



# SAFETY DATA SHEET

**MATERION**

Version #: 03

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

Registration number	-
Synonyms	BARIUM FLUORIDE * Barium difluoride
Materion Code	1CS
1.1. Product identifier	
Name of the substance	Barium Fluoride (BaF <sub>2</sub> )
Identification number	056-002-00-7 (Index number)
1.2. Relevant identified uses 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	1CS

## 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 classification applies.

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

##### Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.

### 2.2. Label elements

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

**Contains:** barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex

##### Hazard pictograms



##### Signal word

Warning

##### Hazard statements

H302	Harmful if swallowed.
H332	Harmful if inhaled.

#### Precautionary statements

##### Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

P264

Wash thoroughly after handling.

**Response**

P301 + P312

IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.

**Storage**

P403 + P233

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

P405

Store locked up.

**Disposal**

Not available.

**Supplemental label information**

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

**2.3. Other hazards**

The Safety Information Sheet Chemicals of hazardous chemical can be obtained through phone, email or on the company website. 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.	REACH Registration No.	Index No.	Notes
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex	100	7787-32-8 232-108-0	-	056-002-00-7	
<b>Classification:</b> Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H332;(ATE: 1,5 mg/l)					

**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. \*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**Composition comments**

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

**SECTION 4: First aid measures****General information**

In case of shortness of breath, give oxygen. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep victim under observation. Keep victim warm.

**4.1. Description of first aid measures****Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician or poison control centre immediately.

**Skin contact**

Remove and isolate contaminated clothing and shoes. Wash the skin immediately with soap and water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.

**Eye contact**

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**

Call a physician or poison control centre immediately. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**4.2. Most important symptoms and effects, both acute and delayed**

Irritation of eyes and mucous membranes. Prolonged exposure may cause chronic effects.

**4.3. Indication of any immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**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 (CO<sub>2</sub>).

**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 personnel**

Avoid inhalation of dust. Wear appropriate personal protective equipment.

**For emergency responders**

Keep unnecessary personnel away. Ensure adequate ventilation. Avoid inhalation of dust. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

**6.2. Environmental precautions**

Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent entry into waterways, sewer, basements or confined areas. 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. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

**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 storage**

**7.1. Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimise dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

**7.2. Conditions for safe storage, including any incompatibilities**

Store locked up. Store in a cool, dry place out of direct sunlight. 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 controls/personal protection**

**8.1. Control parameters**

## Occupational exposure limits

### Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

Material	Type	Value
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	STEL	1 mg/m3
	TWA	0,1 mg/m3

### Netherlands. OELs per Annex XIII of Working Conditions Regulation (Staatscourant no. 252, 29 December 2006), as amended

Material	Type	Value
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	STEL	2 mg/m3
	TWA	0,5 mg/m3

### Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended

Material	Type	Value	Form
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	TWA	0,5 mg/m3	Inhalable fraction.

## Biological limit values

### Croatia. BELs (BGV). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and BELs, Annex IV (NN 91/2018), as amended

Material	Value	Determinant	Specimen	Sampling Time
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	8 mg/g	Fluoride	Creatinine in urine	*
	4 mg/g	Fluoride	Creatinine in urine	*
	40 mmol/mol	Fluoride	Creatinine in urine	*
	24 mmol/mol	Fluoride	Creatinine in urine	*

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

### Czech Republic. BELs. Government Decree 432/2003 Sb., as amended

Material	Value	Determinant	Specimen	Sampling Time
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	60 µmol/mmol	Fluoride	Creatinine in urine	*

**Czech Republic. BELs. Government Decree 432/2003 Sb., as amended**

Material	Value	Determinant	Specimen	Sampling Time
	10 mg/g	Fluoride	Creatinine in urine	*

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

**France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS), ND 2065)**

Material	Value	Determinant	Specimen	Sampling Time
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	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
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	4 mg/l	Fluorid	Urine	*

\* - 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
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	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	*

\* - 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
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	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
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	3 mg/l	Fluoruros	Urine	*
	2 mg/l	Fluoruros	Urine	*

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

**Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle BAT-Werte**

Material	Value	Determinant	Specimen	Sampling Time
barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthaleny l aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)	4 mg/l	Fluorid	Urine	*

\* - For sampling details, please 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 designation**

barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8) Can be absorbed through the skin.

**Latvia OELs: Skin designation**

barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8) 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. Provide eyewash station.

