

SAFETY DATA SHEET

SECTION 1 - MANUFACTURER'S IDENTIFICATION

Product Name: INDURETHANE MONARCH Product Code: A3-1304W

Manufacturer's Name: Induron Protective Coatings, LLC
Address: 3333 Richard Arrington Blvd. N.
Birmingham, Alabama 35234

Emergency Phone: 1-800-424-9300
Information Phone: (205)324-9584

Section 2 - Composition / Information on Ingredients

GHS Ratings:

Flammable liquid	3
Skin corrosive	2
Eye corrosive	2A
Skin sensitizer	1
Carcinogen	2
Reproductive toxin	1B

GHS Hazards

H226	Flammable liquid and vapour.
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash equipment and contaminated skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required
P321	Wash contaminated skin, follow Physician's instructions for treatment.
P362	Take off contaminated clothing and wash before reuse
P363	Wash contaminated clothing before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	If skin irritation occurs: Get medical advice/attention

P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
 P337+P313 Get medical advice/attention
 P370+P378 In case of fire: Use CO2, water spray, foam, or dry chemical to extinguish.
 P405 Store locked up
 P403+P235 Store in a well ventilated place. Keep cool
 P501 Dispose of contents/container in accordance to appropriate regulations and laws.

Signal Word: Danger



Section 3 - Hazards Identification

Chemical Name	CAS number	Weight Concentration %
Titanium Dioxide Colorant	13463-67-7	30.00% - 40.00%
n-BUTYL ACETATE	123-86-4	10.00% - 20.00%
Benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6	10.00% - 20.00%
2-ETHYLHEXYL ACETATE	103-09-3	1.00% - 5.00%
Kaolin	1332-58-7	1.00% - 5.00%
Mixed Xylenes	1330-20-7	0.10% - 1.00%

Section 4 - First Aid Measures

INHALATION - If product solids are inhaled either as dust or in the form of a spray mist, remove the person from exposure immediately. If breathing is difficult, irregular, or has stopped, start resuscitation; call a physician . Administer oxygen if a qualified operator is available.

EYE CONTACT - In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

SKIN CONTACT - In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

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.

Notes to Physician: No data found

Section 5 - Fire Fighting Measures

Flash Point: 26 C (79 F)

LEL: 1.00

UEL: 8.00

Flamable Product

EXTINGUISHING MEDIA: Use carbon dioxide (CO2), "alcohol" foam, dry chemical systems, water fog, water spray.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Under normal storage conditions this product is stable.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon and hydrocarbons

FIRE FIGHTING: 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. Use water spray to cool unopened containers.

FIRE FIGHTING: 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.

Section 6 - Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spill supervisor - Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

SMALL SPILLS: Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant materials with water to prevent spontaneous combustion with alkyd type formulas.

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

LARGE SPILLS: Prevent this 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. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant with water for alkyd type spills.

Section 7 - Handling and Storage

HANDLING PRECAUTIONS: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containers closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 40 to 95 F (4 to 35 C).

STORAGE: Prevent from freezing. Do not store above 120 F (49 C).

Store only in original containers.

REGULATORY REQUIREMENTS: No data found.

Section 8 - Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Titanium Dioxide Colorant 13463-67-7	15 mg/m ³ TWA (total dust)	10 mg/m ³ TWA	Not Established
n-BUTYL ACETATE 123-86-4	150 ppm TWA; 710 mg/m ³ TWA	200 ppm STEL 150 ppm TWA	NIOSH: 150 ppm TWA; 710 mg/m ³ TWA 200 ppm STEL; 950 mg/m ³ STEL
Benzene, 1-chloro-4- (trifluoromethyl)- 98-56-6	Not Established	Not Established	Not Established
2-ETHYLHEXYL ACETATE 103-09-3	Not Established	Not Established	Not Established
Kaolin 1332-58-7	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	NIOSH: 10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)

Mixed Xylenes 1330-20-7	100 ppm TWA; 435 mg/m3 TWA	150 ppm STEL 100 ppm TWA	Not Established
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ENGINEERING: Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

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

ADMINISTRATIVE CONTROLS: No data found.

