rescue!

### 4.1 Description of first aid measures

**Inhalation:** Move to fresh air.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy or thoroughly clean contaminated shoes. Call a POISON CENTER/doctor/ if you feel unwell.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a POISON CENTER/doctor/ if you feel unwell.

**Ingestion:** Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center.

**Personal Protection for First-aid Responders:** See Section 8 of the SDS for Personal Protective Equipment.

**4.2 Most important symptoms and effects, both acute and delayed:** See section 11 of the SDS for additional information on health hazards.

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

**Hazards:** See section 11 of the SDS for additional information on health hazards.

**Treatment:** Get medical attention if symptoms occur.

## SECTION 5: Firefighting measures

**General Fire Hazards:** No unusual fire or explosion hazards noted.

### 5.1 Extinguishing media Suitable extinguishing media:

Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**5.2 Special hazards arising from the substance or mixture:** During fire, gases hazardous to health may be formed.

**5.3 Advice for firefighters Special fire fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures:** Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away.

**6.2 Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

**6.4 Reference to other sections:** See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage:

**7.1 Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Do not taste or swallow.

**7.2 Conditions for safe storage, including any incompatibilities:** Store locked up.

**7.3 Specific end use(s):** Reserved for industrial and professional use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control Parameters

#### Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
1-Methoxy-2-propanol	STEL	150 ppm 560 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	TWA	100 ppm 375 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	TWA	100 ppm 375 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
	STEL	150 ppm 568 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
ammonium bifluoride; ammonium hydrogen difluoride - as F	TWA	2.5 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
ammonium bifluoride; ammonium hydrogen	TWA	2.5 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC,

difluoride				2006/15/EC, 2009/161/EU (12 2009)
hydrofluoric acid - as F	STEL	3 ppm	2.5 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
	TWA	1.8 ppm	1.5 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)
hydrofluoric acid	STEL	3 ppm	2.5 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
	TWA	1.8 ppm	1.5 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

### DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
benzylalcohol	General population	Oral	Systemic, long-term; 5 mg/kg	
	General population	Oral	Systemic, short-term; 25 mg/kg	
	General population	Dermal	Systemic, short-term; 28.5 mg/kg	
	General population	Dermal	Systemic, long-term; 5.7 mg/kg	Repeated dose toxicity
	Workers	Dermal	Systemic, short-term; 47 mg/kg	
	General population	Inhalation	Systemic, long-term; 8.11 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 450 mg/m3	Acute toxicity
	General population	Inhalation	Systemic, short-term; 40.55 mg/m3	
	Workers	Dermal	Systemic, long-term; 9.5 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 90 mg/m3	Repeated dose toxicity
1-Methoxy-2-propanol	General population	Dermal	Systemic, long-term; 18.1 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 43.9 mg/m3	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 3.3 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 369 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Local, short-term; 553.5 mg/m3	
	Workers	Dermal	Systemic, long-term; 50.6 mg/kg	Repeated dose toxicity
ammonium bifluoride; ammonium hydrogen difluoride	General population	Inhalation	Systemic, long-term; 0.045 mg/m3	Repeated dose toxicity
	General population	Oral	Systemic, short-term; 0.015 ng/kg	
	Workers	Inhalation	Local, short-term; 3.8 mg/m3	Irritating to respiratory system.
	Workers	Inhalation	Systemic, long-term; 2.3 mg/m3	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0.015 mg/kg	Repeated dose toxicity
hydrofluoric acid	Workers	Inhalation	Local, long-term; 1.5 µg/m3	Repeated dose toxicity

	Workers	Inhalation	Local, short-term; 2.5 mg/m <sup>3</sup>	Irritating to respiratory system.
	General population	Oral	Systemic, short-term; 0.01 mg/kg	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 0.03 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 1.5 mg/m <sup>3</sup>	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 0.03 mg/m <sup>3</sup>	Repeated dose toxicity
	General population	Inhalation	Local, long-term; 0.2 mg/m <sup>3</sup>	Irritating to respiratory system.
	General population	Oral	Systemic, long-term; 0.01 mg/kg	Repeated dose toxicity
	General population	Inhalation	Local, short-term; 1.25 mg/m <sup>3</sup>	Irritating to respiratory system.
	Workers	Inhalation	Systemic, short-term; 2.5 mg/m <sup>3</sup>	Irritating to respiratory system.

