

# SAFETY DATA SHEET

Version #: 09 Issue date: 28-August-2013 Revision date: 04-October-2024 Supersedes date: 22-April-2024

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

Registration number	-
Synonyms	Calcium fluoride (CaF2) * Calcium fluoride * Calcium difluoride (as F)
Materion Code	1GJ
1.1. Product identifier	
Name of the substance	Calcium fluoride
Identification number	232-188-7 (EC number)
1.2. Relevant identified uses of	of the substance or mixture and uses advised against
Identified uses	Not available.
Uses advised against	None known.
1.3. Details of the supplier of	the safety data sheet
Supplier	
Company name	Materion Electronic Materials
Address	6070 Parkland Blvd
	Mayfield Heights, OH 44124
	United States
Division	
Telephone	1.216.383.4019
e-mail	Materion-PS@materion.com
Contact person	Product Stewardship Director
1.4. Emergency telephone number	
Document number	1GJ

# **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classificatior applies.

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

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

### 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

Label according to Regulation	n (EC) No. 1272/2008 as amended
Contains:	Calcium fluoride
Hazard pictograms	None.
Signal word	None.
Hazard statements	
H320	Causes eye irritation.
Precautionary statements	
Prevention	
P260	Do not breathe dust/fume/vapours/spray.
P271	Use only outdoors or in a well ventilated area.
Response	Not available.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	For further information, please contact the Product Stewardship Department at +1.800.862.4118.

This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII. The substance is not included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties.

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

### 3.1. Substances

#### General information

Chemical name	%	CAS-No. / EC No.	<b>REACH Registration No.</b>	Index No.	Notes
Calcium fluoride	100	7789-75-5 232-188-7	-	-	#
Classifi	cation: -				

#### List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

ATE: Acute toxicity estimate.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

#: This substance has been assigned Union workplace exposure limit(s).

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

### **SECTION 4: First aid measures**

#### General information

Not available.

### 4.1. Description of first aid measures

Inhalation	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Dusts may irritate the respiratory tract, skin and eyes.
4.3. Indication of any immediate medical attention and special treatment	Treat symptomatically.

### needed

# **SECTION 5: Firefighting measures**

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
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 protective equipment for firefighters	Wear suitable protective equipment.
Special firefighting procedures	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
	-

# **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures For non-emergency Wear appropriate personal protective equipment. personnel

For emergency responders	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
6.2. Environmental precautions	Not available.
6.3. Methods and material for containment and cleaning up	Minimise dust generation and accumulation. Avoid the generation of dusts during clean-up. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.
	Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.
	Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13.
SECTION 7: Handling and	d storage
7.1. Precautions for safe handling	Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Avoid breathing dust. Avoid prolonged exposure. In case of insufficient ventilation, wear suitable respiratory equipment. Practice good housekeeping.
7.2. Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Observe industrial sector guidance on best practices.
SECTION 8: Exposure co	ntrols/personal protection
8.1. Control parameters	
Occupational exposure limits Austria. MAK List, OEL Ord	inance (GwV), BGBI. II, no. 184/2001, as amended

Material	Туре	Value	Form
Calcium fluoride (CAS 7789-75-5)	МАК	2,5 mg/m3	Inhalable fraction.
	STEL	12,5 mg/m3	Inhalable fraction.

# Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Material	Туре	Value
Calcium fluoride (CAS 7789-75-5)	TWA	2,5 mg/m3

# Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Material	Туре	Value
Calcium fluoride (CAS 7789-75-5)	MAC	2,5 mg/m3
Cyprus. OELs. Occupational Ex Agents) Reg., Ann. 1, R.A.A. 20		cals at Work (Safety and Health at Work (Chem.
Material	Туре	Value
Calcium fluoride (CAS 7789-75-5)	TWA	2,5 mg/m3
		icals at work (Decree on protection of health at work
361/2007, Annex 2, Part A & A	Annex 3, Part A, as amended)	
		icals at work (Decree on protection of health at work Value
361/2007, Annex 2, Part A & A	Annex 3, Part A, as amended)	
<b>361/2007, Annex 2, Part A &amp; A</b> Material Calcium fluoride (CAS	Annex 3, Part A, as amended) Type	Value
<b>361/2007, Annex 2, Part A &amp; A</b> <b>Material</b> Calcium fluoride (CAS 7789-75-5)	Annex 3, Part A, as amended) Type Ceiling TWA	Value 5 mg/m3
<b>361/2007, Annex 2, Part A &amp; A</b> <b>Material</b> Calcium fluoride (CAS 7789-75-5)	Annex 3, Part A, as amended) Type Ceiling TWA	Value           5 mg/m3           2,5 mg/m3

Matarial .	<b>T</b>	Value
Material	Туре	Value
Calcium fluoride (CAS 789-75-5)	TWA	2,5 mg/m3
inland. HTP-arvot, App 3., Bind 1aterial	ing Limit Values, Social Affa Type	irs and Ministry of Health Value
Calcium fluoride (CAS 7789-75-5)	TWA	2,5 mg/m3
France. OELs. Indicative Occupa Material	tional Exposure Limits as Pr Type	escribed by Order of 30 June 2004, as amended Value
Calcium fluoride (CAS 7789-75-5)	VME	2,5 mg/m3
France. Threshold Limit Values ( Material	VLEP) for Occupational Expo Type	osure to Chemicals in France, INRS ED 984 Value
Calcium fluoride (CAS 789-75-5)	VME	2,5 mg/m3
Regulatory status: Regulato	ry indicative (VRI)	
Hungary. OELs. Decree on prote amended	ction of workers exposed to	chemical agents (5/2020. (II.6)), Annex 1&2, as
Material	Туре	Value
Calcium fluoride (CAS 7789-75-5)	TWA	2,5 mg/m3
	2009 on Pollution Limits and	Measures to Reduce Pollution at the Workplace, as
amended Material	Туре	Value
Calcium fluoride (CAS 1789-75-5)	TWA	0,6 mg/m3
	sure Limits of Chemical Sub	stances at Workplace (Reg. No. 325/ 2007, L.V. 80,
Annex 1), as amended Material	Туре	Value
Calcium fluoride (CAS ?789-75-5)	STEL	2,5 mg/m3
		0 5
	TWA	0,5 mg/m3
	xposure Limit Values for Che	0,5 mg/m3 emical Substances (Hygiene Norm HN 23:2011; Ord
No. V-824/A1-389), as amended	xposure Limit Values for Che	
No. V-824/A1-389), as amended Material Calcium fluoride (CAS	xposure Limit Values for Che 1	emical Substances (Hygiene Norm HN 23:2011; Ord
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ	xposure Limit Values for Che 1 <b>Type</b> TWA upational Exposure Limit Va	emical Substances (Hygiene Norm HN 23:2011; Ord Value
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as ar	xposure Limit Values for Che 1 <b>Type</b> TWA upational Exposure Limit Va	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as ar Material Calcium fluoride (CAS	xposure Limit Values for Che d Type TWA upational Exposure Limit Va nended	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 1789-75-5) .uxembourg. OELs. Binding Occo Memorial A, n ° 235/2016, as ar Material Calcium fluoride (CAS 1789-75-5) Malta. OELs. Protection of Healt	xposure Limit Values for Che Type TWA upational Exposure Limit Va mended Type TWA h and Safety of Workers from	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ Value
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) .uxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as ar Material Calcium fluoride (CAS 7789-75-5) Malta. OELs. Protection of Healt 227/2003 Schedules I and V), as	xposure Limit Values for Che Type TWA upational Exposure Limit Va mended Type TWA h and Safety of Workers from	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ Value 2,5 mg/m3
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as ar Material Calcium fluoride (CAS 7789-75-5) Malta. OELs. Protection of Healt 227/2003 Schedules I and V), as Material Calcium fluoride (CAS	xposure Limit Values for Che Type TWA upational Exposure Limit Va mended Type TWA h and Safety of Workers from s amended	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ Value 2,5 mg/m3 m Risks related to Chemical Agents at Work (L.N
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as an Material Calcium fluoride (CAS 7789-75-5) Malta. OELs. Protection of Healt 227/2003 Schedules I and V), as Material Calcium fluoride (CAS 7789-75-5)	xposure Limit Values for Che Type TWA upational Exposure Limit Va mended Type TWA h and Safety of Workers from s amended Type TWA TWA	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ Value 2,5 mg/m3 m Risks related to Chemical Agents at Work (L.N Value
No. V-824/A1-389), as amended Material Calcium fluoride (CAS 7789-75-5) Luxembourg. OELs. Binding Occ Memorial A, n ° 235/2016, as ar Material Calcium fluoride (CAS 7789-75-5) Malta. OELs. Protection of Healt 227/2003 Schedules I and V), as Material Calcium fluoride (CAS 7789-75-5) Netherlands. OELs per Annex XI	xposure Limit Values for Che Type TWA upational Exposure Limit Va mended Type TWA h and Safety of Workers from s amended Type TWA TWA	emical Substances (Hygiene Norm HN 23:2011; Ord Value 2,5 mg/m3 lues (Annex I), G.D.R. of 14 November 2016, OJ Value 2,5 mg/m3 m Risks related to Chemical Agents at Work (L.N Value 2,5 mg/m3

