



Coatings, Inc. Emergency Plan Summary

123 Fake St., New Hartford, CT 06057

Facility Emergency Contacts:

Name:	Cell Telephone No.	Home Telephone No.	Home Address
Steve Jobs (1 st shift)	123-456-7890	123-456-7890	1 Home Ave, New Hartford, CT 06057
Hulk Hogan (1 st shift)	123-456-7890	123-456-7890	2 Home Ave, New Hartford, CT 06057
Tina Turner (2 nd shift)	123-456-7890	123-456-7890	3 Home Ave, New Hartford, CT 06057
Wile E. Coyote (2 nd shift)	123-456-7890	123-456-7890	4 Home Ave, New Hartford, CT 06057

Does an explosion risk exist at the facility?	YES
Could the facility release a respiratory hazard that could threaten site workers, emergency responders or neighbors?	YES
Is it okay to shut the power off during an event?	NO
Is it okay to shut the water off during an event	NO
Is it okay to shut the gas off during an event?	YES
Can a run-away reaction/process occur?*	YES

***If so, describe how:** Failure of safety equipment could result in a continuous release of flammable adhesives from coating units. A loss of cooling water to the mixing tanks in the south side of the building could result in a runaway exothermic reaction, resulting in a fire.

Describe special hazards identified above: The site contains large quantities of flammable adhesives and liquid solvents, including three 3,000-gallon and two 4,500-gallon adhesive storage tanks, as well as numerous 55-gallon drums. The primary solvent used at the facility is toluene, which is stored in a 3,000 gallon and a 5,000

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gallon underground storage tank. The facility also contains an 11,000 gallon liquid nitrogen tank, which is used to supply nitrogen gas to the coating units. A leak from the nitrogen piping located within the facility could result in suffocating atmospheres. If the solvent recovery system is shut down inappropriately, an explosive atmosphere could develop inside the coating lines. The facility is equipped with a natural gas-powered emergency generator, however emergency responders should first confirm with Coatings, Inc. staff that it is safe to shut off power to the facility if needed. If the water to the facility is cut without first ensuring the mixing tanks have been shutdown, the contents of the mixing tanks could overheat and ignite.

Worst-case scenarios that could occur involving hazardous materials stored on site:

Scenario	Negative Outcome	Location
Atmospheric controls within coating units fails.	Explosion	Eastern and southern sections of the process floor.
Uncontrolled fire in Drum or AST Bulk Storage Rooms.	Potential for devastating fire. Due to administrative controls in the drum storage room (blow-out walls and skylights), an explosion in the AST Bulk Storage Room has the potential to be more structurally damaging than an explosion in the Drum Storage Room.	Western side of the building.
Loss of cooling water to the mixing tanks while in operation	Mixing tanks overheat and contents ignite	Mixing Room on the southwest side of the building

See attached facility map, which includes the locations of hazardous materials, locations of process equipment, locations of emergency response equipment, and locations of Process Stop switches and buttons.

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Planning Inventory:

Chemicals of Concern	Toluene: 108-88-3	Adhesive Mixtures Containing Toluene, Resins, Rubbers: 108-88-3, 9003-35-4, 69131-77-1, 9006-04-6, 25038-32-8	Batteries, wet, filled with acid: 7664-93-9	Nitrogen (liquefied): 7727-37-9	Phenolic Resin, contains xylene, ethyl benzene, formaldehyde: 1330-20-7, 100-41-4, 50-00-0
Chemical Hazard(s) (e.g. flammable, corrosive)	Flammable	Flammable	Corrosive	Cryogenic, asphyxiant	Toxic
Maximum volume stored on site	25,000-49,999 pounds	100,000-499,999 pounds	2849 pounds	50,000-74,999 pounds	Toxic
How is it stored (e.g. drum, AST)	UST	Drums, ASTs	Batteries	AST	Bags
Where is it stored (e.g. room number)	Underneath the parking lot southeast of the building. May be located within mixing room ASTs. Contained in piping between the USTs and the Mixing Room.	Drum Storage Room, Bulk (AST) Storage Room. Contained in piping from the mixing room ASTs to the Bulk Storage ASTs, as well as from the Bulk Storage ASTs to the process lines.	Forklifts and pallet jacks	Outside, south of the building. Contained in piping from the AST to the solvent recovery system, as well as to the process lines.	On racks in the mixing room
Containment/Safety Precautions Provided (e.g. on containment pallet)	Daily monitoring program.	ASTs are located within secondary containment. AST rooms are equipped with Class 1 – Division 1 rated equipment and vapor sensors. Entrances to the Drum Storage Room are bermed.	None. Located on forklifts and pallet jacks.	AST low level alarm.	None (solid)
Is the material found in process tanks or piping?	Yes: mixing tanks, ASTs, coating ovens, piping	Yes: mixing tanks, ASTs, coating ovens, piping	No	Yes: solvent recovery skids, piping	Yes, mixing tanks