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

Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

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

CONTAMINATED EQUIPMENT: Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 9 - Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

<p>VOC LB/GAL 2.66</p> <p>Odor: na</p> <p>Odor threshold: na</p> <p>pH: na</p> <p>Melting point: na</p> <p>Solubility: na</p> <p>Flash point: 26°C, 79°F</p> <p>Explosive Limits: na</p> <p>Autoignition temperature: na</p> <p>Viscosity: na</p>	<p>Appearance: na</p> <p>Vapor Pressure: na</p> <p>Vapor Density: na</p> <p>DENSITY 11.95</p> <p>Freezing point: na</p> <p>Boiling range: na</p> <p>Evaporation rate: na</p> <p>Partition coefficient (n-octanol/water): na</p> <p>Decomposition temperature: na</p>
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Section 10 - Stability and Reactivity

Stability: This product is stable under normal storage conditions.

STABLE

Avoid strong oxidizing agents.

This mixture is likely to exhibit the following combustion products: Carbon oxides.

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 281mg/L

Component Toxicity

123-86-4	n-BUTYL ACETATE Inhalation LC50: 390 ppm (Rat)
98-56-6	Benzene, 1-chloro-4-(trifluoromethyl)-

Oral LD50: 13 g/kg (Rat) Dermal LD50: 3 g/kg (RABBIT) Inhalation LC50: 33 mg/L (Rat)

103-09-3 2-ETHYLHEXYL ACETATE
Oral LD50: 3 g/kg (Rat)

1330-20-7 Mixed Xylenes
Oral LD50: 3,500 mg/kg (Rat) Inhalation LC50: 29 mg/L (Rat)

Routes of Entry:

Exposure to this material may affect the following organs:

Eyes Central Nervous System Skin Respiratory System

Effects of Overexposure

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
13463-67-7	Titanium Dioxide Colorant	30 to 40%	Titanium Dioxide Colorant: NIOSH: potential occupational carcinogen IARC: Possible human carcinogen OSHA: listed

Preexisting skin, eye, and respiratory disorders may be aggravated by exposure to this product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention). Liver damage may be evidenced by loss of appetite, jaundice and sometimes pain in the upper abdomen on the right side.

Section 12 - Ecological Information

Ecological information: No data found.

Component Ecotoxicity

n-BUTYL ACETATE	96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through] 72 Hr EC50 Desmodesmus subspicatus: 674.7 mg/L
Benzene, 1-chloro-4-(trifluoromethyl)-	48 Hr EC50 Daphnia magna: 3.68 mg/L
Mixed Xylenes	96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

Section 13 - Disposal Considerations

As the US EPA, state, regional, and other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste, it is incumbent upon you, the hazardous waste generator, to learn of and satisfy all the requirements which affect you. Dispose of the hazardous waste at a properly licensed and permitted disposal site or facility. Ensure conformity to all applicable hazardous waste disposal regulations.

The US EPA Hazardous Waste Numbers which follow are applicable to this unadulterated product 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).

Section 14 - Transport Information

Section 14 - Transport Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	PAINT	1263	III	3
IATA	PAINT	1263	III	3

15: Regulatory Information

All components are in compliance with TSCA inventory listing or are exempt.

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

13463-67-7 Titanium Dioxide Colorant 30 to 40 %

CHEMICAL LIST FOR SARA 313

1330-20-7 Mixed Xylenes

CHEMICAL LIST FOR SARA 311/312

103-09-3 2-ETHYLHEXYL ACETATE

1330-20-7 Mixed Xylenes

CHEMICAL LIST FOR SARA 311

1330-20-7 Mixed Xylenes

MASSACHUSETTS RIGHT TO KNOW

13463-67-7 Titanium Dioxide Colorant 30 to 40 %

123-86-4 n-BUTYL ACETATE 10 to 20 %

103-09-3 2-ETHYLHEXYL ACETATE 1 to 5 %

1332-58-7 Kaolin 1 to 5 %

NEW JERSEY RIGHT TO KNOW

13463-67-7 Titanium Dioxide Colorant 30 to 40 %

123-86-4 n-BUTYL ACETATE 10 to 20 %

1332-58-7 Kaolin 1 to 5 %

PENNSYLVANIA RIGHT TO KNOW

13463-67-7 Titanium Dioxide Colorant 30 to 40 %

123-86-4 n-BUTYL ACETATE 10 to 20 %

103-09-3 2-ETHYLHEXYL ACETATE 1 to 5 %

1332-58-7 Kaolin 1 to 5 %

Country

Regulation

All Components Listed

EU Risk Phrases

Safety Phrase

- None

16: OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
PERSONAL PROTECTION		G