Material		Туре			Valu	e
Calcium fluoride (CAS 7789-75-5)		TLV		0,5 n	ng/m3	
Portugal. Decree-Law Material		Occupational Exposure Limit Values, A Type V		Anne Valu		
Calcium fluoride (CAS 7789-75-5)		TWA 2		2,5 n	ng/m3	
Portugal. VLEs. Norm Material	-	al exposure to chemical agents (NP 179 Type Va			796-2014) Value	
Calcium fluoride (CAS 7789-75-5)		TWA		2,5 n	ng/m3	
	Values of Chemical	Agents	s at Workplace	(Regulatio	n 1.2	18/2006, M.O 845, Annex 1, 3&4
amended) Material		Туре			Valu	e
Calcium fluoride (CAS		STEL			2 mg	
7789-75-5)		TWA			1 mg	/m3
			limits for chen	nical factor	s in v	vorkplace air (Regulation No
355/2006, Annex 1, T Material		i) Type			Valu	e
Calcium fluoride (CAS 7789-75-5)		TWA			2,5 n	ng/m3
Spain. OELs. INSST, Li Ambientales (VLAs)	ímites de Exposició	n Profe	sional Para Ag	entes Quím	nicos,	Table 1-Valores Límites
Material		Туре			Valu	е
Calcium fluoride (CAS 7789-75-5)		TWA		2,5 n	ng/m3	
amended	-		thority (AV), O	-	-	osure Limit Values (AFS 2018:1)
Material		71 -		Valu	-	
Calcium fluoride (CAS 7789-75-5)		TWA			2 mg	/m3
UK. OELs. Workplace I Material		/ELs) (E Type	H40/2005 (Fo		n 202 Valu	
Calcium fluoride (CAS 7789-75-5)		TWA			2,5 n	ng/m3
2017/164/EU			es 91/322/EEC	, 2000/39/		2006/15/EC, 2009/161/EU,
Material		Туре			Valu	e
Calcium fluoride (CAS 7789-75-5)		TWA			2,5 n	ng/m3
ogical limit values						
Croatia. BELs (BGV). R OELs and BELs, Annex				nst Exposu	re to	Dangerous Chemicals at Work,
Material	Value		Determinant	Specimer	n	Sampling Time
Calcium fluoride (CAS 7789-75-5)	8 mg/g	F	luoride	Creatinine urine	in	*
	4 mg/g	F	luoride	Creatinine urine	in	*
	40 mmol/mol	F	luoride	Creatinine urine	in	*

 $\ast$  - For sampling details, please see the source document.

