MSDS Name	**DEVCON® Wear Guard™ High Load**
Manufacturer Name	ITW Devcon
Stock No.:	11490
Kit MSDS Revision Date	10/12/2010

Components	
	WEAR GUARD (HIGH LOAD) RESIN
	WEAR GUARD (HIGH LOAD) HARDENER
ITW Devcon Product Code : 11490	

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**WEAR GUARD (HIGH LOAD) RESIN**
Manufacturer Name:	ITW Devcon
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
Canutec:	In Canada, call CANUTEC: (613) 996-6666 (call collect)
MSDS Revision Date:	1/15/2011

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
Aluminum (III) silicate	1302-76-7	30 - 60 by weight
Bisphenol A diglycidyl ether resin	25068-38-6	10 - 30 by weight
Fillers	N/A	10 - 30 by weight
Silica, vitreous	60676-86-0	1 - 5 by weight
Trade secret.	N/A	1 - 5 by weight
Iron oxide	1309-37-1	1 - 5 by weight
Inert material	N/A	1 - 5 by weight
Titanium dioxide	13463-67-7	1 - 5 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:	WARNING! Potential Sensitizer. Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	

by weight:	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.
Emergency Overview:	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 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.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	>400°F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
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 (CO2) 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.
Auto Ignition Temperature:	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.
Unsuitable Media:	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

Silica, vitreous:	
Guideline ACGIH:	
Guideline OSHA:	
Iron oxide:	
Guideline ACGIH:	5 mg/m3 TLV-TWA: 5 mg/m3 Respirable fraction (R)
Guideline OSHA:	10 mg/m3 PEL-TWA: 10 mg/m3
Titanium dioxide:	
Guideline ACGIH:	10 mg/m3 TLV-TWA: 10 mg/m3
Notes :	Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Viscous. Liquid..
Odor:	slight odor
Boiling Point:	>500°F (260°C)
Melting Point:	Not determined.
Specific Gravity:	1.1-1.3
Solubility:	negligible
Vapor Density:	>1 (air = 1)
Vapor Pressure:	0.03 mmHg @171°F
Percent Volatile:	0
Evaporation Rate:	<<1 (butyl acetate = 1)
pH:	Neutral.
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	>400°F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
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

RTECS Number:	BD1450000
Bisphenol A diglycidyl ether resin:	
RTECS Number:	SL6480000
Skin:	Administration onto the skin - Rat LD : >2 gm/kg [Nutritional and Gross Metabolic - Other changes]
RTECS Number:	VV7328000
RTECS Number:	NO7400000
Titanium dioxide:	
RTECS Number:	XR2275000
Skin:	Administration onto the skin - Human : 300 ug/3D (Intermittent)
Carcinogenicity:	IARC: Group 2B: Possibly carcinogenic to humans.

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:	None.

SECTION 14 - TRANSPORT INFORMATION

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

SECTION 15 - REGULATORY INFORMATION

Aluminum (III) silicate :

Canada DSL:	Listed

Bisphenol A diglycidyl ether resin :

TSCA Inventory Status:	Listed
Canada DSL:	Listed

Silica, vitreous :

TSCA Inventory Status:	Listed
Massachussetts:	Listed
Canada DSL:	Listed

Iron oxide :

TSCA Inventory Status:	Listed
Massachussetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed

Titanium dioxide :

TSCA Inventory Status:	Listed
Massachussetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed
Canadian Regulations.	WHMIS Hazard Class(es): D2B All components of this product are on the Canadian Domestic Substances List.

SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard:	1
HMIS Reactivity:	2*
HMIS Reactivity:	1
HMIS Personal Protection:	x
MSDS Revision Date:	1/15/2011
MSDS Author:	Actio Corporation
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.

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**WEAR GUARD (HIGH LOAD) HARDENER**
Manufacturer Name:	ITW Devcon
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
Canutec:	In Canada, call CANUTEC: (613) 996-6666 (call collect)
MSDS Revision Date:	10/12/2010

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
Aluminum (III) silicate	N/A	10 - 30 by weight
Silica, vitreous	1302-76-7	30 - 60 by weight
Iron oxide	60676-86-0	1 - 5 by weight
Inert material	1309-37-1	1 - 5 by weight
Trade secret.	N/A	1 - 5 by weight
Crystalline silica	13463-67-7	1 - 5 by weight
Trade secret.	N/A	10 - 30 by weight
Crystalline silica	14808-60-7	10 - 30 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:	WARNING! Potential Sensitizer Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Extinguishing Media:	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 causes burns. Repeated or prolonged inhalation may cause toxic effects.
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.

Handling

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.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	>250°F (121.1°C)
Flash Point Method:	Setaflash Closed Cup
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 (CO2) 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.

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. Corrosive. 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. 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.
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:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
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

Iron oxide:

Guideline ACGIH:	5 mg/m3 TLV-TWA: 5 mg/m3 Respirable fraction (R)
Physical State Appearance:	10 mg/m3 PEL-TWA: 10 mg/m3

Titanium dioxide:

Guideline ACGIH:	10 mg/m3 TLV-TWA: 10 mg/m3

Titanium dioxide:

Guideline ACGIH:	0.025 mg/m3 TLV-TWA: 0.025 mg/m3 Respirable fraction (R)
Guideline OSHA:	[10 mg/m3]/[{% SiO2} + 2]
Notes :	Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Paste..
Color:	White.
Odor:	mild ammonia.
Boiling Point:	>350°F (176.6°C)
Melting Point:	Not determined.
Specific Gravity:	2.25
Solubility:	negligible
Vapor Density:	>1 (air = 1)

Vapor Pressure:	Negligible.
Percent Volatile:	0
Evaporation Rate:	<1 (butyl acetate = 1)
pH:	9.5 @ 5 Percent Solution
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	>250°F (121.1°C)
Flash Point Method:	Setaflash Closed Cup
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.
Ecotoxicity:	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.
SECTION 13 - DISPOSAL CONSIDERATIONS:	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

RTECS Number:	VV7328000
Aluminum (III) silicate:	
RTECS Number:	XR2275000
Skin:	Administration onto the skin - Human : 300 ug/3D (Intermittent)
Carcinogenicity:	IARC: Group 2B: Possibly carcinogenic to humans.
Silica, vitreous:	
RTECS Number:	VV7330000
Carcinogenicity:	IARC: Group 1: Carcinogenic to humans. NTP: Reasonably anticipated to be a human carcinogen.

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

Canada DSL:	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.

SECTION 14 - TRANSPORT INFORMATION

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

SECTION 15 - REGULATORY INFORMATION

Iron oxide :	
Canada DSL:	Listed
Silica, vitreous :	
TSCA Inventory Status:	Listed
Massachussetts:	Listed
Canada DSL:	Listed
Iron oxide :	
TSCA Inventory Status:	Listed
Massachussetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed
Titanium dioxide :	
TSCA Inventory Status:	Listed
Massachussetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed
Crystalline silica :	
TSCA Inventory Status:	Listed
Massachussetts:	Listed
Pennsylvania:	Listed
Canada DSL:	Listed
Canadian Regulations.	WHMIS Hazard Class(es): D2B; D2A All components of this product are on the Canadian Domestic Substances List.

SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard:	1
HMIS Health Hazard:	2*
HMIS Reactivity:	1
HMIS Personal Protection:	x
MSDS Revision Date:	10/12/2010
MSDS Revision Notes:	"DOT classification changed to not regulated based on corrosivity testing."
MSDS Author:	Actio Corporation
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.