HMIS & NFPA Hazard Rating

Legend

* = Chronic Health Hazard

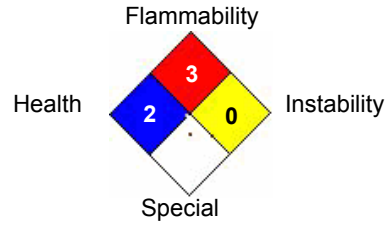
0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

National Fire Protection Association (NFPA)



Reviewer Revision

Date Prepared: 11/13/2017

SAFETY DATA SHEET

SECTION 1- MANUFACTURER'S IDENTIFICATION

Product Name: INDURETHANE MONARCH CLEAR BASE Product Code: A3-1307C

Trade Name: INDURON MONARCH

Manufacturer's Name: Induron Protective Coatings, LLC

Address: 3333 Richard Arrington Blvd. N.
Birmingham, Alabama 35234

Emergency Phone: 1-800-424-9300

Information Phone: (205)324-9584

Section 2 - Composition / Information on Ingredients

GHS Ratings:

Flammable liquid	3
Skin corrosive	2
Eye corrosive	2A
Skin sensitizer	1
Mutagen	1B
Carcinogen	1B
Reproductive toxin	1A

GHS Hazards

H226	Flammable liquid and vapour.
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H340	May cause genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash equipment and contaminated skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required
P321	Wash contaminated skin, follow Physician's instructions for treatment.
P362	Take off contaminated clothing and wash before reuse
P363	Wash contaminated clothing before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P308+P313 IF exposed or concerned: Get medical advice/attention

P332+P313 If skin irritation occurs: Get medical advice/attention

P333+P313 If skin irritation or a rash occurs: Get medical advice/attention

P337+P313 Get medical advice/attention

P370+P378 In case of fire: Use CO2, water spray, foam, or dry chemical to extinguish.

P405 Store locked up

P403+P235 Store in a well ventilated place. Keep cool

P501 Dispose of contents/container in accordance to appropriate regulations and laws.

Signal Word: Danger



Section 3 - Hazards Identification

Chemical Name	CAS number	Weight Concentration %
Benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6	10.00% - 20.00%
2-ETHYLHEXYL ACETATE	103-09-3	10.00% - 20.00%
n-BUTYL ACETATE	123-86-4	10.00% - 20.00%
Kaolin	1332-58-7	1.00% - 5.00%
Acetyl Acetone	123-54-6	1.00% - 5.00%
Naptha(Pet), light arom.	64742-95-6	0.10% - 1.00%

Section 4 - First Aid Measures

INHALATION - If product solids are inhaled either as dust or in the form of a spray mist, remove the person from exposure immediately. If breathing is difficult, irregular, or has stopped, start resuscitation; call a physician . Administer oxygen if a qualified operator is available.

EYE CONTACT - In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

SKIN CONTACT - In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

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.

Notes to Physician: No data found

Section 5 - Fire Fighting Measures

Flash Point: 26 C (79 F)

LEL: 1.00

UEL: 8.00

Flamable Product

EXTINGUISHING MEDIA: Use carbon dioxide (CO2), "alcohol" foam, dry chemical systems, water fog, water spray.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Under normal storage conditions this product is stable.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon and hydrocarbons

FIRE FIGHTING: 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. Use water spray to cool unopened containers.

FIRE FIGHTING: 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.

Section 6 - Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spill supervisor - Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

SMALL SPILLS: Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant materials with water to prevent spontaneous combustion with alkyd type formulas.

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

LARGE SPILLS: Prevent this 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. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant with water for alkyd type spills.

Section 7 - Handling and Storage

HANDLING PRECAUTIONS: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containers closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 40 to 95 F (4 to 35 C).

STORAGE: Prevent from freezing. Do not store above 120 F (49 C).

Store only in original containers.

REGULATORY REQUIREMENTS: No data found.

Section 8 - Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Benzene, 1-chloro-4-(trifluoromethyl)- 98-56-6	Not Established	Not Established	Not Established
2-ETHYLHEXYL ACETATE 103-09-3	Not Established	Not Established	Not Established
n-BUTYL ACETATE 123-86-4	150 ppm TWA; 710 mg/m3 TWA	200 ppm STEL 150 ppm TWA	NIOSH: 150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL
Kaolin 1332-58-7	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)

Acetyl Acetone 123-54-6	Not Established	25 ppm TWA	Not Established
Naptha(Pet), light arom. 64742-95-6	Not Established	Not Established	Not Established

ENGINEERING: Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

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

ADMINISTRATIVE CONTROLS: No data found.

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

Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

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

CONTAMINATED EQUIPMENT: Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 9 - Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

<p>VOC LB/GAL 3.14</p> <p>Odor: na</p> <p>Odor threshold: na</p> <p>pH: na</p> <p>Melting point: na</p> <p>Solubility: na</p> <p>Flash point: 26°C, 79°F</p> <p>Explosive Limits: na</p> <p>Autoignition temperature: na</p> <p>Viscosity: na</p>	<p>Appearance: na</p> <p>Vapor Pressure: na</p> <p>Vapor Density: na</p> <p>DENSITY 9.06</p> <p>Freezing point: na</p> <p>Boiling range: na</p> <p>Evaporation rate: na</p> <p>Partition coefficient (n- na octanol/water):</p> <p>Decomposition temperature: na</p>
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Section 10 - Stability and Reactivity

Stability: This product is stable under normal storage conditions.

STABLE

Avoid strong oxidizing agents.

This mixture is likely to exhibit the following combustion products: Carbon oxides.

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 91mg/L

Component Toxicity

98-56-6 Benzene, 1-chloro-4-(trifluoromethyl)-

	Oral LD50: 13 g/kg (Rat) Dermal LD50: 3 g/kg (RABBIT) Inhalation LC50: 33 mg/L (Rat)
103-09-3	2-ETHYLHEXYL ACETATE Oral LD50: 3 g/kg (Rat)
123-86-4	n-BUTYL ACETATE Inhalation LC50: 390 ppm (Rat)
123-54-6	Acetyl Acetone Inhalation LC50: 1,224 ppm (Rat)
64742-95-6	Naptha(Pet), light arom. Inhalation LC50: 3,400 ppm (Rat)

Routes of Entry:

Exposure to this material may affect the following organs:

Eyes Central Nervous System Skin Respiratory System

Effects of Overexposure

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
64742-95-6	Naptha(Pet), light arom.	.1 to 1.0%	Naptha(Pet), light arom.: EU REACH: Present (P)

Preexisting skin, eye, and respiratory disorders may be aggravated by exposure to this product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention). Liver damage may be evidenced by loss of appetite, jaundice and sometimes pain in the upper abdomen on the right side.

Section 12 - Ecological Information

Ecological information: No data found.

Component Ecotoxicity

Benzene, 1-chloro-4-(trifluoromethyl)-	48 Hr EC50 Daphnia magna: 3.68 mg/L
n-BUTYL ACETATE	96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through] 72 Hr EC50 Desmodesmus subspicatus: 674.7 mg/L
Acetyl Acetone	96 Hr LC50 Pimephales promelas: 98.3 - 110 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 50.3 - 71.8 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 64.1 - 80.1 mg/L [flow-through] 48 Hr EC50 Daphnia magna: 34.4 mg/L
Naptha(Pet), light arom.	96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L 48 Hr EC50 Daphnia magna: 6.14 mg/L

Section 13 - Disposal Considerations

As the US EPA, state, regional, and other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste, it is incumbent upon you, the hazardous waste generator, to learn of and satisfy all the requirements which affect you. Dispose of the hazardous waste at a properly licensed and permitted disposal site or facility. Ensure conformity to all applicable hazardous waste disposal regulations.

The US EPA Hazardous Waste Numbers which follow are applicable to this unadulterated product 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).

Section 14 - Transport Information

Section 14 - Transport Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	PAINT	1263	III	3
IATA	PAINT	1263	III	3

15: Regulatory Information

All components are in compliance with TSCA inventory listing or are exempt.

