



PRODUCT INFORMATION SHEET

MATERION

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

1.1. Product identifier

Name of the substance Tin Products
Identification number 7440-31-5 (CAS number)
Synonyms None.
Document number 138
Issue date 25-May-2015
Version number 03
Revision date 28-May-2015
Supersedes date 27-May-2015

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 product information sheet

Supplier

Company name Materion Advanced Materials Group
Address 42 Mt. Ebo Road South
Brewster, NY 10509
United States
Division
Telephone Supplier Phone 1+845.279.0900
e-mail Not available.
Contact person Not available.

1.4. Emergency telephone number Chemtrec 1+703.527.3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

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

Hazard summary

Physical hazards Not classified for physical hazards.
Health hazards Not classified for health hazards.
Environmental hazards Not classified for hazards to the environment.
Specific hazards Not available.
Main symptoms Not available.

2.2. Label elements

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

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

Precautionary statements

Prevention Not available.
Response Not available.
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
Tin	99 - 100	7440-31-5 231-141-8	-	-	#
Classification:	DSD: -				
	CLP: -				

SECTION 4: First aid measures

General information Not available.

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.

5.1. Extinguishing media

Suitable extinguishing media DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.

Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture Not available.

5.3. Advice for firefighters

Special protective equipment for firefighters Not available.

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.

6.3. Methods and material for containment and cleaning up Not available.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Not available.

7.2. Conditions for safe storage, including any incompatibilities 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
Tin Products	MAK	2 mg/m ³	Inhalable fraction.
	STEL	4 mg/m ³	Inhalable fraction.
Components	Type	Value	Form
Tin (CAS 7440-31-5)	MAK	2 mg/m ³	Inhalable fraction.
	STEL	4 mg/m ³	Inhalable fraction.

Belgium. Exposure Limit Values.

Material	Type	Value
Tin Products	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

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

Material	Type	Value
Tin Products	TWA	0,1 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	0,1 mg/m ³

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

Material	Type	Value
Tin Products	MAC	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	MAC	2 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Tin Products	Ceiling	4 mg/m ³
	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	Ceiling	4 mg/m ³
	TWA	2 mg/m ³

Finland. Workplace Exposure Limits

Material	Type	Value
Tin Products	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 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
Tin Products	TWA	0,02 mg/m ³	Vapor and aerosol, inhalable fraction.
		0,004 ppm	Vapor and aerosol, inhalable fraction.
Components	Type	Value	Form
Tin (CAS 7440-31-5)	TWA	0,02 mg/m ³	Vapor and aerosol, inhalable fraction.
		0,004 ppm	Vapor and aerosol, inhalable fraction.

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

Material	Type	Value
Tin Products	TWA	2 mg/m ³

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

Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m3

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
Tin Products	STEL	8 mg/m3
	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	STEL	8 mg/m3
	TWA	2 mg/m3

Ireland. Occupational Exposure Limits

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Italy. Occupational Exposure Limits

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
Tin Products	TLV	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TLV	2 mg/m3
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Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Material	Type	Value	Form
Tin Products	TWA	2 mg/m3	Inhalable fraction.
Components	Type	Value	Form

Tin (CAS 7440-31-5)	TWA	2 mg/m3	Inhalable fraction.
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Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Material	Type	Value
Tin Products	TWA	2 mg/m3
Components	Type	Value

Tin (CAS 7440-31-5)	TWA	2 mg/m3
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Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Material	Type	Value
Tin Products	STEL	4 mg/m ³
	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	STEL	4 mg/m ³
	TWA	2 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
Tin Products	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

Spain. Occupational Exposure Limits

Material	Type	Value
Tin Products	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

Sweden. Occupational Exposure Limit Values

Material	Type	Value	Form
Tin Products	TWA	2 mg/m ³	Inhalable dust.
Components	Type	Value	Form
Tin (CAS 7440-31-5)	TWA	2 mg/m ³	Inhalable dust.

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

Material	Type	Value
Tin Products	TWA	2 mg/m ³
Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m ³

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

Recommended monitoring procedures Not available.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

General information Not available.

Eye/face protection Not available.

Skin protection

- **Hand protection** Not available.

- **Other** Not available.

Respiratory protection Not available.

Thermal hazards Not available.

Hygiene measures Not available.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Physical state Solid.

Form Not available.

Colour	Not available.
Odour	Not applicable.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	231,9 °C (449,42 °F)
Initial boiling point and boiling range	2507 °C (4544,6 °F)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
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)	Insoluble
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	630 °C (1166 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	
Density	7,26 g/cm ³ estimated
Dynamic viscosity	1,85 mPa.s
Kinematic viscosity	0,2547 mm ² /s estimated
Molecular formula	Sn
Molecular weight	118,69 g/mol
Specific gravity	7,27

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.
Information on likely routes of exposure	
Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.
Symptoms	Not available.
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	Not available.
Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Not available.
Specific target organ toxicity - repeated exposure	Not available.
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.

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	Not regulated as dangerous goods.
RID	Not regulated as dangerous goods.
ADN	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

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, as amended

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, as amended

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

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.

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

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Not listed.

Other EU regulations

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

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Not listed.

Directive 94/33/EC on the protection of young people at work, as amended

Not listed.

National regulations

Not available.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

None.

Revision information

None.

Training information

Not available.