

SECTION 1: Identification

1.1. Product identifier

Product name : Penetron® Injection Foam - Part A
Product code : Not available.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Concrete protection and permeability reduction

1.3. Details of the supplier of the safety data sheet

Penetron International, Ltd.
45 Research Way, Suite 203
East Setauket, New York 11733 – USA
T +1 (631) 941-9700
info@penetron.com - penetron.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: US and Canada: 1-800-424-9300; International +1 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS-US classification

Acute Toxicity - Inhalation (Dust/Mists) 4
Skin Corrosion/Irritation 2
Serious Eye Damage/Eye Irritation 2A
Respiratory Sensitization 1
Skin Sensitization 1
Carcinogenicity 2
Specific Target Organ Toxicity (Single Exposure) 3
Specific Target Organ Toxicity (Repeated Exposure) 2

2.2. Label elements (GHS-US)

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

2.3. Precautionary statements (GHS-US)

Prevention :

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Do not breath dust/fume/gas/mist/vapors/spray.

Response :

IF exposed or concerned: Get medical advice/attention. Specific treatment (see supplemental first-aid instructions on this label).

Eyes :

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin :

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation :

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison control center or doctor/physician.

Penetron® Injection Foam – Part A

Safety Data Sheet

according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents/container to an approved waste disposal plant.

2.4. Unknown acute toxicity (GHS-US)

0% of the mixture consists of ingredient(s) of unknown toxicity.

2.5. Other information

Harmful to aquatic life with long lasting effects. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

SECTION 3: Composition/information on ingredients

3.1. Mixture

Chemical name	Product identifier	%
Dimethyl glutarate	(CAS No) 1119-40-0	15 - 40
Polymethylene polyphenylene isocyanate	(CAS No) 9016-87-9	15 - 40
Methylene bisphenyl isocyanate (MDI)	(CAS No) 101-68-8	15 - 40
Dimethyl succinate	(CAS No) 106-65-0	10 - 30
CTS-15-029	Trade Secret	5 - 10

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First-aid measures

4.1. Description of first-aid measures

- First-aid measures after inhalation : If breathing is difficult, remove to fresh air. Get medical attention immediately if symptoms occur. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
- First-aid measures after skin contact : In case of contact, wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
- First-aid measures after eye contact : In case of contact, rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
- First-aid measures after ingestion : If ingested, rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. May produce an allergic reaction. If an allergic reaction occurs, stop use and seek medical help right away. Call a physician or poison control center immediately.
- Self-protection of the first-aider : Avoid direct contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use barrier to give mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

Burning sensation. Coughing and/or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician : May cause sensitization in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : CAUTION: Use of water spray when fighting fire may be inefficient.

5.2. Special hazards arising from the substance or mixture

Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. Uniform Fire Code: Sensitizer: Liquid - Toxic: Liquid

5.3. Hazardous combustion products

Products of combustion : May include, and are not limited to oxides of carbon.

5.4. Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Avoid breathing vapors or mists. Avoid generation of dust. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Penetron® Injection Foam – Part A

Safety Data Sheet

according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012.

6.2. Environmental precautions

Refer to protective measures listed in sections 7 and 8. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment : Prevent further leakage or spillage if safe to do so.

Methods for cleaning up : Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products : Strong acids. Strong oxidizing agents. Strong bases. Water. Alcohols. Finely powdered metals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure guidelines : The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this Safety Data Sheet (SDS) is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here:

Methylene bisphenyl isocyanate (MDI) (101-68-8)	
ACGIH TLV	TWA: 0.005 ppm
OSHA PEL	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³
NIOSH IDLH	IDLH: 75 mg/m ³ Ceiling: 0.020 ppm 10 min Ceiling: 0.2 mg/m ³ 10 min TWA: 0.005 ppm TWA: 0.05 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other exposure guidelines : Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

8.2. Appropriate engineering controls

Engineering measures : Showers, eyewash stations, ventilation systems.

8.3. Individual protection measures, such as personal protective equipment

Eye/face protection : Wear safety glasses with side shields or goggles.

Skin and body protection : Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Other information : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Wash hands before breaks and immediately after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear

Color : Amber

Odor : Characteristic

Odor threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Penetron® Injection Foam – Part A

Safety Data Sheet

according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012.

Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Specific gravity	: 1.16
Relative vapor density at 20°C	: No data available
Solubility	: Reacts with water
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Hazardous polymerization

Hazardous polymerization does not occur. Hazardous polymerization may occur.