### PNEC-Values

Critical component	Environmental compartment	PNEC-Values
benzylalcohol	Marine sediments	0.527 mg/kg
	soil	0.456 mg/kg
	Aquatic (intermit. releases)	2.3 mg/l
	Aquatic (freshwater)	1 mg/l
	Sewage treatment plant	39 mg/l
	Aquatic (marine water)	0.1 mg/l
1-Methoxy-2-propanol	freshwater sediment	5.27 mg/kg
	soil	5.49 mg/kg
	Aquatic (freshwater)	10 mg/l
	freshwater sediment	52.3 mg/kg
	Sewage treatment plant	100 mg/l
	Aquatic (intermit. releases)	100 mg/l
ammonium bifluoride; ammonium hydrogen difluoride	Aquatic (marine water)	1 mg/l
	Marine sediments	5.2 mg/kg
	soil	22 mg/kg
	Aquatic (freshwater)	1.3 mg/l
hydrofluoric acid	Sewage treatment plant	76 mg/l
	Aquatic (freshwater)	0.9 mg/l
	soil	11 mg/kg
	Sewage treatment plant	51 mg/l
	Aquatic (marine water)	0.9 mg/l

## 8.2 Exposure controls

### Appropriate Engineering Controls:

Provide adequate ventilation.

### Individual protection measures, such as personal protective equipment

#### General information:

Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level. Follow training instructions when handling this material.

#### Eye/face protection:

Safety goggles. EN 166.

#### Skin protection

<b>Hand Protection:</b>	Protective gloves should be used if there is a risk of direct contact or splash.(EN374) Chemical resistant gloves required for prolonged or repeated contact. Butyl rubber. Glove thickness: > 0.70 mm Break-through time: > 480 min Risk of splashes: Nitrile rubber. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
<b>Other:</b>	Safety clothes : long sleeved clothing EN13688
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator (EN14387). Seek advice from local supervisor.
<b>Hygiene measures:</b>	Wash contaminated clothing before reuse. Avoid contact with skin. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash hands after handling.
<b>Environmental Controls:</b>	Do not empty into drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Blue
<b>Odor:</b>	Weak aromatic
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	not applicable
<b>Freezing point:</b>	No data available.
<b>Boiling Point:</b>	No data available.
<b>Flash Point:</b>	62 °C (Literature.)
<b>Evaporation Rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Not flammable.
<b>Flammability Limit - Upper (%):</b>	No data available.
<b>Flammability Limit - Lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density (air=1):</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	1.0010 (20 °C) (Literature.)
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Miscible with water at all ratios.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Autoignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>SADT:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.

### 9.2 Other information

**VOC Content:** EC Directive 1999/13: 8.8 g/l ~0.88 % (calculated)  
 EC Directive 2004/42: 709.2 g/l ~70.92 % (calculated)

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity:** Material is stable under normal conditions.
- 10.2 Chemical Stability:** Material is stable under normal conditions.
- 10.3 Possibility of hazardous reactions:** Not known.
- 10.4 Conditions to avoid:** Avoid heat or contamination.
- 10.5 Incompatible Materials:** None known.
- 10.6 Hazardous Decomposition Products:** By heating and fire, harmful vapors/gases may be formed.

**SECTION 11: Toxicological information**

**Information on likely routes of exposure**

- Inhalation:** Inhalation is the primary route of exposure. In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
- Skin Contact:** Causes severe skin burns.
- Eye contact:** Eye contact is possible and should be avoided. Causes serious eye damage.
- Ingestion:** Harmful if swallowed.

**11.1 Information on toxicological effects**

**Acute toxicity**

**Oral**

- Product:** ATEmix: 3,000 mg/kg
- Specified substance(s)**
- benzylalcohol LD 50 (Rat): 1,570 mg/kg Experimental result, Not specified
- 1-Methoxy-2-propanol LD 50 (Rat): 4,277 mg/kg Experimental result, Key study
- ammonium bifluoride; LD 50 (Rat): 130 mg/kg Experimental result, Key study  
 ammonium hydrogen difluoride
- hydrofluoric acid No data available.

**Dermal**

- Product:** ATEmix 3,000 mg/kg
- Specified substance(s)**
- benzylalcohol LD 50 (Rabbit) : 2,000 mg/kg
- 1-Methoxy-2-propanol LD 50 (Rabbit) : 13,000 mg/kg
- ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride

hydrofluoric acid No data available.

**Inhalation**

**Product:** ATEmix25.3 mg/l Vapour

**Specified substance(s)**

benzylalcohol LC 50 (Rat, 4 h): > 4,178 mg/l Aerosol, Experimental result, Key study

1-Methoxy-2-propanol LC 50 (Rat, 4 h): 54.6 mg/l

ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride

hydrofluoric acid LC 50 (Rat): 1610 ppm Gas, Experimental result, Weight of Evidence study

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol NOAEL (Rat(Female, Male), Oral, 13 Weeks): 400 mg/kg  
 1-Methoxy-2-propanol NOAEL (Rat(Female, Male), Inhalation, 2 Weeks): 1,000 ppm(m)  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride

hydrofluoric acid NOAEL (Rat(Female, Male), Inhalation, 91 d): 0.88 ppm(m)  
 NOAEL (Rat(Female, Male), Inhalation, 15 d): 1 ppm(m)

**Skin Corrosion/Irritation:**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride

hydrofluoric acid in vivo (Rabbit): Experimental result, Supporting study  
 in vivo (Rabbit): Experimental result, Key study

**Serious Eye Damage/Eye Irritation:**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol in vivo (Rabbit, 24 - 72 hrs): Irritating  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; Irritating  
 ammonium hydrogen difluoride

hydrofluoric acid in vivo (Rabbit, 1 hrs): Moderately irritating US CPSC / US FDA

**Respiratory or Skin Sensitization:**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride

hydrofluoric acid No data available.

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**In vivo**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**Carcinogenicity**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**Reproductive toxicity**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

<b>Specified substance(s)</b>	
benzylalcohol	No data available.
1-Methoxy-2-propanol	No data available.
ammonium bifluoride;	No data available.
ammonium hydrogen	
difluoride	
hydrofluoric acid	No data available.

**Aspiration Hazard**  
**Product:** No data available.

<b>Specified substance(s)</b>	
benzylalcohol	No data available.
1-Methoxy-2-propanol	No data available.
ammonium bifluoride;	No data available.
ammonium hydrogen	
difluoride	
hydrofluoric acid	No data available.

<b>SECTION 12: Ecological information</b>
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**12.1 Toxicity**

**Acute toxicity**

**Fish**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s)**

benzylalcohol	LC 50 (Oryzias latipes, 96 h): > 100 mg/l experimental result
1-Methoxy-2-propanol	LC 50 (Pimephales promelas, 96 h): 20,800 mg/l (Static) experimental result
ammonium bifluoride;	LC 50 (96 h): 165 mg/l literature
ammonium hydrogen	
difluoride	
hydrofluoric acid	LC 50 (96 h): 340 mg/l Other, Weight of Evidence study

**Aquatic Invertebrates**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s)**

benzylalcohol	EC 50 (48 h): 230 mg/l experimental result
1-Methoxy-2-propanol	EC 50 (48 h): > 500 mg/l (Static) experimental result
ammonium bifluoride;	EC 50 (96 h): 26 - 48 mg/l (Static) interpreted
ammonium hydrogen	
difluoride	
hydrofluoric acid	EC 50 (Daphnia magna; Daphnia sp., 48 h): 270 mg/l (Static) Other, Supporting study

**Chronic Toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol	No data available.
1-Methoxy-2-propanol	No data available.
ammonium bifluoride;	NOAEL (Oncorhynchus mykiss, 21 d): 4 mg/l (Static) secondary data
ammonium hydrogen	
difluoride	

hydrofluoric acid NOAEL (Oncorhynchus mykiss, 21 d): 4 mg/l (Static) Other, Key study

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**12.2 Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**BOD/COD Ratio**

**Product** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**12.3 Bioaccumulative potential**

**Product:** No data available.

**Specified substance(s)**

benzylalcohol No data available.  
 1-Methoxy-2-propanol No data available.  
 ammonium bifluoride; No data available.  
 ammonium hydrogen difluoride  
 hydrofluoric acid No data available.

