









# SAFETY DATA SHEET

## CRYSTAL 100®(A) (All Colors)

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plication area.  
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Prevent unauthorized access.  
Store in original container.  
Keep in a well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Store in accordance with local regulations.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Quartz (SiO <sub>2</sub> )	14808-60-7	TWA (Respirable fraction)	0.1 mg/m <sup>3</sup>	CA ON OEL
		TWA (Respirable particulates)	0.025 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (respirable dust)	0.1 mg/m <sup>3</sup>	CA QC OEL
		TWA (Respirable)	0.025 mg/m <sup>3</sup> (Silica)	CA BC OEL
		TWA (Respirable fraction)	0.025 mg/m <sup>3</sup> (Silica)	ACGIH
barium sulfate	7727-43-7	TWA	10 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (respirable dust)	5 mg/m <sup>3</sup>	CA QC OEL
		TWAEV (total dust)	10 mg/m <sup>3</sup>	CA QC OEL
		TWA (Total dust)	10 mg/m <sup>3</sup>	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m <sup>3</sup>	CA BC OEL
		TWA (Inhalable fraction)	5 mg/m <sup>3</sup>	ACGIH

**Engineering measures** : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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### Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.  
Wash hands before breaks and immediately after handling the product.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Wash thoroughly after handling.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : various

Odor : ether-like

Odor Threshold : No data available

pH : Not applicable

Melting point/range / Freezing point : No data available

Boiling point/boiling range : No data available

Flash point : 130 °C (266 °F)  
Method: closed cup

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Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: 0.001 hpa (0.001 mmHg)
Relative vapor density	: No data available
Density	: ca. 1.5 g/cm <sup>3</sup> (23 °C (73 °F) ( ))
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20.5 mm <sup>2</sup> /s (40 °C)
Explosive properties	: No data available
Molecular weight	: No data available

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Stable under recommended storage conditions.
Conditions to avoid	: No data available
Incompatible materials	: No data available
No decomposition if stored and applied as directed.	

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

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Not classified based on available information.

### **Ingredients:**

#### **bisphenol-A-(epichlorhydrin) epoxy resin:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 20,000 mg/kg

#### **bisphenol-F-(epichlorhydrin) epoxy resin:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

#### **p-tert-butylphenyl 1-(2,3-epoxy)propyl ether:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3,466 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): 6,000 mg/kg

### **Skin corrosion/irritation**

Causes skin irritation.

### **Serious eye damage/eye irritation**

Causes serious eye irritation.

### **Respiratory or skin sensitization**

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: Not classified based on available information.

### **Germ cell mutagenicity**

Not classified based on available information.

### **Carcinogenicity**

May cause cancer by inhalation.

<b>IARC</b>	Group 1: Carcinogenic to humans
	Quartz (SiO <sub>2</sub> ) 14808-60-7
	Group 2B: Possibly carcinogenic to humans
	titanium dioxide 13463-67-7
	Carbon black 1333-86-4
<b>NTP</b>	Known to be human carcinogen
	Quartz (SiO <sub>2</sub> ) 14808-60-7

### **Reproductive toxicity**

Not classified based on available information.

### **STOT-single exposure**

May cause respiratory irritation.



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### **STOT-repeated exposure**

Causes damage to organs (Lungs) through prolonged or repeated exposure.

### **Aspiration toxicity**

Not classified based on available information.

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### **Ingredients:**

#### **bisphenol-A-(epichlorhydrin) epoxy resin:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.8 mg/l  
aquatic invertebrates Exposure time: 48 h

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Other adverse effects**

#### **Product:**

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.  
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
May be harmful to the environment if released in large quantities.  
Water polluting material.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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### SECTION 14. TRANSPORT INFORMATION

#### Domestic regulation

##### TDG (road/train)

Not regulated as a dangerous good

#### International Regulations

##### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(epoxy resin)  
Class : 9  
Packing group : III  
Labels : Miscellaneous Dangerous Goods  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964

##### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(epoxy resin)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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### SECTION 15. REGULATORY INFORMATION

#### Canadian lists

No substances are subject to a Significant New Activity Notification.

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### SECTION 16. OTHER INFORMATION

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ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
LD50	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	Substances of Very High Concern
vPvB	Very persistent and very bioaccumulative