



MSDS Name: **DEVCON® Brushable Ceramic white**
Manufacturer Name: ITW Devcon
Stock No.: 11770

Components:	
	BRUSHABLE CERAMIC WHITE HARDENER
	BRUSHABLE CERAMIC WHITE RESIN
ITW Performance Polymers (Finished Goods) Product Code : 11770	

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **BRUSHABLE CERAMIC WHITE RESIN**
Manufacturer Name: ITW Devcon
Address: 30 Endicott Street
Danvers, MA 01923
MSDS Revision Date: 10/10/2006
Emergency telephone number (800) 424-9300

HMIS

Health Hazard	2*
Fire Hazard	1
REACTIVITY	1
Personal Protection	X

* Chronic Health Effects:

In the US, call CHEMTREC: (800) 424-9300

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	
Bisphenol A diglycidyl ether resin	25068-38-6	30 - 60 by Weight
Fillers	N/A	30 - 60 by Weight
Titanium dioxide	13463-67-7	1 - 5 by Weight

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SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Potential Sensitizer. Irritant.

Primary Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye Contact: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..

Skin Contact: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion:	Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Health Effects:	Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction
Signs/Symptoms:	Overexposure can cause headaches, dizziness, nausea, and vomiting.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.
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SECTION 4: FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
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SECTION 5: FIRE FIGHTING MEASURES

Auto Ignition Temp :	Not determined.
Flash Point:	>400°F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
Lower Explosive Limit (LEL)	Not determined.
Upper Explosive Limit (UEL)	Not determined.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Unsuitable Media:	Water or foam may cause frothing.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.
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SECTION 7: HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
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SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust
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ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
<u>Titanium dioxide:</u>	
Guideline ACGIH :	ACGIH TLV-TWA 10 mg/m ³
Notes :	Only established PEL and TLV values for the ingredients are listed below.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:	Viscous Liquid.
Odor:	slight odor
Boiling Point:	>500°F (260°C)
Melting / Freezing Point :	Not determined.
Solubility:	negligible
Specific Gravity:	1.1-1.3
pH:	Neutral.
Vapor Density:	>1 (air = 1)
Vapor Pressure:	0.03 mmHg @171°F
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Percent Volatile:	0
VOC Data :	0 g/L
Percent Solids by Weight	100

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SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Heating resin above 300 F in the presence of air may cause slow oxidative decomposition.
Incompatibilities with Other Materials:	Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).
Hazardous Polymerization:	Not reported.

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SECTION 11: TOXICOLOGICAL INFORMATION

Bisphenol A diglycidyl ether resin:

Skin Effects:	Skin - rat LD: >2 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)
Ingestion Effects:	Oral - Rat LD: >5 gm/kg - [Nutritional and Gross Metabolic - other changes] (RTECS)

Titanium dioxide:

Skin Effects:	Skin - Human Standard Draize Test : 300 ug/3D-I - [mild](RTECS)
Inhalation Effects:	Inhalation - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - other changes Biochemical - Metabolism (Intermediary) - effect on inflammation or mediation of inflammation] (RTECS)
Ingestion Effects:	Oral - Rat TDLo - Lowest published toxic dose: 60 gm/kg - [Gastrointestinal - hypermotility, diarrhea Gastrointestinal - other changes] (RTECS)
Carcinogenicity:	IARC: Group 2B: Possibly carcinogenic to humans

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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.
Environmental Fate: No environmental information found for this product.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

RCRA Number : None

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SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.
DOT UN Number: N/A
DOT Hazard Class: Not applicable.
DOT Packing Group: Not applicable.

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SECTION 15: REGULATORY INFORMATION

Bisphenol A diglycidyl ether resin:

TSCA Inventory Status Listed
EC Num : 603-074-00-8

Titanium dioxide:

TSCA Inventory Status Listed
State: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the Pennsylvania State Hazardous Substances List.

Canadian Regulations. WHMIS Hazard Class(es): D2B
All components of this product are on the Canadian Domestic Substances List.

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SECTION 16: ADDITIONAL INFORMATION

HMIS Health Hazard: 2*
HMIS Fire Hazard: 1
HMIS Reactivity: 1
HMIS Personal Protection: x
MSDS Revision Date: 10/10/2006
Disclaimer: "This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment."

