



MSDS Name: **DEVCON® Fasmetal 10 HVAC Repair (Special F)**
 Manufacturer Name: ITW Devcon
 Stock No.: 19770

Components:	
	FASMETAL 10 HVAC REPAIR HARDENER
	FASMETAL 10 HVAC REPAIR RESIN
ITW Performance Polymers (Finished Goods) Product Code : 19770	

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **FASMETAL 10 HVAC REPAIR 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
Inert material	N/A	1 - 5 by Weight
Crystalline silica	14808-60-7	0.1 - 1 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 (CO ₂) 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 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.
Crystalline silica:	
Guideline ACGIH :	ACGIH TLV-TWA 0.025 mg/m3
Guideline OSHA :	OSHA PEL-TWA [10 mg/m3]/[% SiO ₂ + 2]
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:	Paste.
Color:	gray.
Odor:	slight odor
Boiling Point:	>500°F (260°C)
Melting / Freezing Point :	Not determined.
Solubility:	negligible
Specific Gravity:	1.64
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)

Crystalline silica:

Inhalation Effects:	Inhalation - Rat TCl ₀ - 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: 120 gm/kg - [Gastrointestinal - hypermotility, diarrhea Gastrointestinal - other changes] (RTECS)

Carcinogenicity:

IARC: Group 1: Carcinogenic to humans
NTP: Reasonably anticipated to be a human carcinogen

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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

Crystalline silica:

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; D2A
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: **FASMETAL 10 HVAC REPAIR HARDENER**
Manufacturer Name: ITW Devcon
Address: 30 Endicott Street

HMIS

MSDS Revision Date:

Danvers, MA 01923
10/10/2006

Emergency telephone number

(800) 424-9300

Health Hazard	3*
Fire Hazard	1
REACTIVITY	1
Personal Protection	X

* Chronic Health Effects:

In the US, call CHEMTREC: (800) 424-9300[To Top of page](#)**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	
Barium sulfate	7727-43-7	30 - 60 by Weight
Polyamide of tall-oil fatty acid dimers and tetraethylenepentamine	68953-36-6	5 - 10 by Weight
2,4,6-Tris (Dimethylaminomethyl)phenol	90-72-2	1 - 5 by Weight
Dimer/TOFA, reaction products with TETA	68082-29-1	10 - 30 by Weight
Inert material	N/A	1 - 5 by Weight
Non-hazardous ingredients.	N/A	1 - 5 by Weight
Fillers	N/A	1 - 5 by Weight
Triethylenetetramine	112-24-3	1 - 5 by Weight

[To Top of page](#)**SECTION 3: HAZARDS IDENTIFICATION**

Emergency Overview:	WARNING! Harmful. Potential Sensitizer. Irritant.
Primary Routes of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye Contact:	Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.
Skin Contact:	Causes severe skin irritation. 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:	Vapor or mist may cause severe respiratory system irritation. 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 may cause eye watering or discomfort, redness and swelling.
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.

[To Top of page](#)**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:	>200°F (93.3°C)
Flash Point Method:	Tag Closed Cup (TCC)
Lower Explosive Limit (LEL)	Not determined.
Upper Explosive Limit (UEL)	Not determined.
Extinguishing Media:	Use carbon dioxide (CO ₂) 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. 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:	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.

Barium sulfate:

Guideline ACGIH :	ACGIH TLV-TWA 10 mg/m ³
Guideline OSHA :	OSHA PEL-TWA 5 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:	Paste.
Color:	White.
Odor:	mild ammonia like.
Boiling Point:	>450°F (232.2°C)
Melting / Freezing Point :	Not determined.
Solubility:	30-60%
Specific Gravity:	1.73
pH:	10-11 @ 5 Percent Solution
Vapor Density:	>1 (air = 1)
Vapor Pressure:	<0.01 mmHg @68°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.
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

2,4,6-Tris (Dimethylaminomethyl)phenol:

Eye Effect:	Eye - Rabbit Standard Draize Test: 50 ug/24H - [severe](RTECS)
Skin Effects:	Skin - Rat Standard Draize Test: 500 uL/24H - [severe](RTECS) Skin - rat LD50: 1280 mg/kg - [Details of toxic effects not reported other than lethal dose value](RTECS)
Ingestion Effects:	Oral - Rat LD50: 1200 mg/kg - [Peripheral Nerve and Sensation - flaccid paralysis without anesthesia (usually neuromuscular blockage) Lungs, Thorax, or rat - dyspnea] (RTECS)

Triethylenetetramine:

Eye Effect:	Eye - Rabbit Standard Draize Test : 20 mg/24H - [Moderate](RTECS)
Skin Effects:	Skin - Rat Standard Draize Test : 5 mg/24H - [severe](RTECS) Skin - Rat LD50: 805 mg/kg - [Details of toxic effects not reported other than lethal dose value](RTECS)
Ingestion Effects:	Oral - Rat LD50: 2500 mg/kg - [Details of toxic effects not reported other than lethal dose value] (RTECS) Oral - Mouse LD50: 38.5 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: 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

Barium sulfate:

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

2,4,6-Tris (Dimethylaminomethyl)phenol:

EC Num : 603-069-00-0

Triethylenetetramine:

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

EC Num : 612-059-00-5

Canadian Regulations. WHMIS Hazard Class(es): D2B; 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."