



MSDS Name **Devcon® DFense Blok™ Quick Patch**  
Manufacturer Name ITW Polymers Adhesives, North America  
Stock No.: 11320  
Kit MSDS Revision Date 12/30/2012

Components	
	Devcon® DFense Blok™ Quick Patch Resin
	Devcon® DFense Blok™ Quick Patch Hardener
ITW Polymers Adhesives, North America Product Code : 11320	

## SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Devcon® DFense Blok™ Quick Patch Resin**  
MSDS Manufacturer Number: 0096  
Manufacturer Name: ITW Polymers Adhesives, North America  
Address: 30 Endicott Street  
Danvers, MA 01923  
General Phone Number: (978) 777-1100  
Emergency Phone Number: (800) 424-9300  
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300  
MSDS Creation Date: 6/16/2011  
MSDS Revision Date: 12/30/2012

HMIS	
Health Hazard	2*
Fire Hazard	1
Reactivity	1
Personal Protection	X

\* Chronic Health Effects

## SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Bauxite	1318-16-7	60 - 100 by weight
Inert material	N/A	1 - 5 by weight
Reaction Product of Epichlorohydrin & Bisphenol A	25085-99-8	10 - 30 by weight
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	10 - 30 by weight

## SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Potential Sensitizer Irritant.  
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.  
Potential Health Effects:  
Eye: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.  
Skin: 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.

## 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

**Ingestion:**

or give oxygen by trained personnel. Seek immediate medical attention. If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**SECTION 5 : FIRE FIGHTING MEASURES**

Flash Point:	>200°F (93.3°C)
Flash Point Method:	Estimated.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
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.
Extinguishing Media:	Use carbon dioxide (CO <sub>2</sub> ) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization. Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization.

**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

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.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

**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.
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.
Hygiene Practices:	Wash thoroughly after handling.

**SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES**

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.
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.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
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.

**EXPOSURE GUIDELINES**

Notes :	Only established PEL and TLV values for the ingredients are listed.
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## SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Solid.
Odor:	mild.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Specific Gravity:	> 1
Solubility:	Not determined.
Vapor Density:	>1 (air = 1)
Vapor Pressure:	Not determined.
Percent Volatile:	0
Evaporation Rate:	Not determined.
pH:	Neutral.
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	>200°F (93.3°C)
Flash Point Method:	Estimated.
Auto Ignition Temperature:	Not determined.
VOC Content:	0 g/L
Percent Solids by Weight	100

## SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
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.
Incompatible Materials:	Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

## SECTION 11 : TOXICOLOGICAL INFORMATION

### Reaction Product of Epichlorohydrin & Bisphenol A :

Ingestion:	Oral - Rat LD50: 11300 uL/kg [Details of toxic effects not reported other than lethal dose value]
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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.

## 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:	Not determined.

## SECTION 14 : TRANSPORT INFORMATION

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

## SECTION 15 : REGULATORY INFORMATION

### Reaction Product of Epichlorohydrin & Bisphenol A :

TSCA Inventory Status:	Listed
Canada DSL:	Listed
<u>Phenol, polymer with formaldehyde, glycidyl ether :</u>	
TSCA Inventory Status:	Listed
Canada DSL:	Listed
Canadian Regulations.	WHMIS Hazard Class(es): D2B

### WHMIS Pictograms



## SECTION 16 : ADDITIONAL INFORMATION

HMIS Fire Hazard: 1  
HMIS Health Hazard: 2\*  
HMIS Reactivity: 1  
HMIS Personal Protection: X  
MSDS Creation Date: 6/16/2011  
MSDS Revision Date: 12/30/2012  
MSDS Revision Notes: Formula Update  
MSDS Author: Actio Corporation

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## SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Devcon® DFense Blok™ Quick Patch Hardener**  
MSDS Manufacturer Number: 0274  
Manufacturer Name: ITW Polymers Adhesives, North America  
Address: 30 Endicott Street  
Danvers, MA 01923  
General Phone Number: (978) 777-1100  
Emergency Phone Number: (800) 424-9300  
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300  
MSDS Creation Date: 6/16/2011  
MSDS Revision Date: 12/30/2012

HMIS	
Health Hazard	2*
Fire Hazard	1
Reactivity	0
Personal Protection	X

\* Chronic Health Effects

## SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Polyamide-Polymercaptan Epoxy Hardener	Proprietary	5 - 10 by weight
Aluminum oxide	1344-28-1	30 - 60 by weight
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	1 - 5 by weight
Non-hazardous ingredients.	N/A	1 - 4 by weight
Inert material	N/A	1 - 5 by weight
Polymercaptan polymer	Proprietary	10 - 30 by weight
Aluminum (III) silicate	1302-76-7	10 - 30 by weight

## SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Irritant. Potential Sensitizer  
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.  
Potential Health Effects:  
Eye: Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.  
Skin: Contact causes severe skin irritation and possible 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.  
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.