CHEMICAL LIST FOR SARA 311/312

103-09-3 2-ETHYLHEXYL ACETATE

MASSACHUSETTS RIGHT TO KNOW

103-09-3 2-ETHYLHEXYL ACETATE 10 to 20 %

123-86-4 n-BUTYL ACETATE 10 to 20 %

1332-58-7 Kaolin 1 to 5 %

123-54-6 Acetyl Acetone 1 to 5 %

NEW JERSEY RIGHT TO KNOW

123-86-4 n-BUTYL ACETATE 10 to 20 %

1332-58-7 Kaolin 1 to 5 %

123-54-6 Acetyl Acetone 1 to 5 %

PENNSYLVANIA RIGHT TO KNOW

103-09-3 2-ETHYLHEXYL ACETATE 10 to 20 %

123-86-4 n-BUTYL ACETATE 10 to 20 %

1332-58-7 Kaolin 1 to 5 %

123-54-6 Acetyl Acetone 1 to 5 %

Country

Regulation

All Components Listed

EU Risk Phrases

Safety Phrase

- None

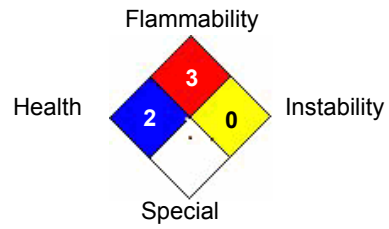
16: OTHER INFORMATION

Hazardous Material Information System (HMIS)

National Fire Protection Association (NFPA)

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
PERSONAL PROTECTION		G

HMIS & NFPA Hazard Rating Legend
 * = Chronic Health Hazard
 0 = INSIGNIFICANT
 1 = SLIGHT
 2 = MODERATE
 3 = HIGH



Reviewer Revision

Date Prepared: 11/13/2017

SAFETY DATA SHEET

SECTION 1 - MANUFACTURER'S IDENTIFICATION

Product Name: INDURETHANE MONARCH ACTIVATOR Product Code: Q3-1222

Trade Name: POLYMERIC HMDI

Manufacturer's Name: Induron Protective Coatings, LLC
Address: 3333 Richard Arrington Blvd. N.
Birmingham, Alabama 35234

Emergency Phone: 1-800-424-9300

Information Phone: (205)324-9584

Section 2 - Composition / Information on Ingredients

GHS Ratings:

Flammable liquid	3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ (140°F)
Inhalation Toxicity	Acute Tox. 4	Gases >2500 and ≤ 5000 ppm, Vapors >10 and ≤ 20 mg/l, Dusts & mists >1 and ≤ 5 mg/l
Skin sensitizer	1	Skin sensitizer
Organ toxin single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation

GHS Hazards

H226	Flammable liquid and vapour.
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H335	May cause respiratory irritation

GHS Precautions

P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P233	Keep container tightly closed.
P241	Use explosion-proof electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required
P285	In case of inadequate ventilation wear respiratory protection
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P363	Wash contaminated clothing before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P308+P313	IF exposed or concerned: Get medical advice/attention
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention
P370+P378	In case of fire: Use CO ₂ , water spray, foam, or dry chemical to extinguish.
P405	Store locked up
P403+P235	Store in a well ventilated place. Keep cool
P501	Dispose of contents/container in accordance to appropriate regulations and laws.

Signal Word: Warning



Preexisting skin, eye, and respiratory disorders may be aggravated by exposure to this product. Impaired kidney and liver functions from preexisting disorders may be aggravated by exposure to this product.

Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention). Liver damage may be evidenced by loss of appetite, jaundice and sometimes pain in the upper abdomen on the right side.

Section 3 - Hazards Identification

Chemical Name	CAS number	Weight Concentration %
Homopolymer of Hexamethylene Diisocyanate.	28182-81-2	80.00% - 90.00%
n-BUTYL ACETATE	123-86-4	1.00% - 5.00%
Naptha(Pet), light arom.	64742-95-6	1.00% - 5.00%
Benzene,1,3,5-trimethyl	108-67-8	0.10% - 1.00%
HEXAMETHYLENE DIISOCYANATE	822-06-0	0.10% - 1.00%
Mixed Xylenes	1330-20-7	0.10% - 1.00%
* 1,2,4-TRIMETHYL BENZENE	95-63-6	0.10% - 1.00%

Section 4 - First Aid Measures

INHALATION - If product solids are inhaled either as dust or in the form of a spray mist, remove the person from exposure immediately. If breathing is difficult, irregular, or has stopped, start resuscitation; call a physician. Administer oxygen if a qualified operator is available.