**12.4 Mobility in soil:**

No data available.

**Known or predicted distribution to environmental compartments**

benzylalcohol	No data available.
1-Methoxy-2-propanol	No data available.
ammonium bifluoride;	No data available.
ammonium hydrogen difluoride	
hydrofluoric acid	No data available.

**12.5 Results of PBT and vPvB assessment:** Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccumulative) criteria

benzylalcohol	No data available.
1-Methoxy-2-propanol	No data available.
ammonium bifluoride;	No data available.
ammonium hydrogen difluoride	
hydrofluoric acid	No data available.

**12.6 Other adverse effects:** No data available.

**12.7 Additional Information:** No data available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**General information:** Disposal considerations (including disposal of contaminated containers or packaging) Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Disposal methods:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

**SECTION 14: Transport information**

**ADR**

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

**RID**

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

**IMDG**

14.1 UN Number:	Not regulated.
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- 14.2 UN Proper Shipping Name: Not regulated.
- 14.3 Transport Hazard Class(es) Not regulated.
- 14.4 Packing Group: Not regulated.
- 14.5 Environmental Hazards: Not regulated.
- 14.6 Special precautions for user: Not regulated.

**IATA**

- 14.1 UN Number: Not regulated.
- 14.2 UN Proper Shipping Name: Not regulated.
- 14.3 Transport Hazard Class(es) Not regulated.
- 14.4 Packing Group: Not regulated.
- 14.5 Environmental Hazards: Not regulated.
- 14.6 Special precautions for user: Not regulated.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:** not applicable.

**SECTION 15: Regulatory information**

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

**EU Regulations**

**Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer:** none

**Regulation (EC) No. 850/2004 on persistent organic pollutants:** none

**Regulation (EC) No. 689/2008 Import and export of dangerous chemicals:** none

**EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC):** none

**Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:** none

**Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:** none

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:** none

**Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:**

Chemical name	CAS-No.	Concentration
1-Methoxy-2-propanol	107-98-2	20 - 30%
ammonium bifluoride; ammonium hydrogen difluoride	1341-49-7	1.0 - 10%
hydrofluoric acid	7664-39-3	0.1 - 1.0%

**EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:**

Chemical name	CAS-No.	Concentration
ammonium bifluoride; ammonium hydrogen difluoride	1341-49-7	1.0 - 10%
hydrofluoric acid	7664-39-3	0.1 - 1.0%

**Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:**

Chemical name	CAS-No.	Concentration
benzylalcohol	100-51-6	40 - 50%
1-Methoxy-2-propanol	107-98-2	20 - 30%
ammonium bifluoride; ammonium hydrogen difluoride	1341-49-7	1.0 - 10%
hydrofluoric acid	7664-39-3	0.1 - 1.0%

**15.2 Chemical safety assessment:**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**Revision Information:** Not relevant.

**References**

PBT PBT: persistent, bioaccumulative and toxic substance.  
 vPvB vPvB: very persistent and very bioaccumulative substance.

**Key literature references and sources for data:** Safety Data Sheet from the supplier.  
 ECHA

**Wording of the H-statements in section 2 and 3**

H226 Flammable liquid and vapor.  
 H300 Fatal if swallowed.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H310 Fatal in contact with skin.  
 H311 Toxic in contact with skin.  
 H313 May be harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.  
 H332 Harmful if inhaled.  
 H336 May cause drowsiness or dizziness.

**Training information:** No data available.

**Classification according to Regulation (EC) No 1272/2008 as amended.**

Skin Corr. 1B, H314 calculated  
 Eye Dam. 1, H318 calculated  
 STOT SE 3, H336 calculated

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**SDS No.:**

**Disclaimer:** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.