



Reference / Product name: ZR 496 Z  
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## U.S. safety data sheet for coated abrasives

### 1. Identification of the product and of the company/undertaking

#### 1.1 Product identifier

Zirconit ZR 496 Z (49640)

#### 1.2 Use of the product

Coated abrasives for industrial and professional use

#### 1.3 Details of the supplier of the voluntary product information:

Company: Hermes Abrasives, LTD.

Address: 524 Viking Drive  
Virginia Beach, VA 23452

Phone: (757) 486-6623 Fax: (757) 431-2370

E-mail: [www.hermesabrasives.com](http://www.hermesabrasives.com)

#### 1.4 Emergency telephone number:

CHEMTREC (U.S.): (800) 424-9300

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### 2. Hazards identification

#### 2.1. Classification

##### GHS Classification

Carcinogenicity Category 2 H351 Suspected of Causing Cancer

Full text of H statements: See Section 16

#### 2.2. Label elements



Signal word:

**Warning**

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### Hazards statement:

H350: May cause cancer

### Precautionary statement:

P201: Obtain special instructions before use.

P260: Do not breathe dust.

P263: Avoid contact during pregnancy/while nursing.

P273: Avoid release to the environment.

P410: Protect from sunlight

P501: Dispose of contents and container in accordance with local and national regulations.

### 2.3. Other hazards

A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

### 3. Composition/information on ingredients

The product contains the following ingredients which are classified according to Regulation (EC) Nr. 1272/2008 or for which a community occupational exposure limit value exists:

Substance	CAS-N°	Conc. (%)	Classification acc. OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
			Hazard classes/ hazard categories	Hazard statements
Quartz	14808-60-7	<0.1	Carc 1A	
Formaldehyde	50-00-0	<0.1	Carc. 1B Acute Tox.3 Skin Corr. 1B Skin Sens.1	H 350 H 301+H 311+H 331 H 314 H 317 H 341 H 370 H 335
Titanium Dioxide	13463-67-7	<1	Carc 2B	
Cryolite	13775-53-6	5-10	Acute Tox. Cat. 4 STOT rep. ex. Cat. 1 chron. Aqua. Cat. 2	Repro. Tox. H 332 H 372 H 362 H 411
potassium tetrafluoroborate	14075-53-7	3-5	Not classified	--
Aluminium Oxide	1344-28-1	5-20	Not classified	--
Alumina Zirkonia (Zirkon Oxide Mineral)	1314-23-4	10-30	Not classified	--
Calcium Carbonate	1317-65-3 471-34-1	5-10	Not classified	--

(For full text of H-phrases see section 16)



## 4. First aid measures

See also section 8 and 16

### 4.1. Description of first aid measures

Inhalation: Not possible, due to the form of the product  
Eye contact: Not possible, due to the form of the product  
Skin contact: No harmful effects known  
Ingestion: Not likely, due to the form of the product; if necessary contact physician  
Note to physician: Not available.

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

Not known.

### 4.3. Indication of any immediate medical attention and special treatment needed

Not relevant. Treat symptomatically.

## 5. Fire fighting measures

### 5.1. Extinguishing media

Extinguishing media: water, foam, sand, powder or CO<sub>2</sub> as appropriate for surrounding materials

### 5.2. Special hazards arising from the product

Toxic fumes may occur. Use respiratory protective equipment.

### 5.3. Advice for fire fighters

Extinguishing materials should be selected according to the surrounding area.

## 6. Accidental release measures

Not applicable.

## 7. Handling and storage

Follow instructions of grinding machine manufacturers and the relevant national regulations. In addition, observe the safety recommendations of the manufacturer.



## 8. Exposure controls/personal protection

### 8.1. Control parameters

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

Note: Hazardous dust of the workpiece material may be generated during and/or sanding operations. National regulations for dust exposures limit values have to be taken into consideration.

*Occupational exposure limit values and/or biological limit values*

Keep exposure to the following components under surveillance.  
(Observe also the regional official regulations)

substance	CAS-N°	TWA	STEL	Source, remark
Cryolite	13775-53-6	(as F) 2.5 mg/m <sup>3</sup>		ACGIH
Cryolite	13775-53-6	(total dust) 2.5 mg/m <sup>3</sup>		OSHA
Cryolite	13775-53-6	(as F) 2.5 mg/m <sup>3</sup>		OSHA
potassium tetrafluoroborate	14075-53-7			
Formaldehyde	50-00-0	0.1 ppm	0.3 ppm	ACGIH
Formaldehyde	50-00-0	0.75 ppm	2 ppm	OSHA
Formaldehyde	50-00-0	0.016 ppm		NIOSH
Zirconium Compounds	1314-23-4	(as Zr) 5 mg/m <sup>3</sup>	(as Zr) 10 mg/m <sup>3</sup>	ACGIH
Zirconium Compounds	1314-23-4	(as Zr) 5 mg/m <sup>3</sup>		OSHA
Alpha-Alumina	1344-28-1	(total dust) 10 mg/m <sup>3</sup>		OSHA
Alpha-Alumina	1344-28-1	(respirable fraction) 5 mg/m <sup>3</sup>		OSHA
Alpha-Alumina	1344-28-1	1 fiber/cm <sup>3</sup>		CMRG
Alpha-Alumina	1344-28-1	(as Al; respirable fraction) 1 mg/m <sup>3</sup>		ACGIH
Titanium Dioxide	13463-67-6	10 mg/m <sup>3</sup>		ACGIH
Titanium Dioxide	13463-67-6	(respirable dust) 5 mg/m <sup>3</sup>		CMRG
Titanium Dioxide	13463-67-6	(total dust) 15 mg/m <sup>3</sup>		OSHA
Titanium Dioxide	13463-67-6	(respirable dust) 5 mg/m <sup>3</sup>		OSHA
Quartz	14808-60-7	(Respirable dust) 0.05 mg/m <sup>3</sup>		OSHA
Quartz	14808-60-7	(Action level: respirable dust) 0.025 mg/m <sup>3</sup>		OSHA
Quartz	14808-60-7	(respirable dust) 0.025 mg/m <sup>3</sup>		ACGIH
Quartz	14808-60-7	0.05 mg/m <sup>3</sup>		NIOSH
Calcium Carbonate	1317-65-3	(total dust) 10 mg/m <sup>3</sup>		OSHA
Calcium Carbonate	1317-65-3	(respirable dust) 5 mg/m <sup>3</sup>		OSHA
Calcium Carbonate	1317-65-3	(total dust) 10 mg/m <sup>3</sup>		NIOSH
Calcium Carbonate	1317-65-3	(respirable dust) 5 mg/m <sup>3</sup>		NIOSH