EYE CONTACT - In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

SKIN CONTACT - In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

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.

Notes to Physician: No data found

Section 5 - Fire Fighting Measures

Flash Point: 47 C (117 F)

LEL: 1.00

UEL: 8.00

Flamable Product

EXTINGUISHING MEDIA: Use carbon dioxide (CO₂), "alcohol" foam, dry chemical systems. Direct water application may cause violent frothing.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Moisture can cause significant pressure increases in the packaging, leading to pressure caused leaks or even explosions.

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, hydrocarbons, hydrogen cyanide, oxides of sulfur and or zinc.

FIRE FIGHTING: 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. Use water spray to cool unopened containers.

FIRE FIGHTING: 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.

Section 6 - Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spill supervisor - Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

SMALL SPILLS: Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant materials with water to prevent spontaneous combustion with alkyd type formulas.

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

LARGE SPILLS: Prevent this 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. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes. Wet absorbant with water for alkyd type spills.

Section 7 - Handling and Storage

HANDLING PRECAUTIONS: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containers closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 40 to 95 F (4 to 35 C).

STORAGE: Prevent from freezing. Do not store above 120 F (49 C). Keep in dry areas.

Store only in original containers.

REGULATORY REQUIREMENTS: No data found.

Section 8 - Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Homopolymer of Hexamethylene Diisocyanate. 28182-81-2	Not Established	Not Established	Not Established
n-BUTYL ACETATE 123-86-4	150 ppm TWA; 710 mg/m3 TWA	200 ppm STEL 150 ppm TWA	NIOSH: 150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL
Naptha(Pet), light arom. 64742-95-6	Not Established	Not Established	Not Established
Benzene,1,3,5-trimethyl 108-67-8	Not Established	Not Established	NIOSH: 25 ppm TWA; 125 mg/m3 TWA

HEXAMETHYLENE DIISOCYANATE 822-06-0	Not Established	0.005 ppm TWA	NIOSH: 0.005 ppm TWA; 0.035 mg/m3 TWA 0.020 ppm Ceiling (10 min); 0.140 mg/m3 Ceiling (10 min)
Mixed Xylenes 1330-20-7	100 ppm TWA; 435 mg/m3 TWA	150 ppm STEL 100 ppm TWA	Not Established
* 1,2,4-TRIMETHYL BENZENE 95-63-6	Not Established	Not Established	NIOSH: 25 ppm TWA; 125 mg/m3 TWA

ENGINEERING: Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

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

ADMINISTRATIVE CONTROLS: No data found.

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

Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

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

Wear chemical vapor mask or air supplied mask during exposure of vapors.

CONTAMINATED EQUIPMENT: Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 9 - Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

<p>Coating VOC Lb/Gal 0.47</p> <p>Odor: N/A</p> <p>Odor threshold: N/A</p> <p>Explosive Limits: N/A</p> <p>pH: N/A</p> <p>Melting point: N/A</p> <p>Solubility: N/A</p> <p>Flash point: 117 F, 47 C</p> <p>Partition coefficient (n- octanol/water): N/A</p> <p>Decomposition temperature: N/A</p>	<p>Appearance: N/A</p> <p>Vapor Pressure: 6.1 mmHg</p> <p>Flammability: N/A</p> <p>Vapor Density: 4.3</p> <p>DENSITY 9.43</p> <p>Freezing point: N/A</p> <p>Boiling range: 126°C</p> <p>Evaporation rate: N/A</p> <p>Autoignition temperature: N/A</p> <p>Viscosity: N/A</p>
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Section 10 - Stability and Reactivity

Stability: The product is stable under normal storage conditions

STABLE

The product is unstable in the presence of water, and active hydrogen containing compounds such as amines, alcohols, and acids.

This mixture is likely to exhibit the following combustion products: Carbon oxides, hydrogen cyanide, aliphatic compounds, and oxides of sulfur and zinc.

