



# SAFETY DATA SHEET

**MATERION**

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

### 1.1. Product identifier

<b>Name of the substance</b>	Barium titanate (BaTiO <sub>3</sub> )
<b>Identification number</b>	056-002-00-7 (Index number)
<b>Registration number</b>	-
<b>Document number</b>	1CI
<b>Synonyms</b>	BARIUM TITANATE * Barium titanium oxide (BaTiO <sub>3</sub> ) * Barium(IV) titanate
<b>Materion Code</b>	1CI
<b>Issue date</b>	24-October-2013
<b>Revision date</b>	10-January-2018

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

#### Supplier

<b>Company name</b>	Materion Advanced Chemicals Inc.
<b>Address</b>	407 N. 13th Street 1316 W. St. Paul Avenue Milwaukee, WI 53233 United States
<b>Division</b>	Milwaukee
<b>Telephone</b>	414.212.0257
<b>e-mail</b>	advancedmaterials@materion.com
<b>Contact person</b>	Laura Hamilton

### 1.4. Emergency telephone number

<b>Supersedes date</b>	14-July-2015
<b>Version number</b>	04

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

<b>Identified uses</b>	Not available.
<b>Uses advised against</b>	None known.

## 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	

**Hazard summary** Harmful by inhalation and if swallowed. Harmful if inhaled.

### 2.2. Label elements

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

**Contains:** Barium titanate

##### Hazard pictograms



**Signal word** Warning

##### Hazard statements

H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled

#### Precautionary statements

##### Prevention

P261 Avoid breathing dust/fume.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.

**Response**

P301 + P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a POISON CENTRE/doctor if you feel unwell.  
 P330 Rinse mouth.

**Storage**

Store away from incompatible materials.

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Supplemental label information**

None.

**2.3. Other hazards**

The Safety Information Sheet Chemicals of hazardous chemical can be obtained through phone, email or on the company website.

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

**3.1. Substances**

**General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Barium titanate	90 - 100	12047-27-7 234-975-0	-	056-002-00-7	#
<b>Classification:</b>	Acute Tox. 4;H302				1,A

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

CLP: Regulation No. 1272/2008.  
 DSD: Directive 67/548/EEC.  
 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).

**Composition comments**

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). 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. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTRE or doctor/physician if you feel unwell.

**Skin contact**

Wash the skin immediately with soap and water. 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**

If swallowed, seek medical advice immediately and show this container or label. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

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

Direct contact with eyes may cause temporary irritation.

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

Provide general supportive measures and treat symptomatically. Treat symptomatically. In case of shortness of breath, give oxygen. 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** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

**For emergency responders** Keep unnecessary personnel away.

### 6.2. Environmental precautions

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). Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

### 6.4. Reference to other sections

Not available.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Minimise dust generation and accumulation. Avoid breathing dust. Avoid prolonged exposure. Do not taste or swallow. 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. Observe good industrial hygiene practices.

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

Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place.

### 7.3. Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001**

Material	Type	Value	Form
Barium titanate (CAS 12047-27-7)	MAK	0,5 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	2 mg/m <sup>3</sup>	Inhalable fraction.

**Belgium. Exposure Limit Values.**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	MAC	0,5 mg/m <sup>3</sup>

**Czech Republic. OELs. Government Decree 361**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	Ceiling	2,5 mg/m <sup>3</sup>
	TWA	0,5 mg/m <sup>3</sup>

**Denmark. Exposure Limit Values**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TLV	0,5 mg/m <sup>3</sup>

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Finland. Workplace Exposure Limits**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	VME	0,5 mg/m <sup>3</sup>

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

Material	Type	Value	Form
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Material	Type	Value	Form
Barium titanate (CAS 12047-27-7)	AGW	0,5 mg/m <sup>3</sup>	Inhalable fraction.

**Greece. OELs (Decree No. 90/1999, as amended)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Ireland. Occupational Exposure Limits**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Italy. Occupational Exposure Limits**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Netherlands. OELs (binding)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Norway. Administrative Norms for Contaminants in the Workplace**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TLV	0,5 mg/m <sup>3</sup>

**Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	STEL	30 mg/m <sup>3</sup>

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Spain. Occupational Exposure Limits**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Material	Type	Value	Form
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Material	Type	Value	Form
Barium titanate (CAS 12047-27-7)	STEL	4 mg/m <sup>3</sup>	Inhalable dust.
	TWA	0,5 mg/m <sup>3</sup>	Inhalable dust.

**UK. EH40 Workplace Exposure Limits (WELs)**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Material	Type	Value
Barium titanate (CAS 12047-27-7)	TWA	0,5 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**8.2. Exposure controls**

**Appropriate engineering controls** 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.

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

**Skin protection**

**- Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**- Other**

Wear suitable protective clothing. Use of an impervious apron is recommended. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge.

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

**Hygiene measures** When using, do not eat, drink or smoke. 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** Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

**Physical state** Solid.  
**Form** Solid.  
**Colour** Not available.

**Odour** Not available.

**Odour threshold** Not available.

**pH** Not available.

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

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

#### Upper/lower flammability or explosive limits

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

**Flammability limit - upper (%)** Not available.

**Vapour pressure** Not available.

**Vapour density** Not available.

**Relative density** Not available.

#### Solubility(ies)

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Explosive properties** Not explosive.

**Oxidising properties** Not oxidising.

### 9.2. Other information

**Molecular formula** BaTiO<sub>3</sub>

## 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.

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

<b>Ingestion</b>	Harmful if swallowed. Harmful if swallowed.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if inhaled. Harmful if swallowed. Harmful if swallowed.
<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>	Due to partial or complete lack of data the classification is not possible.
<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.
<b>Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)</b>	
	Not listed.
<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<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.
<b>Other information</b>	This product has no known adverse effect on human health.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<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 Kow)</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>	Not a PBT or vPvB substance or mixture.
<b>12.6. 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.

### 12.7. Additional information

#### Estonia Dangerous substances in groundwater Data

Barium titanate (CAS 12047-27-7)	Barium (Ba) 50 ug/l
	Barium (Ba) 7000 ug/l

#### Estonia Dangerous substances in soil Data

Barium titanate (CAS 12047-27-7)	Barium (Ba) 2000 mg/kg
	Barium (Ba) 500 mg/kg
	Barium (Ba) 750 mg/kg

## 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>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>Hazard No. (ADR)</b>	Not available.
<b>Tunnel restriction code</b>	Not available.
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### 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>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### 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>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not available.

### IATA

<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>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.

**14.6. Special precautions for user** Not available.

#### IMDG

**14.1. UN number** UN1564  
**14.2. UN proper shipping name** Barium compounds, n.o.s.  
**14.3. Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Label(s)** 6.1  
**14.4. Packing group** III  
**14.5. Environmental hazards**  
**Marine pollutant** No.  
**EmS** Not available.  
**14.6. Special precautions for user** Not available.

#### 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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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**  
Not listed.

**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**  
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.

**Other EU regulations****Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

**Other regulations**

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

**National regulations**

Follow national regulation for work with chemical agents.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

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

Not available.

**References**

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

**Training information**

Follow training instructions when handling this material.

**Disclaimer**

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