



W-209 Insulkote

MSDS Number: W209032408

Revision Date: 032408

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NIC Industries, Inc
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White City, OR 97503

Contact:

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2 HAZARDS IDENTIFICATION

Route of Entry: Eyes, Ingestion, Inhalation, Skin
Target Organs: Central Nervous System, Kidneys, Liver, Respiratory
Inhalation: Mists may cause severe irritation to the nose, throat, and lungs; may cause pulmonary edema. It is slightly toxic. Prolonged respiration may cause ulceration or perforation of the nasal septum.
Skin Contact: Contact with liquid or mists may irritate and burn skin. Contact with broken skin may cause deep ulcers or the formation of chrome sores.
Eye Contact: Severe irritation. May cause tissue destruction, permanent damage to the cornea, and blindness. Prolonged or repeated exposure to low level concentrations may cause moderate irritation and conjunctivitis.
Ingestion: Causes burns to mouth, throat, esophagus and stomach with severe chest and stomach pain; difficulty in breathing, nausea, vomiting, bloody diarrhea and convulsions.

HMIS II-ratings (scale 0-4): Health = 3, Fire = 1, Reactivity = 1

HMIS® Rating H3/F1/PH1

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Perc.	Chemical Name
7664382	10-35%	Phosphoric acid
7429905	30-50%	Aluminum
14808607	8-10%	Silica, crystalline
1333820	2-3%	Chromium oxide (CrO3)
1344281	2-3%	Aluminum oxide (Al2O3)
7631869	1-2%	Silica, amorphous
	1.2-6%	Proprietary Formulation



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4 FIRST AID MEASURES

- Inhalation:** If spray mist is inhaled, remove the person from exposure immediately; call a physician. If breathing is irregular or stopped, start resuscitation. Administer oxygen if a qualified operator is available.
- Skin Contact:** Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. If irritation persists, seek medical attention.
- Eye Contact:** Immediately flush with water for at least 15 minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician or ophthalmologist examine the eyes.
- Ingestion:** If material is ingested, seek immediate medical attention. If vomiting occurs spontaneously, keep the head below the hips to prevent aspiration of liquid into the lungs.

5 FIRE FIGHTING MEASURES

- Flash Point:** None
- Flash Point Method:** Setaflash
- LEL:** 100.0%
- Flammability Classification:** Not Flammable

Use a class B extinguisher, inert granular material like dry sand, a class D extinguisher with a low velocity nozzle, or a class D extinguishing agent.

Firemen and emergency responders: wear full turnout gear or Level A equipment including a positive-pressure, self-contained breathing apparatus (SCBA). If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure.

This product contains finely divided aluminum, therefore, the use of an approved Class B or Class D fire extinguisher is recommended.

Never use water. Do not use a water stream. Do not use a halogenated extinguishing agent like halon or carbon tetrachloride. Aluminum particles suspended in air may form an explosive mixture; avoid any disturbance which could cause a dust cloud such as directing a water stream or gas-propelled extinguishing agent into the burning material.

Direct class B extinguishing agents, such as dry chemical agents, above the fire, to rain down on the burning material. Care should be used when applying a Class B extinguishing agent because some agents can accelerate a fire where most of the liquid carrier in the product has been consumed and the aluminum particles have started to burn. If the extinguishing agent is carefully applied, it will be very evident if it accelerates the fire.

If it does, or if the fire has the appearance of metal burning with a bright, whitish glow, so not try to extinguish it. Isolate the fire by ringing it with a dry, inert, granular material (sand/earth), or a Class D extinguishing agent, then let it alone. Allow the material to become cold before disposal since the metal has ignited, it may continue to burn under a crust without flames.

An aluminum fire may react with water to form hydrogen gas. Hydrogen gas is flammable and explosive.



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6 ACCIDENTAL RELEASE MEASURES

Ensure cleanup personnel wear all appropriate Personal Protective Equipment, including respiratory protection. If this product has a numerical flash-point, remove all ignition sources; if the flashpoint is none, this precaution is unnecessary. Keep nonessential personnel away from the contaminated area.

