



Kit Name **DEVCON® Titanium Putty**
Stock No.: 10770
Manufacturer Name: ITW Polymers Adhesives, North America
Address: 30 Endicott Street
Danvers, MA 01923

Component list	
Component A	TITANIUM PUTTY RESIN
Component B	TITANIUM PUTTY HARDENER
Kit SDS Revision Date	07/30/2015

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: **TITANIUM PUTTY RESIN**
Synonyms: None.
Product Use/Restriction: Not applicable.
Manufacturer Name: ITW
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

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
Silicon	7440-21-3	9.2 - 10.2 by weight
Crystalline silica	14808-60-7	7.8 - 8.6 by weight
Iron	7439-89-6	45.1 - 49.8 by weight
Bisphenol A diglycidyl ether resin	25068-38-6	27.5 - 30.4 by weight
Titanium	7440-32-6	2.8 - 3.1 by weight
Amorphous silicon dioxide	67762-90-7	1.4 - 1.5 by weight
Aluminum flake	7429-90-5	1.1 - 1.2 by weight

SECTION 3 : HAZARDS IDENTIFICATION

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.
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 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.
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

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.
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.
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

Silicon :

Guideline OSHA: PEL-TWA: 15 mg/m³ Total particulate/dust (T)
PEL-TWA: 5 mg/m³ Respirable fraction (R)

Crystalline silica :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ (R)

Aluminum flake :

Guideline ACGIH: TLV-TWA: 1 mg/m³ Respirable fraction (R)
TLV-TWA: 1 mg/m³ Respirable fraction (R)
TLV-TWA: 1 mg/m³ (R)

Guideline OSHA: 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:	Viscous. Liquid.
Odor:	Slight. odor.
Boiling Point:	>500°F (260°C)
Melting Point:	Not determined.
Specific Gravity:	2.5
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

Silicon :

Eye: Administration into the eye - Rabbit Standard Draize test: 3 mg [Mild] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 3160 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Crystalline silica :

Chronic Effects: Long term exposure to crystalline silica may cause silicosis or lung cancer. Although normal application procedures for this product pose minimal hazard as to the release of crystalline silica dust, grinding or sanding cured product may generate some respirable crystalline silica.

Carcinogenicity: Crystalline silica in the form of quartz or cristobalite dust causes cancer of the lung.

Iron :

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Nutritional and Gross Metabolic - Weight loss or decreased weight gain]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 750 mg/kg [Blood - Changes in serum composition (e.g., TP, bilirubin, cholesterol) Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - Transaminases] (RTECS)

Bisphenol A diglycidyl ether resin :

Eye: Administration into the eye - Rabbit Standard Draize test: 100 mg [Mild]
Administration into the eye - Rabbit Standard Draize test: 20 mg/24H [Moderate]
Administration into the eye - Rabbit Standard Draize test: 5 mg/24H [Severe] (RTECS)

Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 mL/kg [Details of toxic effects not reported other than lethal dose value]

Administration onto the skin - Rat LD50 - Lethal dose, 50 percent kill: >1200 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 10700 uL/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 13600 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 13.6 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 11.4 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic - Weight loss or decreased weight gain]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: >1 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 11400 mg/kg [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Dyspnea Nutritional and Gross Metabolic (RTECS)]

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

Silicon :

TSCA Inventory Status: Listed
Canada DSL: Listed

Crystalline silica :

TSCA Inventory Status: Listed
Canada DSL: Listed

Iron :

TSCA Inventory Status: Listed
Canada DSL: Listed

Bisphenol A diglycidyl ether resin :

TSCA Inventory Status: Listed
Canada DSL: Listed

Titanium :

TSCA Inventory Status: Listed
Canada DSL: Listed

Amorphous silicon dioxide :

TSCA Inventory Status: Listed
Canada DSL: Listed

Aluminum flake :

TSCA Inventory Status: Listed
Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
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 Ratings:

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

SDS Revision Date: May 19, 2015
 MSDS Revision Notes: GHS Update
 SDS Format: According to ANSI Z400.1-2004
 MSDS Author: Actio Corporation

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SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: TITANIUM PUTTY HARDENER
Synonyms: None.
Product Use/Restriction: Not applicable.
Manufacturer Name: ITW
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

HMIS	
Health Hazard	3*
Fire Hazard	1
Reactivity	1
Personal Protection	X

* Chronic Health Effects

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Phenol	108-95-2	6.9 - 7.6 by weight
Glass oxide	65997-17-3	6.6 - 7.3 by weight
2-Ethyl-4-Methylimidazole	931-36-2	4.9 - 5.4 by weight
Silicon	7440-21-3	4.2 - 4.7 by weight
Amorphous silicon dioxide	67762-90-7	3.8 - 4.2 by weight
Triethylenetetramine	112-24-3	3.4 - 3.8 by weight
Titanium dioxide	13463-67-7	3.4 - 3.7 by weight
Formaldehyde polymer with phenol and TETA	32610-77-8	24.2 - 26.7 by weight
Iron	7439-89-6	20.7 - 22.9 by weight
Crystalline silica	14808-60-7	14.1 - 15.5 by weight
Titanium	7440-32-6	1.3 - 1.4 by weight

SECTION 3 : HAZARDS IDENTIFICATION

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	Corrosive. Will cause eye burns, permanent tissue damage, and 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. Central nervous 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

Flammable Properties:	Class III B.
Flash Point:	277°F (136.1°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.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

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.
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.
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

Phenol:

Guideline ACGIH:	Skin: Yes. TLV-TWA: 5 ppm
Guideline OSHA:	PEL-TWA: 5 ppm Skin: Yes.