10.5. Conditions to avoid

Excessive heat.

10.6. Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases. Water. Alcohols. Finely powdered metals.

10.7. Hazardous decomposition product

May include, and are not limited to: Carbon oxides. Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Hydrogen cyanide. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11: Toxicological information

11.1. Information on likely routes of exposure

Inhalation	: Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization in susceptible persons.
Eye contact	: Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	: Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). Prolonged contact may cause redness and irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	: Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional affects as listed under "Inhalation".

11.2. Information on components

Chemical name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Dimethyl glutarate (1119-40-0)	= 8191 mg/kg	-	> 5.6 mg/L 4 h
Polymethylene polyphenylene isocyanate (9016-87-9)	= 49 g/kg	> 9.4 g/kg > 9400 mg/kg	= 490 mg/m ³ 4 h
Methylene bisphenyl isocyanate (MDI) (101-68-8)	= 9200 mg/kg = 31600 mg/kg	-	= 369 mg/m ³ 4 h
Dimethyl succinate (106-65-0)	> 5 g/kg	> 5 g/kg	-

Penetron® Injection Foam – Part A

Safety Data Sheet

according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012.

11.3. Information on toxicological effects

Symptoms : Erythema (skin redness). May cause redness and tearing of the eyes. Coughing and/ or wheezing. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, light-headedness, chest pain, muscle pain, or flushing.

11.4. Delayed and immediate effects as well as chronic effects from short and long term exposure

Sensitization : May cause sensitization in susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.

Mutagenic effects : No information available.

Carcinogenicity : The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	IARC group (International Agency for Research on Cancer)
Polymethylene polyphenylene isocyanate (9016-87-9)	3 - Not classifiable as to Carcinogenicity in Humans
Methylene bisphenyl isocyanate (MDI) (101-68-8)	3 - Not classifiable as to Carcinogenicity in Humans

Reproductive toxicity : No information available.

Specific target organ toxicity (single exposure) : Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. Detailed substance and/or ingredient information may be provided in other sections of this SDS. Target organ effects listed in this document may result from a single overexposure to this product. Respiratory system.

Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic toxicity : Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contains a known or suspected carcinogen. Avoid repeated exposure.

Target organ effects : Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Central nervous system (CNS).

Aspiration hazard : No information available.

ATEmix	Oral	Inhalation-gas	Inhalation-dust/mist	Inhalation-vapor
Numerical measures of toxicity (based on section 3.1)	9,182.00 mg/kg	12,162.00 ppm	1.20 mg/l	30.00 ATEmix

SECTION 12: Ecological information

12.1. Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Fish	Daphnia Magna (Water Flea)
Dimethyl glutarate (1119-40-0)	96h LC50: 19.6 – 26.2 mg/L (Pimephales promelas)	48h EC50: 122.1 – 163.5 mg/L
Dimethyl succinate (106-65-0)	96h LC50: 50 – 100 mg/L (Brachydanio rerio)	-

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical Name	Log Pow
Dimethyl succinate (106-65-0)	0.19

12.4. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging : Dispose of contents/containers in accordance with local regulations.

Penetron® Injection Foam – Part A

Safety Data Sheet

according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012.

SECTION 14: Transport information

14.1 Department of Transportation (DOT)

In accordance with DOT.

Not regulated for transport

14.2. Other information

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 313 : Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	Weight-%	SARA 313 - Threshold Values %
Polymethylene polyphenylene isocyanate (9016-87-9)	15 - 40	1.0
Methylene bisphenyl isocyanate (MDI) (101-68-8)	15 - 40	1.0
CTS-15-029 (Trade Secret)	5 -10	1.0

SARA 311/312 Hazard categories

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CWA : This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (CWA) (40 CFR 122.21 and 40 CFR 122.42)

CERCLA : This material, as supplied, contains a substance regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Methylene bisphenyl isocyanate (MDI) (101-68-8)	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

15.2. US State regulations

California Proposition 65 : This product does not contain any Proposition 65 chemicals known to the State of California to cause cancer.

US State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Methylene bisphenyl isocyanate (MDI) 101-68-8	X	X	X	X	X
Polymethylene polyphenylene isocyanate 9016-87-9	X			X	
CTS-15-29 (Trade Secret)	X			X	

SECTION 16: Other information

Date of issue : 8/18/2015

Revision date : 12/09/2016

Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.