



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance	Nickel Telluride
Identification number	028-040-00-4 (Index number)
Synonyms	None.
Document number	1YO
Materion Code	1YO
Issue date	25-April-2016
Version number	02
Revision date	15-January-2018
Supersedes date	25-April-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

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

Health hazards

Skin sensitisation	Category 1
Carcinogenicity (inhalation)	Category 1A
Specific target organ toxicity - repeated exposure	Category 1

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1

Hazard summary	Not available.
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2.2. Label elements

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

Contains:	Nickel Telluride
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Hazard pictograms	None.
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Signal word	None.
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Hazard statements	The substance does not meet the criteria for classification.
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Precautionary statements

Prevention	Not available.
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Response	Not available.
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Storage	Not available.
Disposal	Not available.
Supplemental label information	None.
2.3. Other hazards	None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Nickel Telluride	90 - 100	12142-88-0 235-260-6	-	028-040-00-4	
Classification:	-				

SECTION 4: First aid measures

General information	Not available.
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4.1. Description of first aid measures

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.
4.2. Most important symptoms and effects, both acute and delayed	Not available.
4.3. Indication of any immediate medical attention and special treatment needed	Not available.

SECTION 5: Firefighting measures

General fire hazards	Not available.
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5.1. Extinguishing media

Suitable extinguishing media	Not available.
Unsuitable extinguishing media	Not available.

5.2. Special hazards arising from the substance or mixture	Not available.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Not available.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Not available.
For emergency responders	Not available.

6.2. Environmental precautions	Not available.
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6.3. Methods and material for containment and cleaning up	Not available.
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6.4. Reference to other sections	Not available.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling	Not available.
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7.2. Conditions for safe storage, including any incompatibilities Not available.

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
Nickel Telluride (CAS 12142-88-0)	MAK	0,1 mg/m3	Inhalable fraction.
	STEL	0,5 mg/m3	Inhalable fraction.

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

Material	Type	Value	Form
Nickel Telluride (CAS 12142-88-0)	STEL	0,2 mg/m3	Inhalable droplets.
	TWA	0,05 mg/m3	Inhalable droplets.

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

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	TWA	1 mg/m3

Finland. Workplace Exposure Limits

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	STEL	0,3 mg/m3

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

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	VME	0,1 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	Ceiling	0,1 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	TLV	0,05 mg/m3

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

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	STEL	0,03 mg/m3

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

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	STEL	0,5 mg/m3
	TWA	0,1 mg/m3

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

Material	Type	Value
Nickel Telluride (CAS 12142-88-0)	TWA	0,1 mg/m3

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
Nickel Telluride (CAS 12142-88-0)	STEL	0,2 mg/m3	Inhalable dust.

Biological limit values

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

Material	Value	Determinant	Specimen	Sampling time
Nickel Telluride (CAS 12142-88-0)	0,02 mg/g	Nickel	Creatinine in urine	*
	0,038 µmol/mmol	Nickel	Creatinine in urine	*

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

Recommended monitoring procedures

Derived no effect levels (DNELs)

Predicted no effect concentrations (PNECs)

8.2. Exposure controls

Appropriate engineering controls

Individual protection measures, such as personal protective equipment

General information

Eye/face protection

Skin protection

- Hand protection

- Other

Respiratory protection

Thermal hazards

Hygiene measures

Environmental exposure controls

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Form

Colour

Odour

Odour threshold

pH

Melting point/freezing point

Initial boiling point and boiling range

Flash point

Evaporation rate

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Flammability limit - upper (%)

Vapour pressure

Vapour density

Relative density

Solubility(ies)

Solubility (water)

Partition coefficient (n-octanol/water)

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Molecular formula	NiTe
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SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Not available.
10.3. Possibility of hazardous reactions	Not available.
10.4. Conditions to avoid	Not available.
10.5. Incompatible materials	Not available.
10.6. Hazardous decomposition products	Not available.

SECTION 11: Toxicological information

General information	Not available.
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Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms	Not available.
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11.1. Information on toxicological effects

Acute toxicity	No data available.
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Respiratory sensitisation	Not available.
Skin sensitisation	Not available.
Germ cell mutagenicity	Not available.

Carcinogenicity

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

Nickel Telluride (CAS 12142-88-0)

IARC Monographs. Overall Evaluation of Carcinogenicity

Nickel Telluride (CAS 12142-88-0)	1 Carcinogenic to humans.
Reproductive toxicity	Not available.
Specific target organ toxicity	Not available.
- single exposure	
Specific target organ toxicity	Not available.
- repeated exposure	
Aspiration hazard	Not available.
Mixture versus substance information	Not available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	No toxicity data noted for the ingredient(s).
12.2. Persistence and degradability	Not available.
12.3. Bioaccumulative potential	Not available.

Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.

12.7. Additional information

Estonia Dangerous substances in groundwater Data

Nickel Telluride (CAS 12142-88-0)	Nickel (Ni) 10 UG/L
	Nickel (Ni) 200 UG/L

Estonia Dangerous substances in soil Data

Nickel Telluride (CAS 12142-88-0)	Nickel (Ni) 150 mg/kg
	Nickel (Ni) 50 mg/kg
	Nickel (Ni) 500 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Not available.
Contaminated packaging	Not available.
EU waste code	Not available.

SECTION 14: Transport information

ADR

14.1. UN number	UN3284
14.2. UN proper shipping name	Tellurium compound, n.o.s. (Nickel Telluride)
14.3. Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
Label(s)	6.1
Hazard No. (ADR)	60
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN3284
14.2. UN proper shipping name	Tellurium compound, n.o.s. (Nickel Telluride)
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	Not available.

ADN

14.1. UN number	UN3284
14.2. UN proper shipping name	Tellurium compound, n.o.s. (Nickel Telluride)
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	Not available.

IATA

14.1. UN number	UN3284
14.2. UN proper shipping name	Tellurium compound, n.o.s. (Nickel Telluride)
14.3. Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.
ERG Code	6L
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3284
14.2. UN proper shipping name	TELLURIUM COMPOUND, N.O.S. (Nickel Telluride)
14.3. Transport hazard class(es)	
Class	6.1(PGIII)
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-A
14.6. Special precautions for user	Not available.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Nickel Telluride (CAS 12142-88-0)

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

Nickel Telluride (CAS 12142-88-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Nickel Telluride (CAS 12142-88-0)

Other EU regulations

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

Nickel Telluride (CAS 12142-88-0)

National regulations

Not available.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

List of abbreviations

Not available.

Information on evaluation method leading to the classification of mixture

Not available.