

# SAFETY DATA SHEET

## 1. Product and company identification

| I. I roduce and company            |                                                                                                                           |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Product name                       | Strontium Titanate(SrTio3)                                                                                                |
| Other name                         | Strontium titanium oxide (SrTiO3) * Strontium titanium trioxide * STRONTIUM TITANIUM OXIDE                                |
| Manufacturer/Supplier<br>Address   | Materion Advanced Chemicals Inc.<br>407 N. 13th Street<br>1316 W. St. Paul Avenue<br>Milwaukee, WI 53233<br>United States |
| Telephone                          | 414.212.0257                                                                                                              |
| e-mail                             | advancedmaterials@materion.com                                                                                            |
| Contact person                     | Noreen Atkinson                                                                                                           |
| Emergency telephone<br>number      |                                                                                                                           |
| <b>Recommended use and Limitat</b> | ions on use                                                                                                               |
| Recommended use                    | Not available.                                                                                                            |
| SDS number                         | MKE-0074                                                                                                                  |
| 2. Hazards identification          |                                                                                                                           |
| GHS classification                 |                                                                                                                           |
| Physical hazards                   | Not classified.                                                                                                           |
| Health hazards                     | Not classified.                                                                                                           |
| Environmental hazards              | Not classified.                                                                                                           |
| Label elements                     |                                                                                                                           |
| Symbols                            | None.                                                                                                                     |
| Signal word                        | None.                                                                                                                     |
| Hazard statement                   | The substance does not meet the criteria for classification.                                                              |
| Precautionary statement            |                                                                                                                           |
| Prevention                         | Observe good industrial hygiene practices.                                                                                |
| Response                           | Wash hands after handling.                                                                                                |
| Storage                            | Store away from incompatible materials.                                                                                   |
| Disposal                           | Dispose of waste and residues in accordance with local authority requirements.                                            |

### 3. Composition/information on ingredients

| Substance or mixture | Substance                                                                                           |            |                   |
|----------------------|-----------------------------------------------------------------------------------------------------|------------|-------------------|
| Chemical property    | Synonyms                                                                                            | CAS Number | Concentration (%) |
| Strontum titante     | Strontium titanium oxide<br>(SrTiO3) * Strontium titanium<br>trioxide * STRONTIUM<br>TITANIUM OXIDE | 12060-59-2 | 100               |

### 4. First aid measures

| Inhalation                                      | Move to fresh air. Call a physician if symptoms develop or persist.                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Skin contact                                    | Get medical attention if irritation develops and persists.                                                       |
| Eye contact                                     | Rinse with water. Get medical attention if irritation develops and persists.                                     |
| Ingestion                                       | Get medical advice/attention if you feel unwell.                                                                 |
| Potential delayed effects                       | Direct contact with eyes may cause temporary irritation.                                                         |
| Personal protection for<br>first-aid responders | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |
| Notes to physician                              | Treat symptomatically.                                                                                           |

## 5. Fire-fighting measures

### Extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

| Extinguishing media to avoid             | None known.                                                                                |
|------------------------------------------|--------------------------------------------------------------------------------------------|
| HAZCHEM Code Number                      | None.                                                                                      |
| Specific hazards during fire<br>fighting | During fire, gases hazardous to health may be formed.                                      |
| Special fire fighting<br>procedures      | Use water spray to cool unopened containers.                                               |
| Protection of fire-fighters              | Wear suitable protective equipment.                                                        |
| Hazards from combustion<br>products      | None.                                                                                      |
| Specific methods                         | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards                     | No unusual fire or explosion hazards noted.                                                |

## 6. Accidental release measures

| Personal precautions,<br>protective equipment and<br>emergency procedures | Keep unnecessary personnel away. For personal protection, see section 8.                                                                                 |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental precautions                                                 | No special environmental precautions required.                                                                                                           |
| Spill cleanup methods                                                     | Stop the flow of material, if this is without risk. Following product recovery, flush area with water.<br>For waste disposal, see section 13 of the SDS. |

## 7. Handling and storage

| Handling                            |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Precautions                         | Use care in handling/storage.                                                                                   |
| Safe handling advice                | Observe good industrial hygiene practices.                                                                      |
| Prevention of fire and<br>explosion | No specific recommendations.                                                                                    |
| Local and general ventilation       | Provide adequate ventilation.                                                                                   |
| Storage                             |                                                                                                                 |
| Suitable storage<br>conditions      | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). |
| Incompatible materials              | Strong oxidising agents. For further information, please refer to section 10.                                   |
| Safe packaging materials            | Store in original tightly closed container.                                                                     |

## 8. Exposure controls/personal protection

### **Exposure limits**

No exposure limits noted for ingredient(s).