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **BRUSHABLE CERAMIC WHITE HARDENER**
Manufacturer Name: ITW Devcon
Address: 30 Endicott Street
Danvers, MA 01923
MSDS Revision Date: 10/10/2006

HMIS

Health Hazard	3*
Fire Hazard	1

REACTIVITY	1
Personal Protection	X

* Chronic Health Effects:

In the US, call CHEMTREC: (800) 424-9300

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	
Diethylenetriamine	111-40-0	30 - 60 by Weight
Bisphenol A	80-05-7	10 - 30 by Weight
Trade secret.	N/A	30 - 60 by Weight

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SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview:	DANGER! Corrosive. Toxic. Potential Sensitizer. Irritant.
Primary Routes of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye Contact:	Corrosive. Will cause eye burns, permanent tissue damage, and blindness.
Skin Contact:	Corrosive causes severe skin burns. may cause permanent skin damage. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation:	May cause severe respiratory system irritation. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion:	Harmful if swallowed. Corrosive to the gastrointestinal tract.
Chronic Health Effects:	Prolonged skin contact causes burns. Repeated or prolonged inhalation may cause toxic effects.
Signs/Symptoms:	Depending on solution concentration, material may be corrosive to skin, mucous membranes and eyes. Vapors may cause respiratory irritation.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

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SECTION 4: FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

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SECTION 5: FIRE FIGHTING MEASURES

Auto Ignition Temp :	Not determined.
Flash Point:	>200°F (93.3°C)
Flash Point Method:	Closed Cup.
Lower Explosive Limit (LEL)	Not determined.

Upper Explosive Limit (UEL)	Not determined.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Unsuitable Media:	Water or foam may cause frothing.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Corrosive. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

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SECTION 7: HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Avoid contact with eyes and skin. Do not reuse containers without proper cleaning or reconditioning.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not store in reactive metal containers. Keep away from acids, oxidizers.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

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SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
Diethylenetriamine:	
Guideline ACGIH :	ACGIH TLV-TWA 1 ppm
Notes :	Only established PEL and TLV values for the ingredients are listed below.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:	Liquid.
Color:	Clear.
Odor:	Ammonia like.
Boiling Point:	>300°F (148.8°C)

Melting / Freezing Point :	Not determined.
Solubility:	miscible.
Specific Gravity:	1.07
pH:	Approximately 11 @ 5 Percent Solution
Vapor Density:	>1 (air = 1)
Vapor Pressure:	Negligible.
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Percent Volatile:	0
VOC Data :	0 g/L
Percent Solids by Weight	100

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SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Product may slowly corrode copper, aluminum, zinc and galvanized surfaces.
Incompatibilities with Other Materials:	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/ oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.
Hazardous Polymerization:	Not reported.

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SECTION 11: TOXICOLOGICAL INFORMATION

Diethylenetriamine:

Skin Effects:	Skin - Rat Standard Draize Test : 500 mg(RTECS) Skin - Rat LD50: 1090 mg/kg - [Details of toxic effects not reported other than lethal dose value](RTECS) Skin - Rodent guinea pig LD50: 170 uL/kg - [Details of toxic effects not reported other than lethal dose value](RTECS)
Inhalation Effects:	Inhalation - Rat LCLo - Lowest published lethal concentration: 70 mg/m3/4H - [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 1080 mg/kg - [oral - convulsions or effect on seizure threshold] (RTECS)

Bisphenol A:

Eye Effect:	Eye - Rabbit Standard Draize Test : 250 ug/24H - [severe](RTECS)
Skin Effects:	Skin - Rat Standard Draize Test : 500 mg/24H - [mild](RTECS) Skin - Rat LD50: 3 mL/kg - [Details of toxic effects not reported other than lethal dose value](RTECS) Skin - Human TCLo - Lowest published toxic concentration: 1 pph - [Skin and Appendages - dermatitis, allergic (after topical exposure)](RTECS)
Inhalation Effects:	Inhalation - Human TCLo - Lowest published toxic concentration: 20 mg/m3/1H - [Behavioral - headache Gastrointestinal - nausea or vomiting] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 1200 mg/kg - [Reproductive - Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated)] (RTECS) Oral - Mouse LD50: 2400 mg/kg - [Autonomic Nervous System - other (direct) parasympathomimetic oral - convulsions or effect on seizure threshold oral - ataxia] (RTECS) Oral - Mouse LD50: 2500 mg/kg - [Details of toxic effects not reported other than lethal dose value] (RTECS)

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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Number :	None

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SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Diethylenetriamine mixture
DOT UN Number: 2079
DOT Hazard Class: 8,
DOT Packing Group: II
DOT Exemption ORM-D Small quantity exemption

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SECTION 15: REGULATORY INFORMATION

Diethylenetriamine:

State: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the Pennsylvania State Hazardous Substances List.

EC Num : 612-058-00-X

Bisphenol A:

State: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the New Jersey State Right to Know List.
Listed in the Pennsylvania State Hazardous Substances List.

EC Num : 604-030-00-0

Canadian Regulations. WHMIS Hazard Class(es): D2B; E; D2A
All components of this product are on the Canadian Domestic Substances List.

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SECTION 16: ADDITIONAL INFORMATION

HMIS Health Hazard: 3*
HMIS Fire Hazard: 1
HMIS Reactivity: 1
HMIS Personal Protection: x
MSDS Revision Date: 10/10/2006
Disclaimer: "This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment."