SAFETY DATA SHEET

Section 1. Identification

Manufacturer
Polymeric Systems, Inc.
47 Park Avenue
Elverson, PA 19520
Tel: (610) 286-2500
Fax: (610) 286-2510
Web: polymericsystems.com

Supplier
Anderson Manufacturing Co. Inc.
2885 Country Drive #190
St. Paul MN 55117
Tel: (651) 484-1316
Fax: (651) 484-0930
Web: leaktools.com

Emergency telephone Number (610)286-2500 (24 Hours) Chemtrec Contract No.: 17567

Product name Leakmaster Pool Repair Putty
Code PP701, PP712
Specific uses Sealants and adhesives

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms

Signal word Warning!
Hazard statements May cause an allergic skin reaction.
Precautionary statements
Prevention Wear protective gloves. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace.
Response IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.
Storage Not applicable.
Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified None known.

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Name	CAS number	%
Talc , not containing asbestiform fibres	14807-96-6	30 - 60
glass, oxide, chemicals	65997-17-3	10 - 30
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	5 - 10
titanium dioxide	13463-67-7	5 - 10
crystalline silica non-respirable	14808-60-7	0.1 - 1
3,6-diazaoctanethylenediamin	112-24-3	0.1 - 1

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lowereyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Ingestion Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact May cause an allergic skin reaction.

Eye contact No known significant effects or critical hazards

Ingestion No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:
Irritation redness

Section 4. First aid measures

Eye contact No specific data.

Ingestion No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical No specific fire or explosion hazard.

National Fire Protection Association (U.S.A.)

Flammability

Health **Instability/Reactivity**

Special

Hazardous thermal Decomposition Products Decomposition products may include the following materials
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective Actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Section 6. Accidental release measures

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor

Large spill Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient	List name	TWA (8 hours) ppm	TWA (8 hours) mg/m³	TWA (8 hours) Other	STEL (15 mins) ppm	STEL (15 mins) mg/m³	STEL (15 mins) Other	Ceiling ppm	Ceiling mg/m³	Ceiling Other	Notations
3,6-diazaoctanethylenediamin	ON 1/2013	0.5	3	-	-	-	-	-	-	-	[1]
	US AIHA 10/2011	1	-	-	-	-	-	-	-	-	[1]
titanium dioxide	US ACGIH 4/2014	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	
	BC 4/2014	-	3	-	-	-	-	-	-	-	[a]
		-	10	-	-	-	-	-	-	-	[b]
	ON 1/2013	-	10	-	-	-	-	-	-	-	
	QC 1/2014	-	10	-	-	-	-	-	-	-	[c]
crystalline silica non-respirable	US ACGIH 3/2012	-	0.025	-	-	-	-	-	-	-	[d]
	BC 4/2012	-	0.025	-	-	-	-	-	-	-	[e]
	ON 1/2013	-	0.1	-	-	-	-	-	-	-	[f]
	QC 12/2012	-	0.1	-	-	-	-	-	-	-	[g]
Talc , not containing asbestiform fibres	AB 4/2009	-	2	-	-	-	-	-	-	-	[h]
	BC 4/2012	-	2	-	-	-	-	-	-	-	[e]
		-	-	0.1 f/cc	-	-	-	-	-	-	
	ON 1/2013	-	2	-	-	-	-	-	-	-	[f]
		-	2	-	-	-	-	-	-	-	[i]

Section 8. Exposure controls/personal protection

		-	-	2 f/cc	-	-	-	-	-	-	
	QC 12/2012	-	3	-	-	-	-	-	-	-	[g]
glass, oxide, chemicals	US ACGIH 4/2014	-	5	-	-	-	-	-	-	-	[j]
	US ACGIH 4/2014	-	-	1 f/cc	-	-	-	-	-	-	[k]
	AB 4/2009	-	5	1 f/cc	-	-	-	-	-	-	[l]
		-	5	-	-	-	-	-	-	-	[m]
	BC 4/2014	-	5	-	-	-	-	-	-	-	[n]
		-	-	1 f/cc	-	-	-	-	-	-	
	ON 1/2013	-	10	-	-	-	-	-	-	-	[o]
		-	5	-	-	-	-	-	-	-	[p]
		-	-	1 f/cc	-	-	-	-	-	-	[q]
	QC 1/2014	-	-	1 f/cc	-	-	-	-	-	-	[r]
		-	10	-	-	-	-	-	-	-	[c]

[1]Absorbed through skin.
Form: [a]Respirable dust [b]Total dust [c]Total dust. [d]Respirable fraction [e]Respirable [f]Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size–selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency. [g]Respirable dust. [h] Respirable particulate [i]The value is for particulate matter containing no asbestos and < 1 per cent crystalline silica. [j] Inhalable fraction [k]Respirable fibers: length greater than 5 uM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination. [l]Fibres [m]Fibres, total particulate [n]Inhalable [o]Fiber [p]Inhalable fraction: means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 100 µm at 50 per cent collection efficiency. [q]Respirable fibres: length > 5µm; aspect ratio ≥3:1, as determined by the membrane filter method at 400-450 times magnification (4-mm objective), using phase-contrast illumination. [r]RESPIRABLE FIBRES (other than respirable asbestos fibres) : Objects, other than respirable asbestos fibres, longer than 5 µm, having a diameter of less than 3 µm and a ratio of length to diameter of more than 3 :1.

Appropriate engineering controls Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin protection

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Other skin protection Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

Eye/face protection Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9. Physical and chemical properties

Physical state	Solid.
Color	Green.-White. [Light]
Odor	Pungent.-Sulfurous. [Strong]
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not applicable.
Relative density	1.972
Solubility	Easily soluble in the following materials: methanol and acetone. Insoluble in the following materials: cold water and hot water.
Solubility in water	Not applicable.
Auto-ignition temperature	Not available.
Decomposition temperature	>220°C (>428°F)
Viscosity	Kinematic (room temperature): Not applicable. Kinematic (40°C (104°F)): Not applicable.

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

No specific data.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization

No specific data.

Mutagenicity

No specific data.

Carcinogenicity

No specific data.

Conclusion/Summary : IARC classifies TiO2 as a 2B carcinogen based in large part on several studies of the effects of the inhalation of TiO2 on animals in which the TiO2 particles were of various sizes. Particles defined as “ultrafine” have been shown to cause cancer in animals exposed to very high concentrations. A number of authorities have reviewed those studies and others involving exposure to ultrafine particles and have concluded that the effects result from overloading the respiratory system of the animals. The effects observed, according to the scientists, are not due to TiO2 but are general responses to high levels of dust in the lungs. In addition, a carcinogenic effect of TiO2 dust in the workers was not observed in several epidemiology studies on more than 20,000 TiO2 industry workers in Europe and the USA, nor were other chronic diseases, including other respiratory diseases, associated with exposure to TiO2 dust. Accordingly, we have concluded that our products should not be classified on the basis of the presence of TiO2 in the products. This product contains talc in a polymer matrix. Sanding the cured product may release particles containing talc with the polymer and other components of the matrix into the air. The talc contains less than 1% crystalline silica. Appropriate evaluations of the use of the product should be performed to determine if exposure to talc occurs due to handling and use. If such exposures occur, appropriate precautions must be taken to prevent exposure in excess of the OSHA Permissible Exposure Limit (PEL).

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica non-respirable	-	1	Known to be a human carcinogen.

Reproductive toxicity

No specific data.

Teratogenicity

No specific data.

Specific target organ toxicity (single exposure)

No specific data.

Specific target organ toxicity (repeated exposure)

No specific data.

Section 11. Toxicological information

Aspiration hazard

No specific data.

Information on the likely routes of exposure	Not available.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	May cause an allergic skin reaction.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available

Potential chronic health effects

No specific data.

General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

No specific data.

Section 12. Ecological information

Toxicity

No specific data

Persistence and degradability

No specific data.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in soil
Soil/water partition coefficient (K_{OC}) Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification Not applicable.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN Number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Section 14. Transport information

Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

WHMIS (Canada) Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI None of the components are listed.
CEPA Toxic substances None of the components are listed.
Canada inventory All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Substances of very high concern

None of the components are listed.

Section 16. Other information

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References Not available.

Indicates information that has changed from previously issued version.

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