



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance Barium Chloride (BaCl₂) powder
Identification number 056-004-00-8 (Index number)
Synonyms Barium dichloride
Document number 2GT
Materion Code 2GT
Issue date 19-January-2018
Version number 01

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 Advanced Chemicals Inc.
Address 407 N. 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States
Division Milwaukee
Telephone 414.212.0257
e-mail advancedmaterials@materion.com
Contact person Noreen Atkinson

1.4. Emergency telephone number

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 3	H301 - Toxic if swallowed. H301 - Toxic if swallowed.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.
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Hazard summary

WARNING

Toxic if swallowed. Toxic if swallowed. Harmful if inhaled. Harmful by inhalation. Causes damage to organs. Causes skin irritation. May cause irritation to the respiratory system. May cause drowsiness or dizziness. Dangerous for the environment if discharged into watercourses. Occupational exposure to the substance or mixture may cause adverse health effects. The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

2.2. Label elements

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

Contains: BARIUM CHLORIDE

Hazard pictograms



Signal word Danger

Hazard statements

H301 Toxic if swallowed.
H301 Toxic if swallowed.
H315 Causes skin irritation.
H316 Causes mild skin irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs (respiratory system) through prolonged or repeated exposure
H370 Causes damage to organs ().
H412 Harmful to aquatic life with long lasting effects.

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.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P330 Rinse mouth.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see this label).
P332 + P313 If skin irritation occurs: Get medical advice/attention.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal

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

Supplemental label information

100 % of the mixture consists of component(s) of unknown acute dermal toxicity. 100 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 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. Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
BARIUM CHLORIDE	100	10361-37-2 233-788-1	-	056-004-00-8	#
Classification:	Acute Tox. 3;H301, Skin Irrit. 2;H315, Acute Tox. 4;H332, STOT SE 3;H335, STOT SE 3;H336, STOT SE 1;H370, STOT RE 1;H372, Aquatic Chronic 3;H412				

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.
#: This substance has been assigned Union workplace exposure limit(s).
#: This substance has been assigned Community workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
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 R- and H-phrases is displayed in section 16. The full text for all H-statements 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. Wash contaminated clothing before reuse.
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. Call a POISON CENTRE or doctor/physician if you feel unwell.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. 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. Never give anything by mouth to a victim who is unconscious or is having convulsions. 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	Irritant effects. 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 ₂).
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. Water runoff can cause environmental damage.
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	Immediately evacuate personnel to safe areas. 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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. 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. Absorb in vermiculite, dry sand or earth and place into containers. 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. 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.

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimise dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. 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 thoroughly after handling. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Store in a place accessible by authorised persons only. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials (see Section 10 of the SDS).

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 CHIORIDE (CAS 10361-37-2)	MAK	0,5 mg/m ³	Inhalable fraction.
	STEL	2 mg/m ³	Inhalable fraction.

Belgium. Exposure Limit Values.

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	MAC	0,5 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	Ceiling	2,5 mg/m ³
	TWA	0,5 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TLV	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Finland. Workplace Exposure Limits

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	VME	0,5 mg/m ³

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 CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³	Inhalable fraction.

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

Material	Type	Value	Form
BARIUM CHIORIDE (CAS 10361-37-2)	AGW	0,5 mg/m ³	Inhalable fraction.

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Ireland. Occupational Exposure Limits

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Italy. Occupational Exposure Limits

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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 CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Netherlands. OELs (binding)

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TLV	0,5 mg/m ³

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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 CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

Spain. Occupational Exposure Limits

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value	Form
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³	Total dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
BARIUM CHIORIDE (CAS 10361-37-2)	STEL	4 mg/m ³	Inhalable dust.
	TWA	0,5 mg/m ³	Inhalable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value
BARIUM CHIORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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

Material	Type	Value
BARIUM CHLORIDE (CAS 10361-37-2)	TWA	0,5 mg/m ³

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. Ensure adequate ventilation, especially in confined areas.

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.

- 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 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 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 Contain spills and prevent releases and observe national regulations on emissions. Inform appropriate managerial or supervisory personnel of all environmental 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 962 °C (1763,6 °F)

Initial boiling point and boiling range 1560 °C (2840 °F)

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	< 0,0000001 kPa at 25 °C
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	380 g/l
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	
Density	3,90 g/cm ³ estimated
Molecular formula	Ba-Cl ₂
Molecular weight	208,23 g/mol
Specific gravity	3,9

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	Acids.
10.6. Hazardous decomposition products	Hydrogen chloride.

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	Causes skin irritation.
Eye contact	Due to lack of data the classification is not possible.
Ingestion	Toxic if swallowed.

Symptoms Irritant effects.

11.1. Information on toxicological effects

Acute toxicity	In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Toxic if swallowed. Toxic if swallowed. Harmful if inhaled. Harmful by inhalation. May cause respiratory irritation.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Due to partial or complete lack of data the classification is not possible.
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	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)	
Not listed.	
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Narcotic effects. Causes damage to organs (). Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Causes damage to organs () through prolonged or repeated exposure.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.

Mixture versus substance information No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected. Due to partial or complete lack of data the classification for hazardous to the aquatic environment, acute hazard, is not possible.

Product	Species	Test results	
BARIUM CHLORIDE (CAS 10361-37-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	14,5 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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 Not a PBT or vPvB substance or mixture.

12.6. 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.

12.7. Additional information

Estonia Dangerous substances in groundwater Data

BARIUM CHLORIDE (CAS 10361-37-2)

Barium (Ba) 50 UG/L
Barium (Ba) 7000 UG/L

Estonia Dangerous substances in soil Data

BARIUM CHLORIDE (CAS 10361-37-2)

Barium (Ba) 2000 mg/kg
Barium (Ba) 500 mg/kg
Barium (Ba) 750 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). Avoid discharge into water courses or onto the ground.

Contaminated packaging 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.

EU waste code 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.

Disposal methods/information 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.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

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
Hazard No. (ADR) Not available.
Tunnel restriction code Not available.

14.4. Packing group III

14.5. Environmental hazards No.

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

RID

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 No.

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

ADN

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 No.

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

IATA

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 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.

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

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 (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

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. 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. Additional information is given in the Safety Data Sheet.

National regulations

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations Not available.

Information on evaluation method leading to the classification of mixture Not applicable.

Disclaimer

Additional information is given in the Material Safety Data Sheet. Materion Advanced Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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