



## 1. Identification

<b>Product identifier</b>	<b>Strontium</b>	
<b>Other means of identification</b>		
SDS number	1VG	
Materion Code	1VG	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<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>Telephone</b>	414.212.0290	
<b>E-mail</b>	advancedmaterials@materion.com	
<b>Contact person</b>	Laura Hamilton	
<b>Emergency phone number</b>	Chemtrec	800.424.9300

## 2. Hazard(s) identification

<b>Physical hazards</b>	Substances and mixtures which, in contact with water, emit flammable gases	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger	
<b>Hazard statement</b>	In contact with water releases flammable gases which may ignite spontaneously. Causes skin irritation.	

### Precautionary statement

**Prevention** Do not allow contact with water. Handle under inert gas. Protect from moisture. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.

**Response** If on skin: Wash with plenty of water. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.

**Storage** Store in a dry place. Store in a closed container.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

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

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Strontium		7440-24-6	99.5
Barium		7440-39-3	0.25
Calcium		7440-70-2	0.1
Trace metals			0.15

#### Additional components

Chemical name	Common name and synonyms	CAS number	%
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## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Dry sand.
<b>Unsuitable extinguishing media</b>	Water. Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Do not get water inside container.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	In contact with water releases flammable gases which may ignite spontaneously.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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.
<b>Methods and materials for containment and cleaning up</b>	Do not get water on spilled substance or inside containers.  Large Spills: Stop the flow of material, if this is without risk. Following product recovery, flush area with water.  Small Spills: Clean surface thoroughly to remove residual contamination.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Never allow product to get in contact with water during storage. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a dry place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Barium (CAS 7440-39-3)	PEL	0.5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Barium (CAS 7440-39-3)	TWA	0.5 mg/m <sup>3</sup>

#### US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Components	Type	Value
Barium (CAS 7440-39-3)	PEL	0.5 mg/m <sup>3</sup>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### 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 and safety shower.

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

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Face shield is recommended.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

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.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Solid.

#### Form

Solid.

#### Color

Not available.

### Odor

Not available.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

1385.6 °F (752 °C)

<b>Initial boiling point and boiling range</b>	2534 °F (1390 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0.0000001 kPa (77 °F (25 °C))
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	Sr
<b>Molecular weight</b>	87.62 g/mol
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	In contact with water releases flammable gas.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Exposure to moisture. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
<b>Incompatible materials</b>	Water.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Skin irritation. May cause redness and pain.
<b>Information on toxicological effects</b>	

<b>Acute toxicity</b>	Not known.
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Not listed.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>	
Not listed.	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
Not listed.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** 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.

Components	Species	Test Results
Barium (CAS 7440-39-3)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50 Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	> 500 mg/l, 96 hours

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

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>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.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

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**

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.

**14. Transport information**

**DOT**

<b>UN number</b>	UN3208
<b>UN proper shipping name</b>	Metallic substance, water-reactive, n.o.s. (Strontium)
<b>Transport hazard class(es)</b>	
<b>Class</b>	4.3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	4.3
<b>Packing group</b>	I
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	A7, IB4
<b>Packaging exceptions</b>	None
<b>Packaging non bulk</b>	211
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN3208
<b>UN proper shipping name</b>	Metallic substance, water-reactive, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	4.3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	I
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	4W
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Forbidden
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN3208
<b>UN proper shipping name</b>	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
<b>Transport hazard class(es)</b>	
<b>Class</b>	4.3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	I
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-G, S-N
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### Toxic Substances Control Act (TSCA)

##### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Barium (CAS 7440-39-3)

Listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

Yes

##### Classified hazard categories

In contact with water emits flammable gas  
Skin corrosion or irritation

#### SARA 313 (TRI reporting)

Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Listed. Contains component(s) regulated under the Safe Drinking Water Act.

## US state regulations

### California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Barium (CAS 7440-39-3)

Strontium (CAS 7440-24-6)

## 16. Other information, including date of preparation or last revision

**Issue date** 02-22-2017

**Revision date** 11-02-2021

**Version #** 05

### Disclaimer

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. 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.