



# SAFETY DATA SHEET

**MATERION**

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

### 1.1. Product identifier

**Trade name or designation of the mixture** Cd-Sb-Se-Te  
**Synonyms** None.  
**Document number** 1UB  
**Materion Code** 1UB  
**Issue date** 27-September-2016  
**Version number** 02  
**Revision date** 12-January-2018  
**Supersedes date** 27-September-2016

### 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 mixture 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, dermal	Category 3	H311 - Toxic in contact with skin.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Carcinogenicity	Category 1A	H350 - May cause cancer.

##### Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1	H410 - Very toxic to aquatic life with long lasting effects.

#### Hazard summary

Toxic in contact with skin. Harmful if inhaled. May cause cancer. Prolonged exposure may cause chronic effects. 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:** Cadmium Selenide (CdSe), Cadmium telluride

## Hazard pictograms



## Signal word

Danger

## Hazard statements

H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H332 Harmful if inhaled.  
H350 May cause cancer.  
H410 Very toxic to aquatic life with long lasting effects.

## Precautionary statements

### Prevention

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust.  
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/protective clothing/eye protection/face protection.

### Response

P301 + P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
P330 Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P312 Call a POISON CENTRE/doctor if you feel unwell.  
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.  
P391 Collect spillage.

### Storage

Store away from incompatible materials.

### Disposal

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

## Supplemental label information

32,57 % of the mixture consists of component(s) of unknown acute oral toxicity. 32,57 % of the mixture consists of component(s) of unknown acute dermal toxicity.  
For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Cadmium telluride	61,27	1306-25-8 215-149-9	-	048-001-00-5	
<b>Classification:</b>	Acute Tox. 4;H302, Acute Tox. 4;H312, Acute Tox. 4;H332, Carc. 1A;H350, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				1,A
Cadmium Selenide (CdSe)	32,57	1306-24-7 215-148-3	-	-	
<b>Classification:</b>	Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

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

#: This substance has been assigned Union 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.

#### Composition comments

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

## SECTION 4: First aid measures

<b>General information</b>	Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
<b>4.1. Description of first aid measures</b>	
<b>Inhalation</b>	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.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Wash off with soap and water. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>5.2. Special hazards arising from the substance or mixture</b>	During fire, gases hazardous to health may be formed.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Special firefighting procedures</b>	Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	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.
<b>For emergency responders</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
<b>6.2. Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Absorb in vermiculite, dry sand or earth and place into containers. 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. Put material in suitable, covered, labeled containers.

### 6.4. Reference to other sections

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

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimise dust generation and accumulation. Do not taste or swallow. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

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

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

### 7.3. Specific end use(s)

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

Components	Type	Value	Form
Cadmium Selenide (CdSe) (CAS 1306-24-7)	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
Cadmium telluride (CAS 1306-25-8)	STEL	0,3 mg/m <sup>3</sup>	Inhalable fraction.
	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,5 mg/m <sup>3</sup>	Inhalable fraction.

##### Austria. TRK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,06 mg/m <sup>3</sup>	Inhalable fraction.
Cadmium telluride (CAS 1306-25-8)	TWA	0,015 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,06 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	0,015 mg/m <sup>3</sup>	Inhalable fraction.

##### Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	TWA	0,2 mg/m <sup>3</sup>

##### Denmark. Exposure Limit Values

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	TLV	0,005 mg/m <sup>3</sup>

##### Finland. Workplace Exposure Limits

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,3 mg/m <sup>3</sup>

**Finland. Workplace Exposure Limits Components**

Components	Type	Value
Cadmium telluride (CAS 1306-25-8)	STEL	0,3 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	VME	0,05 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) Components**

Components	Type	Value	Form
Cadmium Selenide (CdSe) (CAS 1306-24-7)	TWA	0,02 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value	Form
Cadmium Selenide (CdSe) (CAS 1306-24-7)	AGW	0,05 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,1 mg/m <sup>3</sup>
Cadmium telluride (CAS 1306-25-8)	STEL	0,1 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	Ceiling	0,015 mg/m <sup>3</sup>
	STEL	0,4 mg/m <sup>3</sup>
	TWA	0,1 mg/m <sup>3</sup>
Cadmium telluride (CAS 1306-25-8)	Ceiling	0,015 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium telluride (CAS 1306-25-8)	TLV	0,05 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,3 mg/m <sup>3</sup>
Cadmium telluride (CAS 1306-25-8)	STEL	0,03 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,2 mg/m <sup>3</sup>
Cadmium telluride (CAS 1306-25-8)	TWA	0,05 mg/m <sup>3</sup>

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

Components	Type	Value
Cadmium Selenide (CdSe) (CAS 1306-24-7)	TWA	0,1 mg/m <sup>3</sup>
Cadmium telluride (CAS 1306-25-8)	TWA	0,1 mg/m <sup>3</sup>

**Switzerland. SUVA Grenzwerte am Arbeitsplatz Components**

Components	Type	Value	Form
Cadmium Selenide (CdSe) (CAS 1306-24-7)	STEL	0,16 mg/m <sup>3</sup>	Inhalable dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz  
Components Type**

Components	Type	Value	Form
Cadmium telluride (CAS 1306-25-8)	STEL	0,2 mg/m3	Inhalable dust.

