

# SAFETY DATA SHEET

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

### 1.1. Product identifier

Name of the substance	Tungsten Boride (W2B5)
Identification number	234-524-8 (EC number)
Registration number	-
Document number	2PG
Synonyms	None.
Materion Code	2PG
Issue date	21-April-2021
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.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

**Hazard summary** 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

<b>Contains:</b>	Tungsten Boride (W2B5)
<b>Hazard pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	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. The substance does not meet the criteria for classification.

#### Precautionary statements

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	
P308 + P313	IF exposed or concerned: Get medical advice/attention.
<b>Storage</b>	
P405	Store locked up.
<b>Disposal</b>	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**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
Tungsten Boride (W2B5)	100	12007-98-6 234-524-8	-	-	

**Classification:** -

## SECTION 4: First aid measures

**General information** IF exposed or concerned: Get medical advice/attention.

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Move into fresh air and keep at rest. IF exposed or concerned: Get medical advice/attention.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical advice/attention if you feel unwell.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical advice/attention if you feel unwell.

#### 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

Treat symptomatically.

### SECTION 5: Firefighting measures

**General fire hazards** Not available.

#### 5.1. Extinguishing media

**Suitable extinguishing media** Not available.

**Unsuitable extinguishing media** None known.

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

#### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### SECTION 6: Accidental release measures

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

**For non-emergency personnel** Ensure adequate ventilation. Wear appropriate personal protective equipment. Avoid generation and spreading of dust.

**For emergency responders** Not available.

**6.2. Environmental precautions** Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

**6.4. Reference to other sections** Not available.

### SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Wear necessary protective equipment. Provide adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion. Avoid inhalation of dust. Avoid dust formation.

**7.2. Conditions for safe storage, including any incompatibilities** Keep container closed.

**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
Tungsten Boride (W2B5) (CAS 12007-98-6)	MAK	5 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	10 mg/m <sup>3</sup>	Inhalable fraction.

**Belgium. Exposure Limit Values**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

**Denmark. Exposure Limit Values**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TLV	5 mg/m3

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3

**Finland. Workplace Exposure Limits**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Material	Type	Value	Form
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3	Dust.

**Ireland. Occupational Exposure Limits**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

**Italy. Occupational Exposure Limits**

Material	Type	Value	Form
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	3 mg/m3	Respirable fraction.

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TLV	5 mg/m3

**Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3

**Spain. Occupational Exposure Limits**

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Material	Type	Value	Form
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Material	Type	Value	Form
Tungsten Boride (W2B5) (CAS 12007-98-6)	TWA	5 mg/m3	Inhalable fraction.

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

Material	Type	Value
Tungsten Boride (W2B5) (CAS 12007-98-6)	STEL	10 mg/m3
	TWA	5 mg/m3

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

**Recommended monitoring procedures** Not available.

**Derived no effect levels (DNELs)** 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** Handle in accordance with good industrial hygiene and safety practices.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

- **Hand protection** Use protective gloves.

- **Other** Not available.

**Respiratory protection** Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

**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.

<b>Colour</b>	Not available.
<b>Odour</b>	Odourless.
<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>	Not available.
<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 available.
<b>Oxidising properties</b>	Not available.

## 9.2. Other information

<b>Density</b>	15,25 g/cm <sup>3</sup>
<b>Molecular formula</b>	B5W2
<b>Molecular weight</b>	421,73 g/mol

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<b>10.2. Chemical stability</b>	Instability caused by exposure to light.
<b>10.3. Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>10.4. Conditions to avoid</b>	Light.
<b>10.5. Incompatible materials</b>	Strong oxidising agents.
<b>10.6. Hazardous decomposition products</b>	No dangerous reaction known under conditions of normal use.

## SECTION 11: Toxicological information

<b>General information</b>	Not available.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	May be irritating to the skin.
<b>Eye contact</b>	May cause eye irritation.
<b>Ingestion</b>	May cause irritation.
<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.

**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)**

Not listed.

**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.

#### **12.7. Additional information**

##### **Estonia Dangerous substances in soil Data**

Tungsten Boride (W2B5) (CAS 12007-98-6)

Boron (B) 100 mg/kg

Boron (B) 30 mg/kg

Boron (B) 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.

**Disposal methods/information** Dispose of contents/container in accordance with local/regional/national/international regulations.

## **SECTION 14: Transport information**

#### **ADR**

14.1. - 14.6.: Not regulated as dangerous goods.

#### **RID**

14.1. - 14.6.: Not regulated as dangerous goods.

#### **ADN**

14.1. - 14.6.: Not regulated as dangerous goods.

#### **IATA**

14.1. - 14.6.: Not regulated as dangerous goods.

#### **IMDG**

14.1. - 14.6.: 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 and II, as amended**

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), 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**

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.

#### **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**

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.

**Training information** Not available.