Silicon:

Guideline OSHA:	PEL-TWA: 15 mg/m ³ Total particulate/dust (T) PEL-TWA: 5 mg/m ³ Respirable fraction (R)
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Titanium dioxide:

Guideline ACGIH:	TLV-TWA: 10 mg/m ³
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Crystalline silica:

Guideline ACGIH:	TLV-TWA: 0.025 mg/m ³ (R)
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Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Paste.
Color:	off-white.
Odor:	Mild ammonia like
Boiling Point:	>350°F (176.6°C)
Melting Point:	Not determined.
Specific Gravity:	1.78
Solubility:	APPRECIABLE.
Vapor Density:	Not determined.
Vapor Pressure:	<10.4 mmHg @70°F
Percent Volatile:	0
Evaporation Rate:	Not determined.
pH:	9.5-10.0 @ 5 Percent Solution
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	277°F (136.1°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. 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

Phenol :

Eye: Administration into the eye - Rabbit Standard Draize test: 5 mg [Severe]
Administration into the eye - Rabbit Rinsed with water: 5 mg/30S [Mild] (RTECS)

Skin: Administration onto the skin - Rat LD50 - Lethal dose, 50 percent kill: 669 mg/kg [Behavioral - Tremor Kidney/Ureter/Bladder - Hematuria Skin and Appendages - Cutaneous sensitization, experimental(After topical exposure)]
Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 630 mg/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Rat LD50 - Lethal dose, 50 percent kill: 1500 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Inhalation: Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 316 mg/m3 [Details of toxic effects not reported other than lethal dose value]
Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 316 mg/m3/4H [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 317 mg/kg [Behavioral - Convulsions or effect on seizure threshold]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 512 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Silicon :

Eye: Administration into the eye - Rabbit Standard Draize test: 3 mg [Mild] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 3160 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Triethylenetetramine :

Eye: Administration into the eye - Rabbit Standard Draize test: 49 mg [Severe]
Administration into the eye - Rabbit Standard Draize test: 20 mg/24H [Moderate] (RTECS)

Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 805 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 2500 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Titanium dioxide :

Chronic Effects: Normal application procedures for this product pose minimal hazard as to the release of respirable titanium dioxide dust, but grinding or sanding dried films of this product may yield some respirable titanium dioxide. Although IARC has classified titanium dioxide as possible carcinogenic to human (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products which titanium dioxide is bound to other materials". OSHA does not regulate titanium dioxide as a carcinogen. However, under 29CFR 1910.1200 the SDS must convey the fact that titanium dioxide is a potential carcinogen to rats.

Carcinogenicity: Animal evidence shows that high concentrations of pigment-grade (powdered) and ultrafine titanium dioxide dust caused respiratory tract cancer in rats exposed by inhalation.

Iron :

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Nutritional and Gross Metabolic - Weight loss or decreased weight gain]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 750 mg/kg [Blood - Changes in serum composition (e.g., TP, bilirubin, cholesterol) Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - Transaminases] (RTECS)

Crystalline silica :

Chronic Effects: Long term exposure to crystalline silica may cause silicosis or lung cancer. Although normal application procedures for this product pose minimal hazard as to the release of crystalline silica dust, grinding or sanding cured product may generate some respirable crystalline silica.

Carcinogenicity: Crystalline silica in the form of quartz or cristobalite dust causes cancer of the lung.

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: D002

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Refer to Bill of Lading

DOT UN Number: Refer to Bill of Lading

SECTION 15 : REGULATORY INFORMATION

Phenol :

TSCA Inventory Status: Listed
Section 302 EHS: EPCRA (SARA Title III) Section 302 (40 CFR Part 355) Extremely Hazardous Substances (EHS) Threshold Planning Quantity (TPQ) in pounds.: 500/10,000
Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Canada DSL: Listed

Glass oxide :

TSCA Inventory Status: Listed
Canada DSL: Listed

2-Ethyl-4-Methylimidazole :

TSCA Inventory Status: Listed
Canada DSL: Listed

Silicon :

TSCA Inventory Status: Listed
Canada DSL: Listed

Amorphous silicon dioxide :

TSCA Inventory Status: Listed
Canada DSL: Listed

Triethylenetetramine :

TSCA Inventory Status: Listed
Canada DSL: Listed

Titanium dioxide :

TSCA Inventory Status: Listed
Canada DSL: Listed

Formaldehyde polymer with phenol and TETA :

TSCA Inventory Status: Listed
Canada DSL: Listed

Iron :

TSCA Inventory Status: Listed
Canada DSL: Listed

Crystalline silica :

TSCA Inventory Status: Listed
Canada DSL: Listed

Titanium :

TSCA Inventory Status: Listed
Canada DSL: Listed
Canadian Regulations: WHMIS Hazard Class(es): D2B; E; D2A
WHMIS Pictograms:



SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 3*
HMIS Fire Hazard: 1
HMIS Reactivity: 1
HMIS Personal Protection: X

SDS Revision Date: May 19, 2015
MSDS Revision Notes: GHS Update
SDS Format: According to ANSI Z400.1-2004
MSDS Author: Actio Corporation

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