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

**General information** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Eye wash fountain is recommended.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**- Hand protection** Wear appropriate chemical resistant gloves.

**- Other** Wear chemical protective equipment that is specifically recommended by the manufacturer. Use of an impervious apron is recommended. It may provide little or no thermal protection. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Respiratory protection** Chemical respirator with organic vapour cartridge.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

**Physical state** Solid.

**Form** Solid.

**Colour** Not available.

**Odour** Not available.

**Melting point/freezing point** Not available.

**Boiling point or initial boiling point and boiling range** Not available.

**Flammability** Not available.

**Upper/lower flammability or explosive limits**

**Explosive limit - lower ( %)** Not available.

**Explosive limit – upper ( %)** Not available.

**Flash point** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**pH** 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 density** Not available.

**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 characteristics**

**Molecular formula** BaF2

**Molecular weight** 19 g/mol

**SECTION 10: Stability and 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.

**10.5. Incompatible materials** None known.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

**SECTION 11: Toxicological information**

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

**Information on likely routes of exposure**

**Inhalation** Harmful if inhaled.

**Skin contact** Due to lack of data the classification is not possible.

<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Toxic if swallowed. Harmful if swallowed.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
<b>Acute toxicity</b>	In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Toxic if swallowed. Harmful if inhaled. Harmful if swallowed. Harmful if swallowed. May cause respiratory irritation.
<b>Skin corrosion/irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)

<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	Respiratory tract irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs ( ) through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.

#### 11.2. Information on other hazards

<b>Endocrine disrupting properties</b>	This substance does not have endocrine disrupting properties with respect to human health, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
<b>Other information</b>	Not available.

### SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Contains a substance which causes risk of hazardous effects to the environment. Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log K<sub>ow</sub>)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
<b>12.6. Endocrine disrupting properties</b>	This substance does not have endocrine disrupting properties with respect to the environment, as it does not meet the assessment criteria laid out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605.
<b>12.7. Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<b>Residual waste</b>	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). Avoid discharge into water courses or onto the ground.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.



<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. Waste codes should be assigned by the user based on the application for which the product was used.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN1564
<b>14.2. UN proper shipping name</b>	Barium compounds, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
Class	6.1
Subsidiary risk	-
Label(s)	6.1
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### RID

<b>14.1. UN number</b>	UN1564
<b>14.2. UN proper shipping name</b>	Barium compounds, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
Class	6.1
Subsidiary risk	-
Label(s)	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### ADN

<b>14.1. UN number</b>	UN1564
<b>14.2. UN proper shipping name</b>	Barium compounds, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
Class	6.1
Subsidiary risk	-
Label(s)	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IATA

<b>14.1. UN number</b>	UN1564
<b>14.2. UN proper shipping name</b>	Barium compounds, n.o.s. (Barium fluoride)
<b>14.3. Transport hazard class(es)</b>	
Class	6.1
Subsidiary risk	-
Label(s)	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.

**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**14.1. UN number** UN1564

**14.2. UN proper shipping name** Barium compounds, n.o.s. (Barium fluoride)

**14.3. Transport hazard class(es)**

**Class** 6.1

**Subsidiary risk** -

**Label(s)** 6.1

**14.4. Packing group** III

**14.5. Environmental hazards**

**Marine pollutant** No.

**EmS** Not assigned.

**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**ADN; ADR; IATA; IMDG; RID**



## 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. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

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

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

**Authorisations**

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

**Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended**

Not listed.

**Other regulations**

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. The product is classified and labelled in accordance with EC directives or respective national laws. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

**National regulations**

Follow national regulation for work with chemical agents.

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

**France regulations****France INRS Table of Occupational Diseases**

barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex (CAS 7787-32-8) Affections professionnelles provoquées par le fluor, l'acide fluorhydrique et ses sels minéraux 32

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information****List of abbreviations**

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.  
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.  
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).  
CAS: Chemical Abstract Service.  
CEN: European Committee for Standardization.  
IATA: International Air Transport Association.  
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.  
IMDG: International Maritime Dangerous Goods.  
MAC: Maximum Allowed Concentration.  
MARPOL: International Convention for the Prevention of Pollution from Ships.  
PBT: Persistent, bioaccumulative and toxic.  
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**

ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents

**Information on evaluation method leading to the classification of mixture**

Not applicable.

**Full text of any statements, which are not written out in full under sections 2 to 15**

H302 Harmful if swallowed.  
H332 Harmful if inhaled.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.

**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

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