Material	Value	Determinant	Specimen	Sampling Time
Calcium fluoride (CAS 7789-75-5)	60 µmol/mmol	Fluoride	Creatinine in urine	*
	10 mg/g	Fluoride	Creatinine in urine	*
* - For sampling details,	please see the source c	locument.		
France. Biological indi	cators of exposure (	IBE) (National Insti	tute for Resear	ch and Security (INRS), ND 2065)

- - - - - -

Material	Value	Determinant	Specimen	Sampling Time	
Calcium fluoride (CAS 7789-75-5)	3 mg/g	Fluorures	Creatinine in urine	*	
	10 mg/g	Fluorures	Creatinine in urine	*	

\* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)				
Material	Value	Determinant	Specimen	Sampling Time
Calcium fluoride (CAS	4 mg/l	Fluorid	Urine	*

7789-75-5)

\* - For sampling details, please see the source document.

# Hungary. BELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 3&4, as amended

Material	Value	Determinant	Specimen	Sampling Time	
Calcium fluoride (CAS 7789-75-5)	42 µmol/mmol	fluoride	Creatinine in urine	*	
	24 µmol/mmol	fluoride	Creatinine in urine	*	
	7 mg/g	fluoride	Creatinine in urine	*	
	4 mg/g	fluoride	Creatinine in urine	*	

 $\ast$  - For sampling details, please see the source document.

# Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Material	Value	Determinant	Specimen	Sampling Time
Calcium fluoride (CAS 7789-75-5)	7 mg/g	fluorides	Creatinine in urine	*
	4 mg/g	fluorides	Creatinine in urine	*

\* - For sampling details, please see the source document.

# Spain. BELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 3-Valores Límite Biológicos (VLB)

Material	Value	Determinant	Specimen	Sampling Time	
Calcium fluoride (CAS 7789-75-5)	3 mg/l	Fluoruros	Urine	*	
	2 mg/l	Fluoruros	Urine	*	
★ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	and a second second second	and the second state			

\* - For sampling details, please see the source document.

# Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle BAT-Werte Material Determinant Specimen Sampling Time Calcium fluoride (CAS 4 mg/l Fluorid Urine \*

7789-75-5)	
* - For sampling details, plea	ase see the source document.
Recommended monitoring procedures	Follow standard monitoring procedures.
Derived no effect levels (DNELs)	Not available.
Predicted no effect concentrations (PNECs)	Not available.

Exposure guidelines			
Hungary OELs: Skin design	ation		
Calcium fluoride (CAS 7789-75-5)		Can be absorbed through the skin.	
8.2. Exposure controls			
Appropriate engineering controls	Good general ventilation 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. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.		
Individual protection measures	s, such as personal protective	equipment	
General information	Personal protection equipment sl with the supplier of the personal	should be chosen according to the CEN standards and in discussion I protective equipment.	
Eye/face protection	Wear safety glasses with side sh	ields (or goggles).	
Skin protection			
- Hand protection	Not normally needed. Wear appr	ropriate chemical resistant gloves.	
- Other	Personal protection equipment sl with the supplier of the personal	should be chosen according to the CEN standards and in discussion I protective equipment.	
Respiratory protection	Wear respirator with dust filter.		
Thermal hazards	Wear appropriate thermal protect	ctive clothing, when necessary.	
Hygiene measures	before eating, drinking, and/or s remove contaminants. Always of	bygiene measures, such as washing after handling the material and smoking. Routinely wash work clothing and protective equipment to bserve good personal hygiene measures, such as washing after e eating, drinking, and/or smoking. Routinely wash work clothing nove contaminants.	
Environmental exposure controls	with the requirements of environ	ork process equipment should be checked to ensure they comply nmental protection legislation. Fume scrubbers, filters or e process equipment may be necessary to reduce emissions to	

# **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

9.1. Information on basic phys	ical and chemical properties
Physical state	Solid.
Form	Powder.
Colour	Not available.
Odour	Not available.
Melting point/freezing point	1403 °C (2557,4 °F)
Boiling point or initial boiling point and boiling range	2500 °C (4532 °F)
Flammability	Not available.
Upper/lower flammability or e	xplosive limits
Explosive limit - lower ( %)	Not available.
Explosive limit – upper (%)	Not available.
Flash point	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
рН	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapour pressure	<0,0000001 kPa (25 °C (77 °F))

Density and/or relative densit				
Density	3,18 g/cm3 estimated			
Vapour density	Not available.			
Particle characteristics	Not available.			
9.2. Other information				
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.			
9.2.2. Other safety characteris	tics			
Molecular formula	Ca-F2			
Molecular weight	78,07 g/mol			
Specific gravity	3,18			
SECTION 10: Stability an	id reactivity			
10.1. Reactivity	Not available.			
10.2. Chemical stability	Material is stable under normal conditions.			
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.			
10.4. Conditions to avoid	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).			
10.5. Incompatible materials	None known.			
10.6. Hazardous decomposition products	No hazardous decomposition products are known.			
SECTION 11: Toxicologic	cal information			
General information	Occupational exposure to the substance or mixture may cause adverse effects.			
Information on likely routes of	f exposure			
Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.			
Skin contact	Dust or powder may irritate the skin. Due to lack of data the classification is not possible.			
Eye contact	Dust in the eyes will cause irritation.			
Ingestion	Based on available data, the classification criteria are not met.			
Symptoms	Dusts may irritate the respiratory tract, skin and eyes.			
11.1. Information on hazard c	lasses as defined in Regulation (EC) No 1272/2008			
Acute toxicity	Not known.			
Product	Species Test Results			
Calcium fluoride (CAS 7789-75-5)	•			
Acute				
Oral				
LD50	Rat 4250 mg/kg			
	be based on additional component data not shown.			
Skin corrosion/irritation	Due to partial or complete lack of data the classification is not possible.			
Serious eye damage/eye irritation	Dust in the eyes will cause irritation.			
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.			
Skin sensitisation	Due to partial or complete lack of data the classification is not possible.			
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.			
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.			
	Evaluation of Carcinogenicity			
Calcium fluoride (CAS 778	· · · ·			
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.			
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.			
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.			

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

Material name: Calcium fluoride

Mixture versus substance No information available.

information	
11.2. Information on other haz	zards
Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to human health, as if does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
Other information	This product has no known adverse effect on human health.
SECTION 12: Ecological i	nformation
12.1. Toxicity	Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	This substance does not have endocrine disrupting properties with respect to the environment, as if does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
12.8. Additional information	

#### Estonia Dangerous substances in soil Data

Calcium fluoride (CAS 7789-75-5)

Fluoride (As F ion) 1200 mg/kg Fluoride (As F ion) 2000 mg/kg Fluoride (As F ion) 450 mg/kg

### **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	Not available.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Special precautions	Dispose in accordance with all applicable regulations.

## **SECTION 14: Transport information**

### ADR

14.1. UN number 14.2. UN proper shipping name	Not regulated as dangerous goods. Not regulated as dangerous goods.
14.3. Transport hazard clas	ss(es)
Class	Not assigned.
Subsidiary risk	-
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.
RID	
14.1. UN number	Not regulated as dangerous goods.