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Process Shutdown Procedures:

Process Control	Room Number/Location
Circuit Breakers	Located along the western wall of the production floor
Gas Shut Off	Eastern exterior wall, below the EHS Room A/C unit.
Water Shut Off	East Side Riser Room, adjacent to EHS Room
Main Hazardous Waste Storage Area	Northwest corner of the Drum Storage Room
Fire Alarm Control Panel	Adjacent to employee's entrance door on the north side of the building
Solvent Recovery Shut Off	Next to decant tanks on south side of building
Coating Line Shut Off	Interlocked machine guards on each coating line.

Any spilled materials and their associated fumes should be considered highly flammable, and must be approached with caution. Leaks from the locations listed below could result in spills of significant size, and should be treated with extreme caution. All ignition sources near the spill must be controlled, such as pumps, lights, circuit breakers, switches, and other electric equipment. Process equipment, such as the Mixing Vessels and Coating Line ovens, could also act as an ignition source.

Coating Lines

In the event the Process Stop Button is pressed on either of the coating lines, the oven feed drives will shut down. However, neither the oven heaters nor the solvent recovery system will immediately deactivate. The solvent recovery system will continue to run for 18 minutes to allow sufficient time to draw as much of the remaining solvent vapors out of the adhesive which has been applied to the product web as possible. After this 18-minute period, the solvent recovery system will purge the oven by opening a valve and releasing the contents of the oven's atmosphere into the air through the roof of the facility, and then turn itself off. The oven heaters will not shut down when the coating line Stop Process Button is pressed. The oven heaters are connected to a different circuit, which must be shut off independently. As the facility runs 24-hours per day, the ovens are designed to be on at all times, except during maintenance periods. As such, the electrical power to the ovens must be cut to turn off the heating system. This is done by switching off the circuit breakers for each oven, which have been identified on Figure 1. Operations will not resume without authorization of the Emergency Coordinator.

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Liquid Recovered Solvent Transfer System

If the leak can be isolated from the rest of the piping without shutting down the solvent recovery system, then isolate that section. If the leak cannot be isolated from the rest of the piping, then the solvent recovery system must be shutdown properly to ensure the integrity of the coating oven internal atmosphere. Press the process stop button on the coating oven and allow the ovens to purge before shutting down both the ovens and the solvent recovery system. The oven purge process takes approximately 18 minutes, and could potentially release flammable solvent vapors to the roof of the building.

Mixing Tanks

Adhesives manufactured in the mixing tanks have the potential to leak or overflow. In the event of a mixing tank spill, power to the mixing tank should be turned off. Any valves connecting to the leaking tank should be closed, with the exception of the tank's Spill Control Valve. During the mixing process, heat generated as part of the chemical reaction is removed from the tank via a water cooling system. If the water flow to these vessels is stopped for any reason, the mixing tanks must be shut down by pressing the Emergency Stop button.

Adhesive Piping

Adhesives generated in the mixing are transferred to the AST storage room via pipes and pumps. In the event a pipe is damaged or ruptures, any pumps associated with that pipe should be shut off. Any valves attached to that pipe should be closed to isolate the leaking section from the rest of the transfer system prior to clean-up actions being made.

Adhesives used in the coating lines are delivered by 55-gallon drums, or pumped directly from the ASTs via pipes and pumps. In the event one of these pipes is damaged or ruptured, the leak should be isolated following the procedures used in the Mixing Room pipe leaks. If it is determined that the coating line needs to be stopped to initiate clean up and repair activities, press the stop process button. This will allow the solvent recovery system to manage the atmosphere inside of the coating ovens.

Adhesive ASTs

The 3,000 and 4,500 gallon adhesive ASTs are located within secondary containment. The rooms these tanks are located in are equipped with emergency ventilation, and all electrical equipment inside of the storage rooms are rated as explosion-proof (XP). In the event of a leak in one of these tanks, the pumps

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and valves connecting the mixing tanks to the ASTs should be shut off to prevent additional material from being transferred into a leaking AST.

Contact Information for Sensitive Receptors Located with 1/4-Mile Planning Radius:

Facility Name	Facility Address	24-Hour Emergency Contact Info
Golden Years Homes (Nursing Home)	145 Main St., New Hartford, CT 06057	555-567-3847 (business phone)
Greentree Middle School (School)	4 Education Dr., New Hartford, CT 06057	555-192-8374 (business phone)

See attached site location map, which identifies the locations of the facilities listed above.

Name & Contact Info for spill response firm contracted to support the facility in the event of a release: The Spill Guys: 800-000-0000

Are spill response supplies maintained on site? Yes No

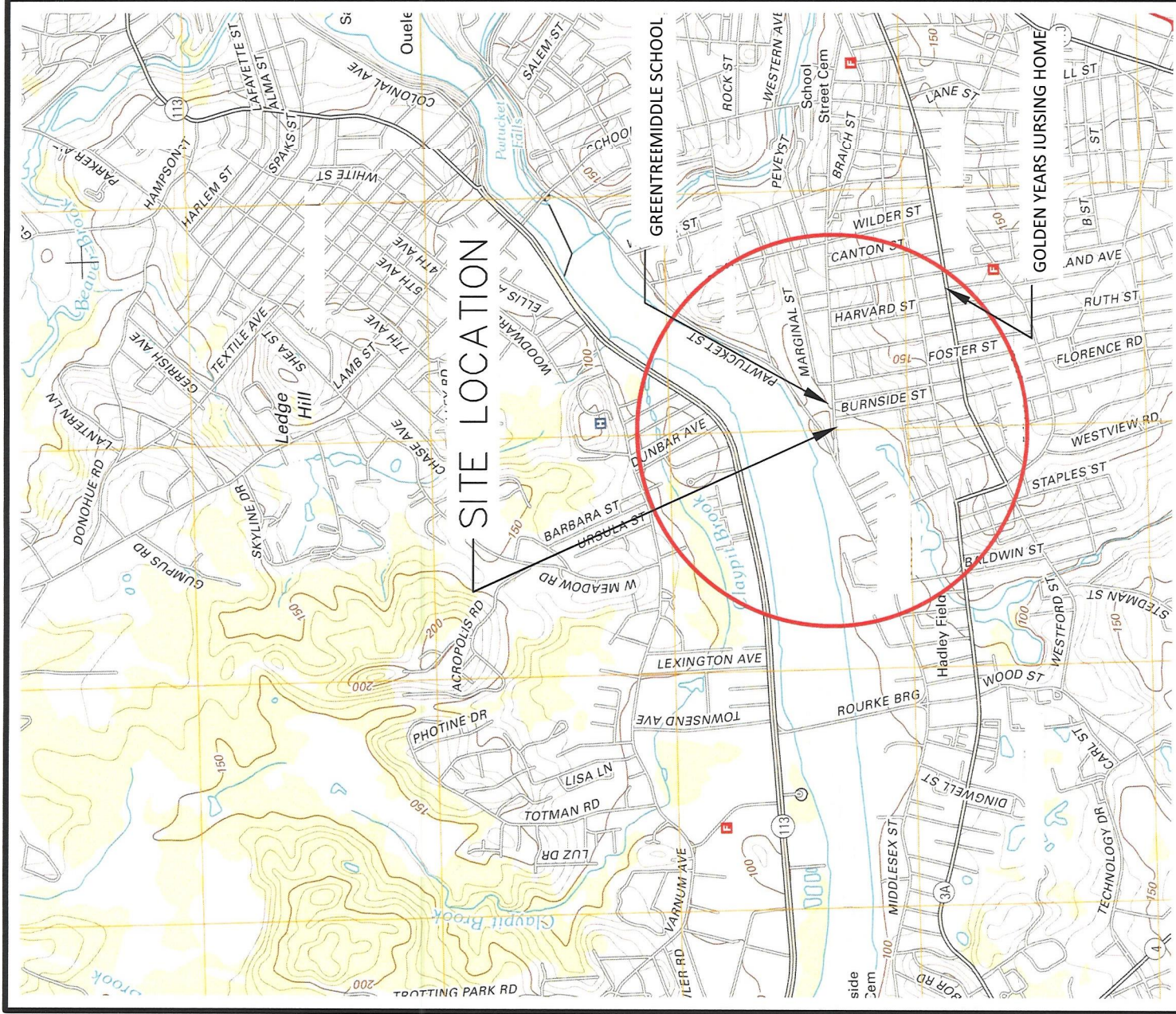
If so, where are these materials stored? In the Drum Storage Room, Mixing Room, and outside of the Bulk Storage Rooms

Describe number and type of materials stored on site: Adsorbants and non-sparking spill response tools are stored in the spill kits, which are located in the Mixing Room, Drum Room, and outside of the Bulk Storage Rooms. PPE, such as chemical protective gloves and safety glasses, are located in dispensers throughout the facility, with respirators located in the Mixing Room office.

Summary Completed by: Robert Trebek

Title: Engineer Date: 11/5/2014

In coordination with: John Dohe, Facility Manager at Coatings, Inc.



SITE LOCATION



APPROXIMATE SCALE IN FEET



MAP REFERENCE:
SECTION OF THE USGS 7.5 MINUTE SERIES
TOPOGRAPHIC MAP

SITE LOCATION MAP



FIGURE 1

KEY

- FIRE EXTINGUISHER
- FIRE HOSE
- FIRE BLANKET
- FIRE ALARM PULL STATION
- EYE WASH
- FIRST AID
- AED
- SPILL KIT
- IN-USE PRODUCT DRUMS
- COMPRESSED GAS
- SATELLITE ACCUMULATION AREAS

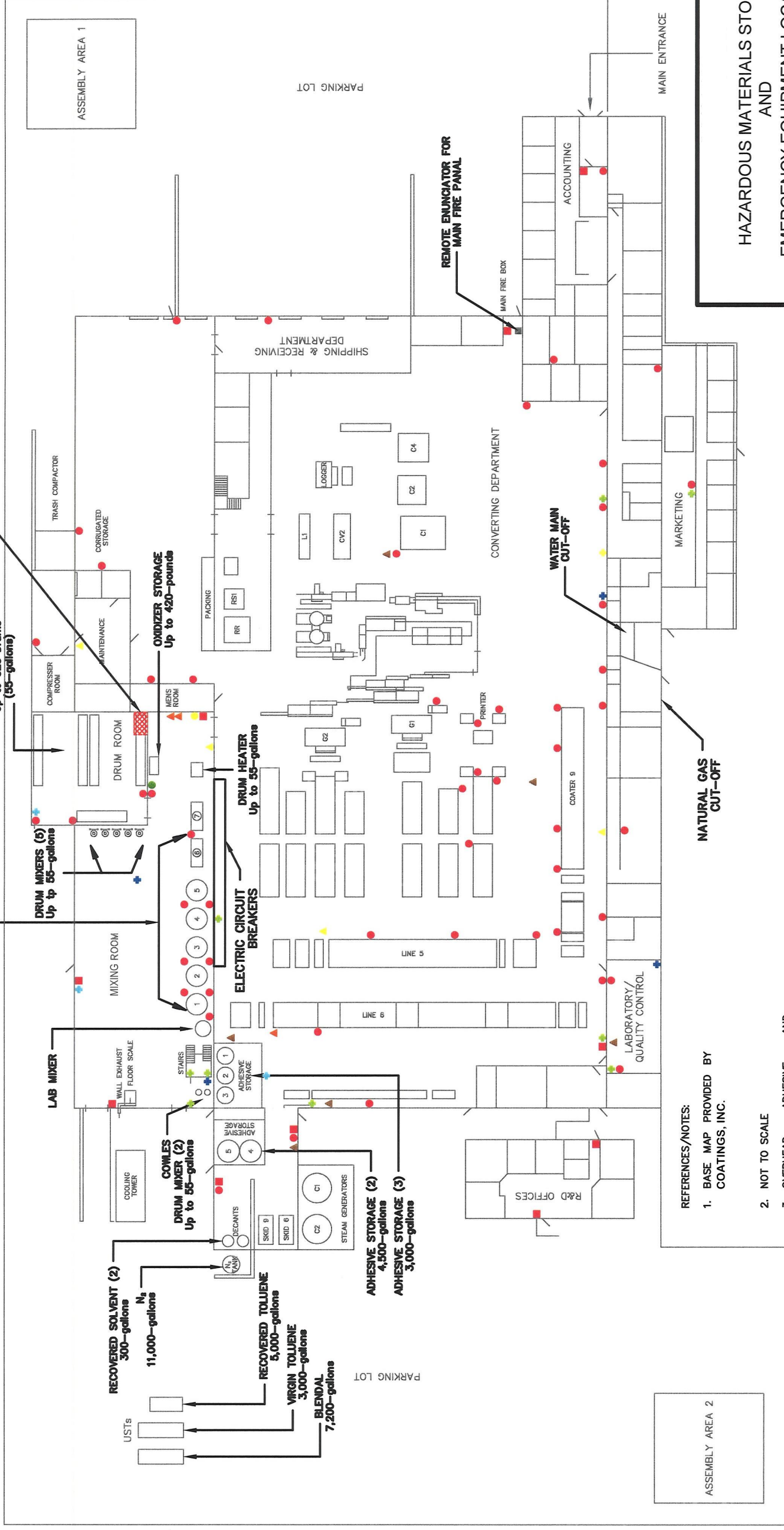
↑ SURFACE WATER DISCHARGE



ADHESIVE MIXING CHURNS (8)
Up to 1,200-gallons

FLAMMABLE LIQUID WASTE DRUM STORAGE
Up to 528 Drums
(55-gallons)

MAIN HAZARDOUS WASTE STORAGE AREA



REFERENCES/NOTES:

1. BASE MAP PROVIDED BY COATINGS, INC.
2. NOT TO SCALE
3. OVERHEAD ADHESIVE AND SOLVENT VAPOR LINES IN SOUTHERN HALF OF BUILDING.

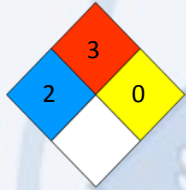
HAZARDOUS MATERIALS STORAGE AND EMERGENCY EQUIPMENT LOCATIONS

FIGURE 2

HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Key Physical and Chemical Properties

Adhesive Mixtures



Vapor Pressure: 22 mmHg
 Vapor Density: 3.14
 LEL: 7.1
 UEL: 1.1
 Flash Point: 40°F
 Specific Gravity: 0.92
 Solubility: 0.05%
 pH: No data available
 Boiling Point: 231°F
 Melting Point: -139°F
 Reactivity: Stable
 Incompatibles: Strong oxidizers, nitric and sulfuric acids



Shipped As: (Circle)

Typical Container:

Drum/ AST

Size/Quantity:

55 gal. drums,
 4,500 gal. or 3,000 gal.
 AST

PAGE:

ERG: 198

NPG: 311

Toxicological Properties

EXPOSURE ROUTES (ER):

Inhalation? Yes
 Contact? Yes
 Absorption? Yes
 Ingestion? Yes

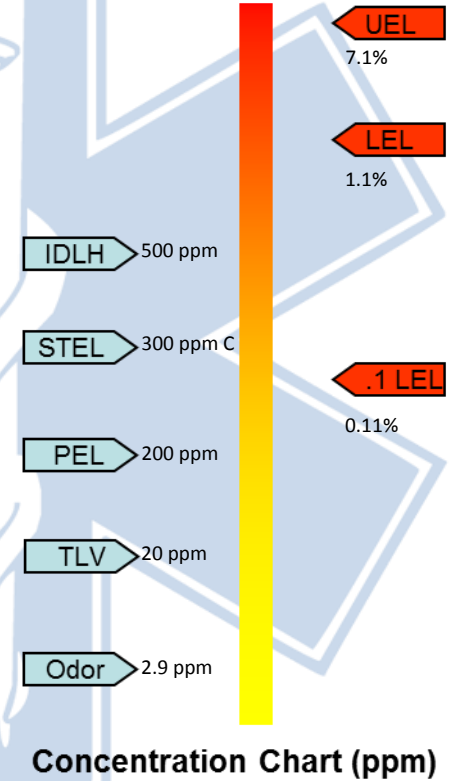
SYMPTOMS:

Symptoms vary on concentration of components. Can cause dizziness, irritated eyes, skin, nose, and throat.

Can cause dermatitis, kidney damage, or liver damage.

TARGET ORGANS:

Eyes, Skin, respiratory system, central nervous system, liver, kidneys.



Glove Type : North brand Silver Shield or Viton (or equivalent) Respiratory Requirements: APR with appropriate cartridge or supplied air
 Suit Type: PVA, Teflon, Viton, PE/EVAL, Barricade, CPF3, Responder, Trelchem, Tychem Storage Location: Drum Storage Room, Bulk Storage Rooms

FIRE: Use water spray, dry chemical foam, or carbon dioxide.

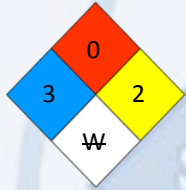
SPECIAL CONCERNS/HAZARDS: CONTAINS A COMBINATION OF TOLUENE, PHENOLIC RESIN, HYDROCARBON RESIN, NATURAL RUBBER, AND SYNTHETIC RUBBER.

MEDICAL: Remove contaminated clothing and wash skin with soap and water. If in eyes, rinse thoroughly for at least 15 minutes. Consult a physician.

HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Key Physical and Chemical Properties

Sulfuric Acid



Vapor Pressure: 1.00 mmHg @ 294.4 °F
 Vapor Density: 3.39
 LEL: No Data Available
 UEL: No Data Available
 Flash Point: N/A
 Specific Gravity: No Data Available
 Solubility: Miscible
 pH: 1.2
 Boiling Point: 554 °F
 Melting Point: 37 °F
 Reactivity: Reacts violently with water



Shipped As: (Circle) Liquid
 Typical Container: Battery

Size/Quantity: 810 pounds

PAGE: _____
 ERG: 212
 NPG: 290

Toxicological Properties

EXPOSURE ROUTES (ER):

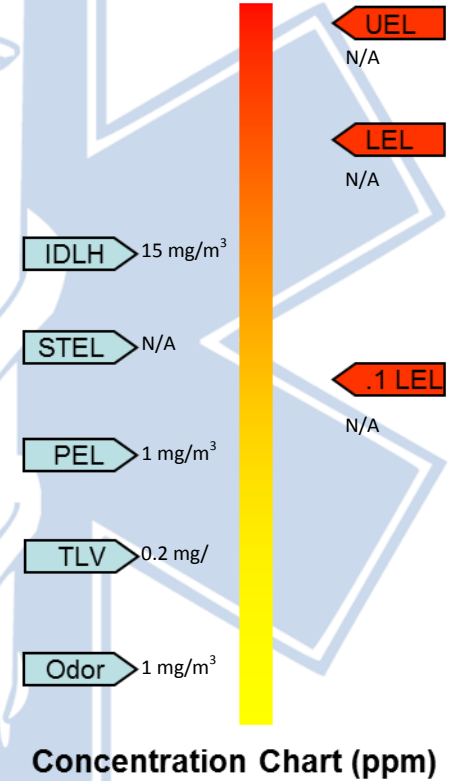
Inhalation? Yes
 Contact? Yes
 Absorption? No
 Ingestion? Yes

SYMPTOMS:

Irritated eyes, skin, nose, mouth, and throat. Pulmonary edema.
Stomasis. Eye and skin burns.
Dermatitis.

TARGET ORGANS:

Eyes, Skin, respiratory system, teeth.



Glove Type : North brand Silver Shield, Viton, or Butyl (or equivalent)

Respiratory Requirements: APR with appropriate cartridge or supplied air

Suit Type: 8 hr: Butyl, PE, Teflon, Saranex, PE/EVAL, Barricade, CPF3, Responder, Trelchem, Tychem 4 hr: Viton

Storage Location: In batteries on fork trucks

FIRE: Use alcohol-resistant foam, dry chemical, or carbon dioxide.

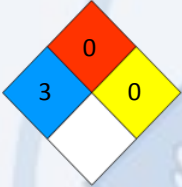
SPECIAL CONCERNS/HAZARDS:

MEDICAL: Remove contaminated clothing and wash skin with soap and water. If in eyes, rinse thoroughly for at least 15 minutes. Consult a physician.

HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Key Physical and Chemical Properties

Nitrogen
Liquid Nitrogen



Vapor Pressure: Gaseous at room temperature

Vapor Density: No data available

LEL: Nonflammable

UEL: Nonflammable

Flash Point: Nonflammable

Specific Gravity: No Data Available

Solubility: 0.023


pH: No Data Available

Boiling Point: -320.44°F

Melting Point: -346°F

Reactivity: No Data Available

Incompatibles: Lithium, neodymium, titanium, magnesium.



Shipped As: (Circle) LIQUID

Typical Container: AST

Size/Quantity: 11,000 gallon

PAGE: _____

ERG: 178

NPG: N/A

Toxicological Properties

EXPOSURE ROUTES (ER):

Inhalation? Yes

Contact? Yes

Absorption? No

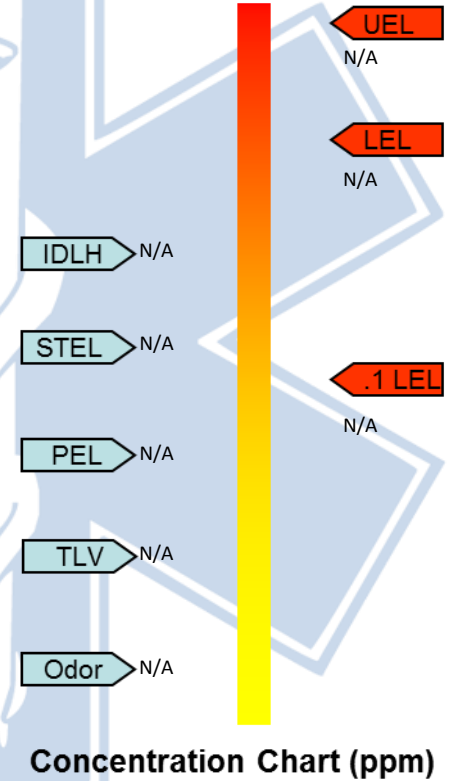
Ingestion? Yes

SYMPTOMS:

Difficulty breathing, headache, unconscious. Contact with skin can induce frostbite.

TARGET ORGANS:

Eyes, skin, respiratory system.



Glove Type : Cryogenic

Suit Type: Cryogenic

FIRE: Nonflammable. May combine with oxygen and hydrogen at high temperatures

MEDICAL: Flush frostbitten areas with warm water . Flush eyes with warm water for at least 15 minutes. Give oxygen if breathing, or artificial respiration if not breathing. Consult a physician.

Respiratory Requirements: Supplied air in oxygen-deficient atmospheres

Storage Location: 11,000 gallon AST south of the building

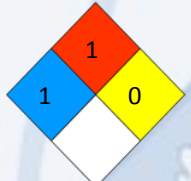
SPECIAL CONCERNS/HAZARDS: ASPHYXIAN, LIQUID FORM IS CRYOGENIC. MAY DISPLACE OXYGEN.

HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Key Physical and Chemical Properties

Phenolic Resin

Phenol formaldehyde resin



Vapor Pressure: 1.00 mmHg @ 294.4 °F

Vapor Density: N/A (solid)

LEL: No Data Available

UEL: No Data Available

Flash Point: 410°F

Specific Gravity: 1.05

Solubility: Negligible

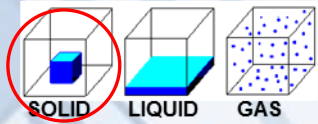
pH: N/A (solid)

Boiling Point: >212°F

Melting Point: 142°F

Reactivity: Stable

Incompatibles: Strong acids, strong oxidizers, halogens, acyl halides, strong alkalis



Shipped As: (Circle)

Typical Container: Bag

Size/Quantity: 15+ bags

PAGE: _____

ERG: N/A

NPG: Phenol: 248
Formaldehyde: 148

Toxicological Properties

EXPOSURE ROUTES (ER):