## 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.

<b>Skin Contact:</b>	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.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
<b>Other First Aid:</b>	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.

## SECTION 5 : FIRE FIGHTING MEASURES

<b>Flammable Properties:</b>	Class III B.
<b>Flash Point:</b>	>200°F (93.3°C)
<b>Flash Point Method:</b>	Estimated.
<b>Auto Ignition Temperature:</b>	Not determined.
<b>Lower Flammable/Explosive Limit:</b>	Not determined.
<b>Upper Flammable/Explosive Limit:</b>	Not determined.
<b>Fire Fighting Instructions:</b>	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.
<b>Extinguishing Media:</b>	Use carbon dioxide (CO <sub>2</sub> ) or dry chemical when fighting fires involving this material.
<b>Unsuitable Media:</b>	Water or foam may cause frothing.
<b>Protective Equipment:</b>	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

<b>Spill Cleanup Measures:</b>	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.
<b>Personnel Precautions:</b>	Corrosive. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
<b>Environmental Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Other Precautions:</b>	Avoid runoff into storm sewers, ditches, and waterways. Pump or shovel to storage/salvage vessels.

## SECTION 7 : HANDLING and STORAGE

<b>Handling:</b>	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.
<b>Storage:</b>	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.
<b>Special Handling Procedures:</b>	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.
<b>Hygiene Practices:</b>	Wash thoroughly after handling.

## SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

<b>Engineering Controls:</b>	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.
<b>Eye/Face Protection:</b>	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.
<b>Skin Protection Description:</b>	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
<b>Respiratory Protection:</b>	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.
<b>Other Protective:</b>	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

## EXPOSURE GUIDELINES

### Aluminum oxide:

Guideline ACGIH:	10 mg/m3 TLV-TWA: 10 mg/m3
Guideline OSHA:	5 mg/m3 PEL-TWA: 15 mg/m3 Total particulate/dust (T) PEL-TWA: 5 mg/m3 Respirable fraction (R)
Notes :	Only established PEL and TLV values for the ingredients are listed.

## SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Solid.
Color:	Amber.
Odor:	Ammonia like fishy.
Boiling Point:	>212°F (100°C)
Melting Point:	Not determined.
Specific Gravity:	0.99
Solubility:	>30%
Vapor Density:	>1 (air = 1)
Vapor Pressure:	<21 mmHg @70°F
Percent Volatile:	Not determined.
Evaporation Rate:	<1 (butyl acetate = 1)
pH:	alkaline
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	>200°F (93.3°C)
Flash Point Method:	Estimated.
Auto Ignition Temperature:	Not determined.
VOC Content:	Not determined.
Percent Solids by Weight	Not determined.

## SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
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.
Incompatible 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.

## SECTION 11 : TOXICOLOGICAL INFORMATION

### Aluminum oxide:

RTECS Number:	BD1200000
Skin:	Intraperitoneal. - Mouse LD50: >3600 mg/kg [Details of toxic effects not reported other than lethal dose value]

### 2,4,6-tris(dimethylaminomethyl)phenol:

RTECS Number:	SN3500000
Eye:	Eye - Rabbit Standard Draize test.: 50 ug/24H [severe]
Skin:	Oral - Rat LD50 : 1200 mg/kg [Peripheral Nerve and Sensation - Flaccid paralysis without anesthesia (usually neuromuscular blockage) Lungs, Thorax, or Respiration - Dyspnea] Administration onto the skin - Rat LD50 : 1280 mg/kg [Details of toxic effects not reported other than lethal dose value]
Ingestion:	Oral - Rat LD50 : 1200 mg/kg [Peripheral Nerve and Sensation - Flaccid paralysis without anesthesia (usually neuromuscular blockage) Lungs, Thorax, or Respiration - Dyspnea]
RTECS Number:	BD1450000

## SECTION 12 : ECOLOGICAL INFORMATION

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

## 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.
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## SECTION 14 : TRANSPORT INFORMATION

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DOT Shipping Name: Non regulated.  
DOT UN Number: Non regulated.

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## SECTION 15 : REGULATORY INFORMATION

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### Aluminum oxide :

TSCA Inventory Status: Listed  
SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.  
New Jersey: Listed: NJ Hazardous List; Substance Number: 2891  
Massachusetts: Listed  
Pennsylvania: Listed  
Canada DSL: Listed

### 2,4,6-tris(dimethylaminomethyl)phenol :

TSCA Inventory Status: Listed  
Canada DSL: Listed

### Aluminum (III) silicate :

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

### WHMIS Pictograms



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## SECTION 16 : ADDITIONAL INFORMATION

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HMIS Fire Hazard: 1  
HMIS Health Hazard: 2\*  
HMIS Reactivity: 0  
HMIS Personal Protection: X  
MSDS Creation Date: 6/16/2011  
MSDS Revision Date: 12/30/2012  
MSDS Author: Actio Corporation

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