



SAFETY DATA SHEET  
According to  
Regulation (EC) No 1907/2006

EC - Safety Data Sheet  
Reference: #1  
Version/Revision: #2  
Printing date: 02/09/2016

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## SAFETY DATA SHEET FOR Syndite Products

### 1. Identification of the article and of the company/undertaking:

#### Identification of the product:

Syndite is a synthetic polycrystalline diamond cutting tool material.

SYNDITE, CTC002, CTB002, CTB010, CTH025, CTM302, CMX850.

#### Use of the product:

Abrasive cutting tool material used in machining non ferrous materials.

#### Company Identification

Company: Element Six Ltd

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Shannon, Co Clare,  
Ireland.

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#### Emergency Number:

**+353 61 471655**

### 2. Hazards Identification

Polycrystalline diamond is not hazardous substances and in the solid massive form does not present a health hazard.

Cobalt may cause sensitization by inhalation and skin contact. Cobalt may cause long-term adverse effects in the aquatic environment.

Exposure to Tungsten Carbide and Cobalt powders dusts, fumes and vapours generated during processing operations can enter the body through inhalation, ingestion and skin contact and can cause / result in respiratory tract and eye irritation. Always use adequate local exhaust ventilation.

### 3. Composition/Information on Ingredients

No	Name	EC Nr. (ELINCS/EINECS)	CAS N°	Concentration range	Classification
<b>Polycrystalline Diamond Layer</b>					
1	Diamond	231-953-2	7782-40-3	85..95%	Not hazardous according to Directive 67/548/EEC
2	Cobalt	231-158-0	7440-48-4	5..15%	R42/43 - R53 Annex I Index# : 027-001-00-9
<b>Cemented Carbide Layer</b>					
1	Tungsten Carbide	235-123-0	12070-12-1	85..90 %	Not hazardous according to Directive 67/548/EEC
2	Cobalt	231-158-0	7440-48-4	10..15%	R42/43 - R53 Annex I Index# : 027-001-00-9

Please refer to the specific product grade and type for the specified chemical composition.

#### 4. First Aid Measures

See also section 8 and 16

**Inhalation:** If high concentrations are inhaled or if worker exhibits trouble breathing, remove to fresh air. As a general rule, in case of doubt or if symptoms persist, always consult a doctor or seek medical attention.

**Eye contact:** Use eye wash for 15 minutes; As a general rule, in case of doubt or if symptoms persist, always consult a doctor or seek medical attention.

**Skin contact:** If exposed wash hands and exposed skin thoroughly with soap and water. As a general rule, in case of doubt or if symptoms persist, always consult a doctor or seek medical attention.

**Ingestion:** Should the situation arise, rinse out the mouth and drink plenty of water. As a general rule, in case of doubt or if symptoms persist, always consult a doctor or seek medical attention.

**Note to physician:** Not available.

#### 5. Fire Fighting Measures

Polycrystalline diamond is not a fire hazard under normal conditions. However dust produced from grinding may be flammable and may pose a fire hazard if allowed to accumulate in the presence of an ignition source.  
Extinguishing media: water, foam, sand, powder or CO<sub>2</sub> as appropriate for surrounding materials

#### 6. Accidental release measures

Avoid dust formation and ventilate area. Wear appropriate personal protective equipment. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Vacuum or carefully scoop up material spillages and place in appropriate containers for disposal. Avoid dispersal or runoff to soil, sewer or surface water.

#### 7. Handling and Storage

**Handling:**  
Avoid contact with eyes, skin and clothing. Product used under normal operating conditions does not require special safety precautions other than the normal safety procedures for handling chemicals. During processing operations, generated dust or fumes may require special consideration. Wash hands after handling, before eating or smoking. Wash exposed skin. Smoking and consumption of food or drink should be restricted from areas where hazardous components may arise. Maintain good housekeeping procedures to avoid dust accumulation during processing. Avoid dust inhalation and direct skin contact. Periodic medical monitoring is recommended for individuals regularly exposed to dust or fumes, with particular attention to any potential sensitisation.

**Storage:**

Keep material in a tightly closed containers and store in a cool dry area. Keep away from sources of ignition.

#### 8. Exposure Controls / Personal Protection

Before processing it is recommended to perform a risk assessment and to use personal protection equipment accordingly.

8.1. Occupational exposure limit values and/or biological limit values

Keep exposure of the following components under surveillance

No	Name	CAS Nr.	Specification	Concentration limits (daily average value)	Short term value	Remarks
1	Cobalt & cobalt compounds (as Co)	7440-48-4	IRL OEL	TWA: 0.1mg/m <sup>3</sup> , 8 hrs	NA	
	Tungsten and compounds (as W)	7440-02-0	IRL OEL	Soluble 1 mg/m <sup>3</sup> , 8 hrs Insoluble 5 mg/m <sup>3</sup> , 8 hrs	3 mg/m <sup>3</sup> , 15min 10mg/m <sup>3</sup> , 15min	
2	Dust	--	IRL OEL	Total Inhalable 10 mg/m <sup>3</sup> , 8 hrs Respirable 4 mg/m <sup>3</sup> , 8 hrs	NA NA	

Note: Hazardous dust / fumes may be generated during processing. National regulations for dust exposure limit values have to be taken into consideration. Consult and observe local authorities for acceptable exposure limit values.

8.2. Exposure controls



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- 8.2.1. Occupational exposure controls  
Use only with adequate ventilation and or local exhaust ventilation.
- 8.2.1.1. Respiratory protection: Use respiratory protective equipment  
(type depends on specific application and material being processes)
- 8.2.1.2. Hand protection: Wear protective gloves  
(type depends on specific application and material being processes)
- 8.2.1.3. Eye protection: Wear protective goggles or face shield  
(type depends on specific application and material being processes)
- 8.2.1.4. Hearing protection: Wear hearing protection if noise in excess of occupational exposure limit.
- 8.2.1.5. Body protection: Wear body protection to protect body from hazardous components during processing.

### 9. Physical and Chemical Properties

- 9.1 Physical state: Massive disc.  
9.2 Colour: Dark grey.  
9.3 Solubility in water: insoluble.

### 10. Stability and Reactivity

#### Stability

Product is stable when used under normal conditions.

#### Reactivity

- 10.1 Conditions to avoid:  
No decomposition in normal use.
- 10.2 Materials to avoid:  
Avoid contact with strong acids and oxidizers.
- 10.3 Hazardous decomposition products:  
No decomposition products known.

### 11. Toxicological Information

#### Acute Toxicity

No potentials known.

### 12. Ecological Information

- 12.1 Ecotoxicity: No potentials known.  
12.2 Mobility: No potentials known.  
12.3 Persistence and degradability: No biodegradable potentials known.  
12.4 Bioaccumulative potential: No potentials known.  
12.5 Other hazardous effects: No effects known.

### 13. Disposal Considerations

- 13.1. Product  
Follow national and regional regulations. Dispose of in a licensed facility and in accordance with appropriate government regulation. May be sold as scrap for reclaim.
- 13.2. Packing  
Follow national and regional regulations.

### 14. Transport Information

The product is not covered by international regulation on the transport of dangerous goods.

### 15. Regulatory Information

#### EU Regulations

#### Hazard Symbol:

TSCA Inventory: The components of this product are all listed in the Toxic Substance Control Act Inventory.

### 16. Other Information

The above information is based on our current standard of knowledge and does not constitute any warranty of conditions of the product. The product must not be used for any purposes other than those specified. It remains the user's responsibility to adhere to existing laws and regulations. The information given in this safety data sheet must be regarded as a description of the safety requirements relating to the product and not a guarantee of its properties.

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