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Mixture Toxicity

Oral Toxicity LD50: 80mg/kg

Inhalation Toxicity LC50: 5mg/L

Routes of Entry: Skin, Eyes, Breathing

Exposure to this material may affect the following organs: Skin, lungs, eyes, internal organs.

Blood **Eyes** **Central Nervous System** **Skin** **Respiratory System**

Effects of Overexposure

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
64742-95-6	Naptha(Pet), light arom.	1 to 5%	Naptha(Pet), light arom.: EU REACH: Present (P)

Section 12 - Ecological Information

Component Ecotoxicity

n-BUTYL ACETATE	96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through] 72 Hr EC50 Desmodesmus subspicatus: 674.7 mg/L
Naptha(Pet), light arom.	96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L 48 Hr EC50 Daphnia magna: 6.14 mg/L
Benzene,1,3,5-trimethyl	96 Hr LC50 Pimephales promelas: 3.48 mg/L
HEXAMETHYLENE DIISOCYANATE	96 Hr LC50 Brachydanio rerio: 26.1 mg/L [static]
Mixed Xylenes	96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L
* 1,2,4-TRIMETHYL BENZENE	96 Hr LC50 Pimephales promelas: 7.19 - 8.28 mg/L [flow-through] 48 Hr EC50 Daphnia magna: 6.14 mg/L

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Section 14 - Transport Information

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<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	PAINT	1263	III	3
IATA	PAINT	1263	III	3

15: Regulatory Information

All components are in compliance with TSCA inventory listing or are exempt.

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

108-67-8 Benzene,1,3,5-trimethyl 0.1 to 1.0 %

HAZARDOUS AIR POLLUTANTS

822-06-0 HEXAMETHYLENE DIISOCYANATE
1330-20-7 Mixed Xylenes

MASSACHUSETTS RIGHT TO KNOW

1330-20-7 Mixed Xylenes 0.1 to 1.0 %
95-63-6 * 1,2,4-TRIMETHYL BENZENE 0.1 to 1.0 %
822-06-0 HEXAMETHYLENE DIISOCYANATE 0.1 to 1.0 %
108-67-8 Benzene,1,3,5-trimethyl 0.1 to 1.0 %
123-86-4 n-BUTYL ACETATE 1 to 5 %

NEW JERSEY RIGHT TO KNOW

95-63-6 * 1,2,4-TRIMETHYL BENZENE 0.1 to 1.0 %
1330-20-7 Mixed Xylenes 0.1 to 1.0 %
822-06-0 HEXAMETHYLENE DIISOCYANATE 0.1 to 1.0 %
108-67-8 Benzene,1,3,5-trimethyl 0.1 to 1.0 %
123-86-4 n-BUTYL ACETATE 1 to 5 %

PENNSYLVANIA RIGHT TO KNOW

1330-20-7 Mixed Xylenes 0.1 to 1.0 %
822-06-0 HEXAMETHYLENE DIISOCYANATE 0.1 to 1.0 %
108-67-8 Benzene,1,3,5-trimethyl 0.1 to 1.0 %
95-63-6 * 1,2,4-TRIMETHYL BENZENE 0.1 to 1.0 %
123-86-4 n-BUTYL ACETATE 1 to 5 %

CHEMICAL LIST FOR SARA 311

1330-20-7 Mixed Xylenes

CHEMICAL LIST FOR SARA 311/312

1330-20-7 Mixed Xylenes
28182-81-2 Homopolymer of Hexamethylene Diisocyanate.

CHEMICAL LIST FOR SARA 313

95-63-6 * 1,2,4-TRIMETHYL BENZENE
1330-20-7 Mixed Xylenes

Country

Regulation

All Components Listed

EU Risk Phrases

Safety Phrase

- None

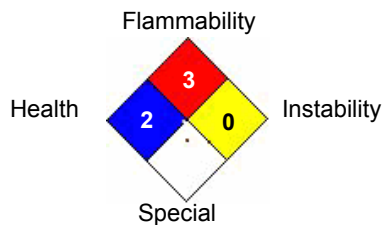
16: OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

HMIS & NFPA Hazard Rating
Legend
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National Fire Protection Association (NFPA)



Reviewer Revision

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