| No exposure inflits hoted for in  | greatent(s).                                                                                                                                                                                                          |  |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Biological limit values           | No biological exposure limits noted for the ingredient(s).                                                                                                                                                            |  |
| Engineering controls              |                                                                                                                                                                                                                       |  |
| Personal protective equipment     |                                                                                                                                                                                                                       |  |
| <b>Respiratory protection</b>     | In case of insufficient ventilation, wear suitable respiratory equipment.                                                                                                                                             |  |
| Hand protection                   | Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.                                                                                                                 |  |
| Skin protection                   | Wear suitable protective clothing.                                                                                                                                                                                    |  |
| Eye/face protection               | Wear safety glasses with side shields (or goggles).                                                                                                                                                                   |  |
| Radioactive or thermal<br>hazards | Not available.                                                                                                                                                                                                        |  |
| Hygiene measures                  | 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

| Solid.          |
|-----------------|
| Solid.          |
| Not available.  |
| Not applicable. |
| Not available.  |
| Not available.  |
|                 |

| Melting point/freezing point                               | Not available.           |
|------------------------------------------------------------|--------------------------|
| Boiling point, initial boiling<br>point, and boiling range | Not available.           |
| Flash point                                                | Not available.           |
| Auto-ignition temperature                                  | Not applicable.          |
| Flammability (solid, gas)                                  | Not available.           |
| Flammability limit - lower<br>(%)                          | Not available.           |
| Flammability limit - upper<br>(%)                          | Not available.           |
| Explosive limit - lower (%)                                | Not available.           |
| Explosive limit – upper<br>(%)                             | Not available.           |
| Vapour pressure                                            | < 0.0000001 kPa at 25 °C |
| Vapour density                                             | Not available.           |
| Evaporation rate                                           | Not available.           |
| Relative density                                           | Not available.           |
| Density                                                    | Not available.           |
| Solubility(ies)                                            |                          |
| Solubility (water)                                         | Not available.           |
| Partition coefficient<br>(n-octanol/water)                 | Not available.           |
| Decomposition temperature                                  | Not available.           |
| Other data                                                 |                          |
| Explosive properties                                       | Not explosive.           |
| Molecular formula                                          | O3Ti                     |
| Oxidizing properties                                       | Not oxidizing.           |

## 10. Stability and reactivity

| Reactivity                            | The product is stable and non-reactive under normal conditions of use, storage and transport. |
|---------------------------------------|-----------------------------------------------------------------------------------------------|
| Stability                             | Material is stable under normal conditions.                                                   |
| Conditions to avoid                   | Contact with incompatible materials.                                                          |
| Incompatible materials                | None known.                                                                                   |
| Hazardous decomposition<br>products   | No hazardous decomposition products are known.                                                |
| Possibility of hazardous<br>reactions | No dangerous reaction known under conditions of normal use.                                   |

## 11. Toxicological information

| Acute toxicity                           | Not available.                                           |  |
|------------------------------------------|----------------------------------------------------------|--|
| Information on likely routes of exposure |                                                          |  |
| Ingestion                                | Due to lack of data the classification is not possible.  |  |
| Inhalation                               | Due to lack of data the classification is not possible.  |  |
| Skin contact                             | Due to lack of data the classification is not possible.  |  |
| Eye contact                              | Due to lack of data the classification is not possible.  |  |
| Routes of exposure                       | Not available.                                           |  |
| Symptoms                                 | Direct contact with eyes may cause temporary irritation. |  |
| Skin corrosion/irritation                | Due to lack of data the classification is not possible.  |  |
| Serious eye damage/eye<br>irritation     | Due to lack of data the classification is not possible.  |  |
| Respiratory sensitiser                   | Due to lack of data the classification is not possible.  |  |
| Skin sensitiser                          | Due to lack of data the classification is not possible.  |  |
| Germ cell mutagenicity                   | Due to lack of data the classification is not possible.  |  |
| Carcinogenicity                          | Due to lack of data the classification is not possible.  |  |
| Toxic to reproduction                    | Due to lack of data the classification is not possible.  |  |
|                                          |                                                          |  |

| Specific target organ toxicity<br>- single exposure   | Due to lack of data the classification is not possible. |
|-------------------------------------------------------|---------------------------------------------------------|
| Specific target organ toxicity<br>- repeated exposure | Due to lack of data the classification is not possible. |
| Aspiration hazard                                     | Due to lack of data the classification is not possible. |
| Chronic effects                                       | Not available.                                          |
| Relevant negative data                                | Not available.                                          |

### 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. |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Persistence and degradability                      | No data is available on the degradability of this product.                                                                                                                                         |
| Bioaccumulation                                    | No data available.                                                                                                                                                                                 |
| Partition coefficient<br>n-octanol/water (log Kow) | Not available.                                                                                                                                                                                     |
| Bioconcentration factor (BCF)                      | Not available.                                                                                                                                                                                     |
| Mobility                                           | No data available.                                                                                                                                                                                 |
| Other hazardous effects                            | 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

| Disposal            | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. |
|---------------------|--------------------------------------------------------------------------------------|
| methods/information |                                                                                      |
| Special precautions | Dispose in accordance with all applicable regulations.                               |

### 14. Transport information

### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

Not available.

### 15. Regulatory information

### 16. Other information

References Issued by Not available.

#### Prepared by

Not available.

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