Prevent the material from entering sewers and watercourses by diking or impounding the spilled material. Advise authorities if the product has entered or may enter sewers, watercourses, or extensive land areas.

Ventilate the contaminated area. Use plastic shovels/scoops/rubber squeegees to clean up the spill because of the products acid content. Use the recommended tool type to mix the appropriate sorbent into the spilled material. Use an absorbent like sand, earth, or clay. Collect the saturated sorbent and transfer it into a covered container. Use suitable plastic containers for acid-bearing wastes.

Label the waste container. Dispose of waste in compliance with all Federal, state, regional, and local regulations.

7 HANDLING AND STORAGE

Handling Precautions:

Respiratory Protection:

Respiratory protection may not be needed if the local exhaust is sufficient to maintain levels of hazardous ingredients below occupational exposure limits. If needed, use a NIOSH/MSHA approved respirator equipped with a full facepiece, acid-gas cartridges, and a high-efficiency, particulate air (HEPA) filter.

Do not use respirators beyond their capabilities. For emergencies and unknown concentrations, use supplied-air respiratory protection or a positive-pressure, self-contained breathing apparatus (SCBA).

Ventilation:

Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits.

Local Exhaust:

Local exhaust is recommended to ensure adequate ventilation.

Mechanical (General):

Use explosion-proof equipment and good manufacturing practice.

Special:

Safety showers and eyewash fountains should be readily available to personnel who handle this material. Enforce "No Smoking" rules.

Protective Gloves:

Wear chemical-resistant gloves (butyl rubber or neoprene). Protective gloves should be inspected frequently and discarded when they exhibit cuts, pinholes, or signs of excessive wear.

Eye Protection:

Wear splash goggles. If extra protection is needed, wear a face shield over the splash goggles. Face shields are effective only if worn in addition to splash goggles.

Other:

Protective boots must be worn if there is a chance that processing personnel may walk on



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Storage Requirements:

surfaces on which the product has been spilled. Boots may be: butyl-rubber or other material known by chemical test to be impervious to organic solvents.

Keep container properly closed and properly labeled.
Keep away from heat, sparks, and open flame.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminants below exposure limits. Use of fume hoods or closed booths recommended when product is used in a manner that may generate mist or aerosol.

Protective Equipment:

See Section 7 - Handling and Storage for in depth description of required PPE

Exposure Guidelines/Other:

See section 11 for exposure guidelines

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Viscous, metallic-gray liquid dispersion

Physical State:

Liquid

Boiling Point:

110 deg C to 160 deg C

Odor:

Freezing/Melting Pt.:

pH:

3.0

Solubility:

Vapor Pressure:

Spec Grav./Density:

1.48

Vapor Density:

Lighter than air

Evap. Rate:

Slower than ether

Viscosity:

13-15 seconds (Zahn cup)

Percent Volatile:

58.7%

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STABILITY AND REACTIVITY

Stability:

Stable

Conditions to avoid:

High temperatures, interaction with incompatible materials

Materials to avoid (incompatibility):

Reactive metals, alkaline metals, organic materials, halogenated hydrocarbons, strong oxidizing agents, acids, and alkali/base/caustic solutions.

Hazardous Decomposition products:

Oxides of phosphorous, oxides of carbon, oxides of chromium, oxides of aluminum

Hazardous Polymerization:

Will not occur



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11 TOXICOLOGICAL INFORMATION

Chromium trioxide is listed and/or classified as a carcinogen or potential carcinogen by NTP, IARC, OSHA, or ACGIH.

NTP Human Carcinogen
IARC Human Carcinogen (Group 1)
ACGIH A1-Confirmed Human Carcinogen.

OSHA's Chromium VI Standard, effective November 27, 2006, sets the action level for airborne Cr VI at 2.5 micrograms/m³ calculated as an 8-hour time-weighted average (TWA). The permissible exposure limit (PEL) is 5 micrograms/m³.

