



# SAFETY DATA SHEET

**MATERION**

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

### 1.1. Product identifier

**Name of the substance** Sodium tungstate  
**Identification number** 13472-45-2 (CAS number)  
**Synonyms** SODIUM TUNGSTATE \* Tungstic acid, Disodium salt  
**Issue date** 18-May-2015  
**Version number** 02  
**Revision date** 14-July-2015  
**Supersedes date** 18-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 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 substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

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

**Classification** Xn;R22, R52/53

The full text for all R-phrases is displayed in section 16.

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

##### Health hazards

Acute toxicity, oral Category 4 H302 - Harmful if swallowed.  
H302 - Harmful if swallowed.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard Category 3 H412 - Harmful to aquatic life with long lasting effects.

#### Hazard summary

**Physical hazards** Not classified for physical hazards.  
**Health hazards** Harmful if swallowed. Occupational exposure to the substance or mixture may cause adverse health effects.  
**Environmental hazards** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**Specific hazards** For additional information on inhalation hazards, see Section 11 of this safety data sheet.

### 2.2. Label elements

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

**Contains:** Sodium tungstate

## Hazard pictograms



### Signal word

Warning

### Hazard statements

H302 Harmful if swallowed.  
H302 Harmful if swallowed.  
H412 Harmful to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.

#### Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P330 Rinse mouth.

#### Storage

Store away from incompatible materials.

#### Disposal

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

### Supplemental label information

Not applicable.

### 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
Sodium tungstate	100	13472-45-2 236-743-4	-	-	
<b>Classification:</b>	<b>DSD:</b>	Xn;R22, R52/53			
	<b>CLP:</b>	Acute Tox. 4;H302, Aquatic Chronic 3;H412			

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

CLP: Regulation No. 1272/2008.  
DSD: Directive 67/548/EEC.  
M: M-factor  
vPvB: very persistent and very bioaccumulative substance.  
PBT: persistent, bioaccumulative and toxic substance.  
#: This substance has been assigned Community workplace exposure limit(s).

#### Composition comments

The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

#### General information

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 4.1. Description of first aid measures

##### Inhalation

If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

##### Skin contact

Get medical attention if irritation develops and persists.

##### Eye contact

Get medical attention if irritation develops and persists.

##### Ingestion

Rinse mouth. Get medical advice/attention if you feel unwell. IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Direct contact with eyes may cause temporary irritation.

**4.3. Indication of any immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

**5.1. Extinguishing media**

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** None known.

**5.2. Special hazards arising from the substance or mixture** During fire, gases hazardous to health may be formed.

**5.3. Advice for firefighters**

**Special protective equipment for firefighters** Wear suitable protective equipment.

**Special firefighting procedures** Use water spray to cool unopened containers. Water runoff can cause environmental damage.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**6.2. Environmental precautions** Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Collect spillage. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimise dust generation and accumulation. Prevent product from entering drains. Following product recovery, flush area with water. Sweep up or vacuum up spillage and collect in suitable container for disposal.

**6.4. Reference to other sections** For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not taste or swallow. Avoid breathing dust. Avoid contact with skin and eyes. Avoid prolonged exposure. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Practice good housekeeping. Avoid release to the environment. Do not empty into drains.

**7.2. Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. 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**

Material	Type	Value	Form
Sodium tungstate (CAS 13472-45-2)	MAK	1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	2 mg/m <sup>3</sup>	Inhalable fraction.

**Belgium. Exposure Limit Values.**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m3
	TWA	1 mg/m3

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

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m3
	TWA	1 mg/m3

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

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	MAC	1 mg/m3
	STEL	5 mg/m3

**Denmark. Exposure Limit Values**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TLV	1 mg/m3

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m3

**Finland. Workplace Exposure Limits**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m3

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

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m3
	TWA	1 mg/m3

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m3

**Ireland. Occupational Exposure Limits**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m3
	TWA	1 mg/m3

**Italy. Occupational Exposure Limits**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m3
	TWA	1 mg/m3

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m3

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

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TLV	1 mg/m3

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m <sup>3</sup>

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

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

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m <sup>3</sup>

**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	Form
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.

**Sweden. Occupational Exposure Limit Values**

Material	Type	Value	Form
Sodium tungstate (CAS 13472-45-2)	TWA	1 mg/m <sup>3</sup>	Total dust.

**UK. EH40 Workplace Exposure Limits (WELs)**

Material	Type	Value
Sodium tungstate (CAS 13472-45-2)	STEL	3 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no-effect level (DNEL)** 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. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

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

**Eye/face protection** Use tight fitting goggles if dust is generated.

**Skin protection**

- **Hand protection** Not normally needed.

- **Other** Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Respiratory protection** Wear respirator with dust filter.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** When using, do not eat, drink or smoke. 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.

**Environmental exposure controls** Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Colour</b>	Not available.
<b>Odour</b>	Not applicable.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	698 °C (1288,4 °F)
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<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>	< 0,0000001 kPa at 25 °C
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Solubility (other)</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 available.
<b>Oxidizing properties</b>	Not available.

### 9.2. Other information

<b>Density</b>	4,18 g/cm <sup>3</sup> estimated
<b>Molecular formula</b>	H <sub>2</sub> -O <sub>4</sub> -W <sub>2</sub> Na
<b>Molecular weight</b>	293,82 g/mol
<b>Specific gravity</b>	4,18

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<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. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
<b>10.5. Incompatible materials</b>	None known.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Prolonged inhalation may be harmful. Inhalation of dusts may cause respiratory irritation.
<b>Skin contact</b>	Due to lack of data the classification is not possible.

<b>Eye contact</b>	Dust in the eyes will cause irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.

#### 11.1. Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

Product	Species	Test results
Sodium tungstate (CAS 13472-45-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Guinea pig	1152 mg/kg
	Mouse	240 mg/kg
	Rabbit	875 mg/kg
	Rat	1190 mg/kg

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

**Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.

**Serious eye damage/eye irritation** Dust in the eyes will cause irritation.

**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** Due to partial or complete lack of data the classification is not possible.

**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** Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test results
Sodium tungstate (CAS 13472-45-2)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia magna)	78,04 - 99,51 mg/l, 48 hours

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

**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.

## 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>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
<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. This material and its container must be disposed of as hazardous waste. 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

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**

Sodium tungstate (CAS 13472-45-2)

**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.

**Other regulations**

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

**National regulations**

Follow national regulation for work with chemical agents.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**

Not available.

**References**

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.

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

R22 Harmful if swallowed.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

H302 Harmful if swallowed.

H412 Harmful to aquatic life with long lasting effects.

**Revision information**

None.

**Training information**

Follow training instructions when handling this material.

**Disclaimer**

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The information in the sheet was written based on the best knowledge and experience currently available.