14.2. UN proper shipping Not regulated as dangerous goods. name 14.3. Transport hazard class(es) Not assigned. Class Subsidiary risk -14.4. Packing group 14.5. Environmental No. hazards 14.6. Special precautions Not assigned. for user ADN 14.1. UN number Not regulated as dangerous goods. 14.2. UN proper shipping Not regulated as dangerous goods. name 14.3. Transport hazard class(es) Not assigned. Class Subsidiary risk 14.4. Packing group 14.5. Environmental No. hazards 14.6. Special precautions Not assigned. for user ΙΑΤΑ 14.1. UN number Not regulated as dangerous goods. 14.2. UN proper shipping Not regulated as dangerous goods. name 14.3. Transport hazard class(es) Not assigned. Class Subsidiary risk 14.4. Packing group 14.5. Environmental No. hazards 14.6. Special precautions Not assigned. for user IMDG 14.1. UN number Not regulated as dangerous goods. Not regulated as dangerous goods. 14.2. UN proper shipping name 14.3. Transport hazard class(es) Class Not assigned. Subsidiary risk 14.4. Packing group 14.5. Environmental hazards Marine pollutant No. Not assigned. EmS 14.6. Special precautions Not assigned.

for user

### **SECTION 15: Regulatory information**

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

### **EU** regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended** Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended** Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649 amended	9/2012 concerning the export and in	nport of dangerous chemicals, Annex I, Part 3 as
Not listed. Regulation (EU) No. 649	9/2012 concerning the export and ir	nport of dangerous chemicals, Annex V as amended
Not listed. Regulation (EC) No. 166	5/2006 Annex II Pollutant Release a	nd Transfer Registry, as amended
Calcium fluoride (CAS	7789-75-5)	
Regulation (EC) No. 190 Not listed.	07/2006, REACH Article 59(10) Cano	lidate List as currently published by ECHA
Authorisations		
Regulation (FC) No. 190	17/2006 RFACH Anney XIV Substan	ces subject to authorization, as amended
Not listed.		ces subject to dutionzation, as amenaed
Restrictions on use		
Regulation (EC) No. 190		nces subject to restriction on marketing and use, as I entry number should be considered
Not listed.	2	
		e risks related to exposure to carcinogens and
Not listed.		
Regulation 2019/1148	on Marketing and Use of Explosive P	recursors, Annex I, as amended
Not listed.		
Regulation 2019/1148	on Marketing and Use of Explosive P	recursors, Annex II, as amended
Not listed.		
Other regulations		d in accordance with Regulation (EC) 1272/2008 (CLP y Data Sheet complies with the requirements of Regulation (EC)
National regulations	Follow national regulation for work with chemical agents.	
	Follow national regulation for work a amended.	with chemical agents in accordance with Directive 98/24/EC, as
France regulations		
France INRS Table of O	ccupational Diseases	
Calcium fluoride (CAS		ctions professionnelles provoquées par le fluor, l'acide hydrique et ses sels minéraux 32
15.2. Chemical safety assessment	No Chemical Safety Assessment has	been carried out.
SECTION 16: Other inf	ormation	
List of abbreviations		
	ADN: European Agreement Concern Waterways.	ing the International Carriage of Dangerous Goods by Inland
		ernational Carriage of Dangerous Goods by Road.
	AGW: Occupational threshold limit v	alue (Arbeitsplatzgrenzwert – Germany).
	CAS: Chemical Abstract Service.	
	CEN: European Committee for Stand	
	IATA: International Air Transport As	
	Chemicals in Bulk.	e Construction and Equipment of Ships Carrying Dangerous
	IMDG: International Maritime Dange	
	MAC: Maximum Allowed Concentrat	on. or the Prevention of Pollution from Ships.
	PBT: Persistent, bioaccumulative an	•
	•	ornational Carriage of Dangerous Goods by Pail

- RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
- STEL: Short term exposure limit.
- TLV: Threshold Limit Value.
- TWA: Time Weighted Average.
- VLE: Exposure Limit Value.
- VME: Exposure Average Value.
- vPvB: Very persistent and very bioaccumulative.

### References

Not available.

Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculatior methods and test data, if available. Not applicable.	
Full text of any statements, which are not written out in full under sections 2 to 15	H320 Causes eye irritation.	
<b>Revision information</b>	None.	
Training information	Follow training instructions when handling this material.	
Further information	Transportation Emergency Call Chemtrec at: US: 800.424.9300 International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059 South Korea Toll-free Number – 080-880-0468	
Disclaimer	This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.	