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor – Occupational safety and Health Administration

NIOSH: National Institute for Occupational Safety and Health

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit



## 8.2. Exposure controls

8.2.1. Individual protection measures

8.2.1.1. Respiratory protection: Use respiratory protective equipment  
(type depends on specific application and material being ground)

8.2.1.2. Hand protection: Wear protective gloves  
(type depends on specific application and material being ground)

8.2.1.3. Eye protection: Wear protective goggles or face shield  
(type depends on specific application and material being ground)

8.2.1.4. Hearing protection: Use hearing protection  
(type depends on specific application and material being ground)

8.2.1.5. Body protection: Use protective clothing  
(type depends on specific application and material being ground)

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## 9. Physical and chemical properties

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

- |                         |                        |
|-------------------------|------------------------|
| a) Physical state:      | solid                  |
| b) Colour:              | blue                   |
| c) pH:                  | not applicable         |
| d) Melting point:       | not applicable         |
| e) Boiling point:       | not applicable         |
| f) Density:             | not applicable         |
| g) Viscosity:           | not applicable         |
| h) Solubility in water: | not relevant (article) |

### 9.2. Other information

None.

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## 10. Stability and reactivity

### 10.1. Reactivity

Coated abrasives are stable when handled or stored correctly.

### 10.2. Chemical stability

No decomposition in normal use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known.

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#### 10.4. Conditions to avoid

Coated abrasives are stable when handled or stored correctly.

#### 10.5. Incompatible materials

No dangerous reactions known.

#### 10.6. Hazardous decomposition products

At temperatures exceeding 250° C hazardous or toxic decomposition products may be generated.

### 11. Toxicological information

#### 11.1. Information on toxicological effects

**Inhalation:** Dust may cause respiratory irritation.

**Ingestion:** None expected under normal use conditions.

**Skin Contact:** None expect under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions.

**Eye Contact:** Dust may cause eye irritation. Dust particles may cause abrasive injury to the eyes

**Carcinogenicity:** Prolonged and repeated exposure by inhalation to fine dusts of silicon carbide, titanium dioxide, quartz, and/or carbon black, and/or formaldehyde aerosols or vapors is associated with development of cancers of the respiratory system.

#### Acute Toxicity:

substance	CAS-N°	ORAL	INHALATION	DERMAL
Cryolite	13775-53-6	>10000mg/kg (LD50, rat)	>200mg/L (LD50, rat)	>200mg/kg (LD50, rabbit)
Potassium tetrafluoroborate	14075-53-7			
Formaldehyde	50-00-0	100mg/kg (LD50, rat)	0.578mg/L/4h (LD50, rat)	292mg/kg (LD50, rabbit)
Alumina Zirkonia		>5000mg/kg (LD50, rat)	>4.3mg/L/h (LD50, rat)	
Aluminium Oxide	1344-28-1	>5000mg/kg (LD50, rat)	>7.6mg/L/h (LD50, rat)	
Titanium Dioxide	13463-67-6	>10000mg/kg (LD50, rat)	>6.82mg/L/4h (LD50, rat)	>10000mg/kg (LD50, rabbit)
Quartz	14808-60-7			
Calcium Carbonate	1317-65-3	>5000mg/kg (LD50, rat)		



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## 12. Ecological information

### 12.1. Toxicity

No effects known.

### 12.2. Persistence and degradability

No effects known.

### 12.3. Bioaccumulative potential

No potentials known.

### 12.4. Mobility in soil

No potentials known.

### 12.5. Results of PBT and vPvB assessment

Not relevant.

### 12.6. Other adverse effects

No effects known.

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## 13. Disposal considerations

### 13.1. Waste treatment methods

- 13.1. Product  
Follow local, national and regional regulations.
- 13.2. Packing  
Follow local, national and regional regulations.

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## 14. Transport information


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

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## 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the product

#### California Proposition 65:

 **WARNING:** This product contains chemicals (specifically Formaldehyde (CAS No 50-00-0) and Silica (CAS No 14808-60-7)) known to the state of California to cause cancer, lung damage or physical injury. Use of engineering controls to capture or control dust is recommended as stated in the SDS. Wear approved PPE when working with this product. Failure to follow this warning can result in serious injury.

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## 15.2. Chemical safety assessment

Not relevant.

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## 16. Other information

### Changes to the previous versions

See sections 1 to 16.

### Hazard statements referred to in section 2 and 3

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H332	Harmful if inhaled
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects
H350	May cause cancer
H362	May cause harm to breast-fed children
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

The above information is based on our current standard of knowledge and does not constitute any warranty of conditions of the product. The information does not form part of any contractual agreement. It remains the user's responsibility to adhere to existing laws and regulations.

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Issued by: Hermes Abrasive, LTD

Contact: [www.hermesabrasives.com](http://www.hermesabrasives.com)

Appendix: Hermes Abrasives types group B

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