**Biological limit values**

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

Components	Value	Determinant	Specimen	Sampling time
Cadmium Selenide (CdSe) (CAS 1306-24-7)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*
Cadmium telluride (CAS 1306-25-8)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*

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

**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

Components	Value	Determinant	Specimen	Sampling time
Cadmium telluride (CAS 1306-25-8)	10 µg/l	cadmium	Blood	*
	0,01 mg/g	cadmium	Creatinine in urine	*
	0,09 µmol/l	cadmium	Blood	*
	0,01 µmol/mmol	cadmium	Creatinine in urine	*

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

**Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2**

Components	Value	Determinant	Specimen	Sampling time
Cadmium Selenide (CdSe) (CAS 1306-24-7)	4,7 µg/g	Cadmium	Creatinine in urine	*
	7 µg/l	Cadmium	Urine	*
Cadmium telluride (CAS 1306-25-8)	4,7 µg/g	Cadmium	Creatinine in urine	*
	7 µg/l	Cadmium	Urine	*

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

**Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4**

Components	Value	Determinant	Specimen	Sampling time
Cadmium Selenide (CdSe) (CAS 1306-24-7)	5 µg/g	Cadmio	Creatinine in urine	*
	5 µg/l	Cadmio	Blood	*
Cadmium telluride (CAS 1306-25-8)	5 µg/g	Cadmio	Creatinine in urine	*
	5 µg/l	Cadmio	Blood	*

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

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Components	Value	Determinant	Specimen	Sampling time
Cadmium Selenide (CdSe) (CAS 1306-24-7)	150 µg/l	Selen	Serum	*

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

**Recommended monitoring procedures**

Follow standard monitoring procedures.

**Derived no effect levels (DNELs)**

Not available.

**Predicted no effect concentrations (PNECs)**

Not available.

**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

<b>General information</b>	Wear chemical protective equipment that is specifically recommended by the manufacturer. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
- <b>Hand protection</b>	Wear appropriate chemical resistant gloves.
- <b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	Observe any medical surveillance requirements. 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.
<b>Environmental exposure controls</b>	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

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Not available.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<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>Vapour pressure</b>	0,00001 hPa estimated
<b>Vapour 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>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.
<b>9.2. Other information</b>	No relevant additional information available.

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.

- 10.5. Incompatible materials** Strong oxidising agents.
- 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** Toxic in contact with skin.
- Eye contact** Direct contact with eyes may cause temporary irritation.
- Ingestion** Harmful if swallowed.

**Symptoms** Exposure may cause temporary irritation, redness, or discomfort.

### 11.1. Information on toxicological effects

- Acute toxicity** Toxic in contact with skin. Harmful if inhaled. Harmful if swallowed.
- Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.
- 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** May cause cancer.

#### Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Cadmium telluride (CAS 1306-25-8) 1 Carcinogenic to humans.

- Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.
- Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.
- Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.
- 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** Very toxic to aquatic life with long lasting effects.
- 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 available.
- 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

Cadmium telluride (CAS 1306-25-8) Cadmium (Cd) 1 UG/L  
Cadmium (Cd) 10 UG/L

#### Estonia Dangerous substances in soil Data

Cadmium telluride (CAS 1306-25-8) Cadmium (Cd) 1 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).
<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.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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>	UN3288
<b>14.2. UN proper shipping name</b>	Toxic solid, inorganic, n.o.s. (Cadmium Selenide (CdSe))
<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>	60
<b>Tunnel restriction code</b>	Not available.
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	Yes
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**RID**

<b>14.1. UN number</b>	UN3288
<b>14.2. UN proper shipping name</b>	Toxic solid, inorganic, n.o.s. (Cadmium Selenide (CdSe))
<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>	Yes
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**ADN**

<b>14.1. UN number</b>	UN3288
<b>14.2. UN proper shipping name</b>	Toxic Solid, N.o.s. (Cadmium Selenide (CdSe))
<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>	Yes
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IATA**

<b>14.1. UN number</b>	UN3288
------------------------	--------

**14.2. UN proper shipping name** Toxic solid, inorganic, n.o.s. (Cadmium Selenide (CdSe))

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

**Class** 6.1(PGIII)

**Subsidiary risk** -

**14.4. Packing group** III

**14.5. Environmental hazards** Yes

**ERG Code** 6L

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

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.

**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**14.1. UN number** UN3288

**14.2. UN proper shipping name** TOXIC SOLID, INORGANIC, N.O.S. (Cadmium Selenide (CdSe)), MARINE POLLUTANT

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

**Class** 6.1(PGIII)

**Subsidiary risk** -

**14.4. Packing group** III

**14.5. Environmental hazards**

**Marine pollutant** Yes

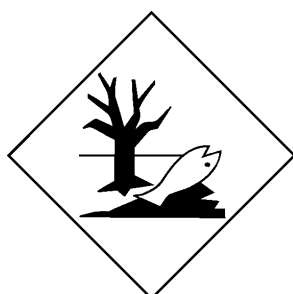
**EmS** F-A, S-A

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

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



**Marine pollutant**



**General information** IMDG Regulated Marine Pollutant.

**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**

Cadmium Selenide (CdSe) (CAS 1306-24-7)

Cadmium telluride (CAS 1306-25-8)

**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**

Cadmium Selenide (CdSe) (CAS 1306-24-7)

Cadmium telluride (CAS 1306-25-8)

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

Not listed.

**Authorisations**

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

Not listed.

**Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

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**

Cadmium telluride (CAS 1306-25-8)

**Other regulations**

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

**National regulations**

Follow national regulation for work with chemical agents. 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**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**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.