1. PRODUCT AND COMPANY IDENTIFICATION

Product name	PES 182 Anti Abrasion Beaded Wearing Compound - Resin/Side A
Version #	3.0
Revision date	April 11, 2018
Company information	Plant Equipment & Services, Inc. 5401 Highway 21 West Bryan, TX 77803 US 979-779-8700 www.pes-solutions.com
Emergency	Chemtrec (800) 424-9300 International (703) 527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS #	Percent
Kaolin	1332-58-7	< 60
Aluminum oxide	1344-28-1	< 20
Bisphenol-A-(Epichlorohydrin) polymer	25068-38-6	< 10
Iron oxide	1309-37-1	< 10
Silica, fused	60676-86-0	< 10
Titanium dioxide	13463-67-7	< 10
Non-hazardous and other components below reportable levels		> 10

3. HAZARDS IDENTIFICATION

Emergency overview	May cause sensitization by skin contact. Irritating to skin. Harmful in contact with eyes. Danger of serious damage to health by prolonged exposure. May cause cancer. May cause breathing disorders and lung damage.
Potential short term health effects	
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury.
Skin	Components of the product may be absorbed into the body through the skin. Irritating to skin. May cause sensitization by skin contact.
Inhalation	May cause breathing disorders and lung damage.
Ingestion	Do not ingest.
Target organs	Eyes. Lungs. Respiratory system. Skin. Stomach.

4. FIRST AID MEASURES

First aid	
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately. Get medical attention if irritation develops or persists.
Skin contact	Get medical attention immediately. Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Wash off immediately with plenty of water. If skin irritation persists, call a physician.
Inhalation	Get medical attention immediately. Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, give oxygen. Get medical attention, if needed.
Ingestion	If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim ingested the substance. Drink plenty of water.
Notes to physician	Symptoms may be delayed.
General advice	Keep victim warm. Keep victim under observation. In case of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Take off contaminated clothing and shoes immediately.

5. FIRE FIGHTING MEASURES

General fire hazards	Not a fire hazard.
Suitable extinguishing media	Small Fires: Dry chemical, CO2, water spray or regular foam. Large Fires: Water spray, fog or regular foam.

6. ACCIDENTAL RELEASE MEASURES

Evacuation procedures	Stay upwind. Keep out of low areas. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
Containment procedures	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Personal precautions	Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dike far ahead of liquid spill for later disposal. Never return spills in original containers for re-use.

7. HANDLING AND STORAGE

Handling	Do not breathe gas/fumes/vapor/spray. Wear personal protective equipment. Avoid contact with eyes. Do not get this material in contact with skin or eyes. Handle and open container with care. Surfaces may become slippery after spillage.
Storage	Keep container tightly closed. Keep out of the reach of children. Use care in handling/storage. Do not freeze.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Aluminum oxide	1344-28-1	10 Mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica)
Iron oxide	1309-37-1	5 Mg/m3 TWA (dust and fume, as Fe)
Kaolin	1332-58-7	2 Mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica)
Silica, fused	60676-86-0	0.1 Mg/m3 TWA (respirable fraction)
Titanium dioxide	13463-67-7	10 Mg/m3 TWA
ACGIH - Threshold Limits Values - TLV Basis - Critical Effects		
Aluminum oxide	1344-28-1	lung; irritation
Iron oxide	1309-37-1	Pneumoconiosis (dust and fume, as Fe)
Kaolin	1332-58-7	pneumoconiosis
Silica, fused	60676-86-0	lung fibrosis
Titanium dioxide	13463-67-7	lung
OSHA - Final PELs - Time Weighted Averages (TWAs)		
Aluminum oxide	1344-28-1	15 Mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Iron oxide	1309-37-1	10 Mg/m3 TWA
Kaolin	1332-58-7	15 Mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Titanium dioxide	13463-67-7	15 Mg/m3 TWA (total dust)

Personal protective equipment

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.
Hand protection	Protective gloves.
Eye protection	Wear chemical goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.
General	Avoid contact with the skin and the eyes. Wear suitable protective equipment.
Engineering measures to reduce exposure	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Hygiene measures	Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice for diagnostics. Avoid contact with the skin and the eyes. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL & CHEMICAL PROPERTIES

Density	19.2641 lb/gal
Form	Liquid.
Specific gravity	2.3117

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Stability	Stable at normal conditions. No hazards to be especially mentioned.
Incompatibility	Peroxides.

