



# PRODUCT INFORMATION 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** Manganese - Platinum Product

**Synonyms** None.

**Document number** 253

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**Version number** 01

### 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** R52

**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** Harmful to aquatic organisms.

**Specific hazards** Not available.

**Main symptoms** Not available.

### 2.2. Label elements

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

**Contains:** Manganese, Platinum

**Hazard pictograms** None.

**Signal word** None.

**Hazard statements** The mixture 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

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Manganese	50 - < 70	7439-96-5 231-105-1	-	-	
<b>Classification:</b>	<b>DSD:</b> -				
	<b>CLP:</b> -				
Platinum	30 - < 50	7440-06-4 231-116-1	-	-	#
<b>Classification:</b>	<b>DSD:</b> -				
	<b>CLP:</b> -				

## 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.

**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
Manganese (CAS 7439-96-5)	MAK	0,5 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	2 mg/m <sup>3</sup>	Inhalable fraction.
Platinum (CAS 7440-06-4)	MAK	1 mg/m <sup>3</sup>	Inhalable fraction.

##### **Belgium. Exposure Limit Values.**

Components	Type	Value
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>

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

Components	Type	Value
Manganese (CAS 7439-96-5)	STEL	3 mg/m <sup>3</sup>
	TWA	0,3 mg/m <sup>3</sup>
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>

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

Components	Type	Value
Manganese (CAS 7439-96-5)	MAC	0,5 mg/m <sup>3</sup>
Platinum (CAS 7440-06-4)	MAC	1 mg/m <sup>3</sup>

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

Components	Type	Value
Manganese (CAS 7439-96-5)	TWA	5 mg/m <sup>3</sup>

##### **Czech Republic. OELs. Government Decree 361**

Components	Type	Value
Manganese (CAS 7439-96-5)	Ceiling	2 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>
Platinum (CAS 7440-06-4)	Ceiling	1 mg/m <sup>3</sup>
	TWA	0,5 mg/m <sup>3</sup>

##### **Denmark. Exposure Limit Values**

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TLV	0,2 mg/m <sup>3</sup>	Dust.
		0,2 mg/m <sup>3</sup>	Fume.
		0,1 mg/m <sup>3</sup>	Respirable.
Platinum (CAS 7440-06-4)	TLV	1 mg/m <sup>3</sup>	Dust.

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

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	Total dust.
		0,1 mg/m <sup>3</sup>	Respirable dust.

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Finland. Workplace Exposure Limits Components**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	Inhalable dust.
		0,02 mg/m <sup>3</sup>	Respirable.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	VME	1 mg/m <sup>3</sup>	Fume.
Platinum (CAS 7440-06-4)	VME	1 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**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	Inhalable fraction.
		0,02 mg/m <sup>3</sup>	Respirable fraction.

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	AGW	0,5 mg/m <sup>3</sup>	Inhalable fraction.
Platinum (CAS 7440-06-4)	AGW	1 mg/m <sup>3</sup>	Inhalable fraction.

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	
Platinum (CAS 7440-06-4)	TWA	5 mg/m <sup>3</sup>	

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	
Manganese (CAS 7439-96-5)	STEL	20 mg/m <sup>3</sup>	
	TWA	5 mg/m <sup>3</sup>	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	STEL	5 mg/m <sup>3</sup>	Total dust.
	TWA	2,5 mg/m <sup>3</sup>	Total dust.
		1 mg/m <sup>3</sup>	Respirable dust.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	Dust.

**Ireland. Occupational Exposure Limits Components**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	0,2 mg/m <sup>3</sup>	Fume.
		0,2 mg/m <sup>3</sup>	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Italy. Occupational Exposure Limits Components**

<b>Components</b>	<b>Type</b>	<b>Value</b>	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment Components**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Manganese (CAS 7439-96-5)	TWA	0,1 mg/m <sup>3</sup>	Welding fume.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.
		0,5 mg/m <sup>3</sup>	Respirable fraction.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Components	Type	Value	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Components	Type	Value	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Netherlands. OELs (binding)**

Components	Type	Value	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TLV	1 mg/m <sup>3</sup>	Inhalable fraction.
		0,1 mg/m <sup>3</sup>	Respirable fraction.

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

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	Inhalable fraction.
		0,05 mg/m <sup>3</sup>	Respirable fraction.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

Components	Type	Value	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

Components	Type	Value	
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

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

Components	Type	Value	
Manganese (CAS 7439-96-5)	STEL	3 mg/m <sup>3</sup>	
	TWA	0,5 mg/m <sup>3</sup>	

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

Components	Type	Value	
Manganese (CAS 7439-96-5)	TWA	0,5 mg/m <sup>3</sup>	
Platinum (CAS 7440-06-4)	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)**

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Spain. Occupational Exposure Limits**

Components	Type	Value	
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	

**Sweden. Occupational Exposure Limit Values**

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0,2 mg/m <sup>3</sup>	Total dust.
Platinum (CAS 7440-06-4)	TWA	0,1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup>	Respirable dust. Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0,5 mg/m <sup>3</sup>	Inhalable dust.
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>	Inhalable dust.

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

Components	Type	Value
Manganese (CAS 7439-96-5)	TWA	0,5 mg/m <sup>3</sup>
Platinum (CAS 7440-06-4)	TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value
Platinum (CAS 7440-06-4)	TWA	1 mg/m <sup>3</sup>

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

Components	Value	Determinant	Specimen	Sampling time
Manganese (CAS 7439-96-5)	20 µg/l	Mangan	Blood	*

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

**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**

**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** 1246 °C (2274,8 °F) estimated

**Initial boiling point and boiling range** 2061 °C (3741,8 °F) estimated

<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>	0,00001 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>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.
<b>9.2. Other information</b>	
<b>Density</b>	13,04 g/cm3 estimated
<b>Specific gravity</b>	13,04 estimated

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

<b>General information</b>	Not available.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Not available.
<b>Skin contact</b>	Not available.
<b>Eye contact</b>	Not available.
<b>Ingestion</b>	Not available.
<b>Symptoms</b>	Not available.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Respiratory sensitisation</b>	Not available.
<b>Skin sensitisation</b>	Not available.
<b>Germ cell mutagenicity</b>	Not available.
<b>Carcinogenicity</b>	Not available.
<b>Reproductive toxicity</b>	Not available.
<b>Specific target organ toxicity - single exposure</b>	Not available.

<b>Specific target organ toxicity - repeated exposure</b>	Not available.
<b>Aspiration hazard</b>	Not available.
<b>Mixture versus substance information</b>	Not available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	No toxicity data noted for the ingredient(s).
<b>12.2. Persistence and degradability</b>	Not available.
<b>12.3. Bioaccumulative potential</b>	Not available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	Not available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Other adverse effects</b>	Not available.

## SECTION 13: Disposal considerations

<b>13.1. Waste treatment methods</b>	
<b>Residual waste</b>	Not available.
<b>Contaminated packaging</b>	Not available.
<b>EU waste code</b>	Not available.

## SECTION 14: Transport information

<b>ADR</b>	Not regulated as dangerous goods.
<b>RID</b>	Not regulated as dangerous goods.
<b>ADN</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	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** R52 Harmful to aquatic organisms.

**Revision information** None.

**Training information** Not available.