The occupational exposure limit for the hazardous components of this product are listed below.

Component	OSHA PEL	ACGIH TLV
Phosphoric acid 7664-38-2	TWA= 1mg/m ³	TWA = 1 mg/m ³ STEL= 3 mg/m ³
Chromium Trioxide 1333-82-0	TWA=5 micrograms/m ³	TWA=0.01 mg/m ³
Aluminum Phosphate 7784-30-7	Not established	Not established
Aluminum Metal	TWA=15 mg/m ³	TWA= 10 mg/m ³

12 ECOLOGICAL INFORMATION

Avoid release to surface waters and waste treatment systems. This material is hazardous to aquatic organisms.

13 DISPOSAL CONSIDERATIONS

Pretreatment may be necessary or desirable before introducing this product into a "waste stream." Pretreatments include reducing the hexavalent chromium to tri-valent chromium and/or neutralizing the pH.

If you wish to dispose of this product "as is," insure your company's hazardous waste disposal firm has the capability to treat the waste and the necessary permits to accept the waste.

The chemicals necessary to reduce hexavalent chromium are sodium bisulfite or sodium sulfite and ferrous sulfate or ferrous chloride. The chemicals necessary to adjust the pH are sodium bicarbonate, soda ash, or lime.

Reduce the hexavalent chromium to trivalent chromium by adding, in equal portions, one of the two pairs of reducing agents listed above. Doing so will cause the color of the liquid carrier of this product to change from its characteristic yellow/orange to a pale green. The reduced chromium may then be precipitated as chromic oxide by neutralizing to a pH of 9.5 using one of the three neutralizing chemicals noted above. Filter to remove the solids. Neutralize the remaining liquid to a pH of 7. The solids residue and treated liquid may now be disposed of as hazardous waste and will be classified by one or more of the U.S. EPA Hazardous Waste Numbers which appear at the end of this section.

As the US EPA, state, regional, and/or other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste, it is incumbent upon you, the waste generator, to learn of and satisfy all the requirements which affect you.



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Dispose of the hazardous waste at an approved disposal site or facility. Insure conformity to all applicable hazardous waste disposal regulations.

The US EPA Hazardous Waste Numbers which follow are applicable to the unadulterated product and/or the solids residue and/or the treated liquid if the product enters the "waste stream." Refer to Title 40 of the Code of Federal Regulations, Part 261 (40 CFR 261). This part of the code identifies solid wastes which are subject to regulation under various sections of the Code and which are subject to the notification requirements of Section 3010 of the Resource Conservation and Recovery Act (RCRA).

D002 and D007

14 TRANSPORT INFORMATION

DOT Class: Corrosive (8) #8

US DOT:

Proper Shipping Name: Chromic Acid Solution

Hazard Class: 8

UN Number: 1755

Packing Group: III

IATA:

Proper Shipping Name: Chromic Acid Solution

Hazard Class: 8

UN Number: 1755

Packing Group: III

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15 REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*Phosphoric acid (7664382 10-35%) CERCLA, CSWHS, EPCRAWPC, MASS, NJHS, OSHAWAC, SARA313, TXAIR

*Aluminum (7429905 30-50%) EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TXAIR

*silica, crystalline (14808607 8-10%) MASS, NRC, OSHAWAC, PA, TXAIR

*Chromium oxide (CrO3) (1333820 2-3%) MASS, PA

*Aluminum oxide (Al2O3) (1344281 2-3%) MASS, NJHS, OSHAWAC, PA, SARA313, TXAIR

*silica, amorphous (7631869 1-2%) MASS, NJHS, PA

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List

OSHA = OSHA workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances



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TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance
CSWS = Clean Water Act Hazardous substances
EPCRAWPC = EPCRA Water Priority Chemicals
NJHS = NJ Right-to-Know Hazardous Substances
SARA313 = SARA 313 Title III Toxic Chemicals

NRC = Nationally Recognized Carcinogens

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OTHER INFORMATION

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to all your employees.

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END OF MSDS DOCUMENT