11. TOXICOLOGICAL INFORMATION

Local effects: Risk of serious damage to eyes. Components of the product may be absorbed into the body through the skin. Irritating to skin. May cause sensitization by skin contact.

Component analysis - LD50

NIOSH - Selected LD50s and LC50s

Bisphenol-A-(Epichlorohydrin) polymer	25068-38-6	Oral LD50 Rat: 11400 mg/kg; Oral LD50 Mouse: 15600 mg/kg

Sensitization: May cause sensitization by skin contact.

Carcinogenicity: Cancer hazard.

ACGIH - Threshold Limits Values - Carcinogens

Aluminum oxide	1344-28-1	A4 - Not Classifiable as a Human Carcinogen
Iron oxide	1309-37-1	A4 - Not Classifiable as a Human Carcinogen (dust and fume, as Fe)
Kaolin	1332-58-7	A4 - Not Classifiable as a Human Carcinogen
Titanium dioxide	13463-67-7	A4 - Not Classifiable as a Human Carcinogen

Chronic toxicity: Prolonged or repeated exposure may cause lung injury.

Routes of exposure: Skin contact.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Components of this product have been identified as having potential environmental concerns.

13. DISPOSAL CONSIDERATIONS

Disposal instructions: Dispose in accordance with all applicable regulations. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. TRANSPORTATION INFORMATION

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

International Air Transport Association (IATA) Requirements

Not regulated as dangerous goods.

International Maritime Dangerous Goods (IMDG) Code Requirements

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

US federal regulations

CERCLA/SARA - Section 313 - Emission Reporting

Aluminum oxide	1344-28-1	1.0 % de minimis concentration (fibrous form only)

Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Aluminum oxide	1344-28-1	215-691-6
Iron oxide	1309-37-1	215-168-2
Silica, fused	60676-86-0	262-373-8
Titanium dioxide	13463-67-7	236-675-5

Inventory - United States - Section 8(b) Inventory (TSCA)

Aluminum oxide	1344-28-1	Present
Bisphenol-A-(Epichlorohydrin) polymer	25068-38-6	XU
Iron oxide	1309-37-1	Present
Kaolin	1332-58-7	XU
Silica, fused	60676-86-0	Present
Titanium dioxide	13463-67-7	Present

Occupational safety and health administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

CERCLA (superfund) reportable quantity

None

Superfund amendments and reauthorization act of 1986 (SARA)

Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
NFPA ratings	Health: 2 Flammability: 0 Instability: 0

International regulations

Canada - 2004 NPRI (National Pollutant Release Inventory)

Aluminum oxide	1344-28-1	Part 1, Group 1 Substance (fibrous form)

Canada - WHMIS - Ingredient Disclosure List

Aluminum oxide	1344-28-1	1 % (English Item 44, French Item 195)
Iron oxide	1309-37-1	1 % (English Item 762, French Item 1327)
Silica, fused	60676-86-0	1 % (English Item 1404, French Item 1487)

State regulations

Massachusetts - Right To Know List

Aluminum oxide	1344-28-1	Present
Iron oxide	1309-37-1	Present
Kaolin	1332-58-7	Present
Silica, fused	60676-86-0	Present
Titanium dioxide	13463-67-7	Present
New Jersey - Right to Know Hazardous Substance List		
Aluminum oxide	1344-28-1	sn 2891
Iron oxide Silica, fused Titanium dioxide	1309-37-1 60676-86-0 13463-67-7	sn 1036 sn 1656 sn 1861
Pennsylvania - RTK (Right to Know) List		
Aluminum oxide	1344-28-1	Environmental hazard
Iron oxide	1309-37-1	Present
Kaolin	1332-58-7	Present
Titanium dioxide	13463-67-7	Present

16. **OTHER INFORMATION**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

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