Inhalation? Yes

Contact? Yes

Absorption? No

Ingestion? Yes

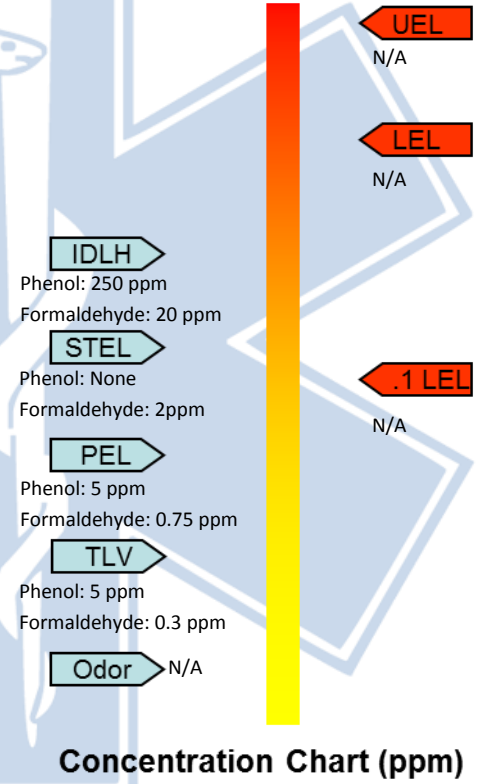
SYMPTOMS:

Exposure to phenol can cause eye, skin, nose, and throat irritation, as well as liver and kidney damage.

Exposure to formaldehyde can cause respiratory irritation. Long term exposure could cause cancer.

TARGET ORGANS:


Eyes, respiratory system.




Glove Type : North brand Silver Shield, Viton, or Butyl (or equivalent)

Respiratory Requirements: APR with appropriate cartridge or supplied air

Suit Type: 8 hr: Viton, Saranex, Barricade, Responder, Trelchem 4 hr: Butyl, Neoprene, Teflon, PE/EVAL **Storage Location:** In bags in the Churn Room

FIRE:  Use water spray, dry chemical, foam, or carbon dioxide.

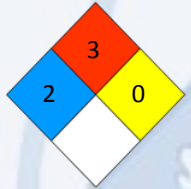
SPECIAL CONCERNS/HAZARDS: CONTAINS PHENOL AND FORMALDEHYDE

MEDICAL:  Remove contaminated clothing and wash skin with soap and water. If in eyes, rinse thoroughly for at least 15 minutes. Consult a physician.

HAZARDOUS MATERIALS PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

Key Physical and Chemical Properties

Toluene



Vapor Pressure: 21 mmHg
 Vapor Density: No Data Available
 LEL: 1.1%
 UEL: 7.1%
 Flash Point: 40°F
 Specific Gravity: 0.87
 Solubility: 0.07%
 pH: No Data Available
 Boiling Point: 232°F
 Melting Point: -139 °F
 Reactivity: Stable
 Incompatibles: Strong oxidizers



Shipped As: (Circle) LIQUID
 Typical Container: UST
 Size/Quantity: 3,000 gallon UST

PAGE: _____

ERG: 198

NPG: 311

Toxicological Properties

EXPOSURE ROUTES (ER):

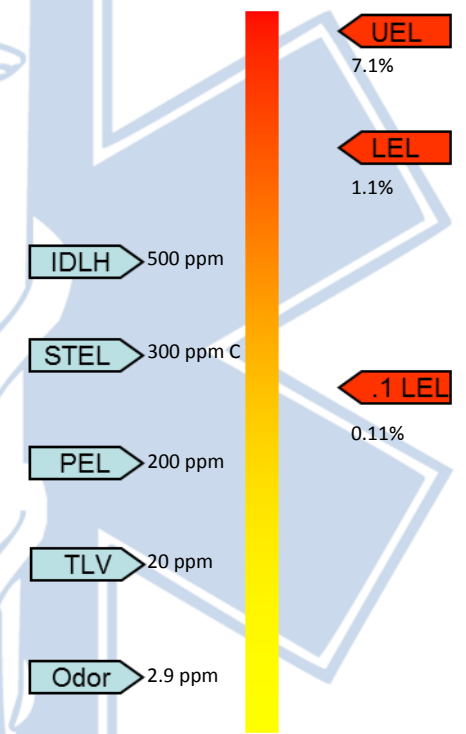
Inhalation? Yes
 Contact? Yes
 Absorption? Yes
 Ingestion? Yes

SYMPTOMS:

Irritated eyes, skin, nose, mouth, and throat. Euphoria, dizziness, or lassitude.
Can cause dermatitis, liver damage, or kidney damage.

TARGET ORGANS:

Eyes, Skin, respiratory system, central nervous system, liver, kidneys.



Concentration Chart (ppm)

Glove Type : North brand Silver Shield or Viton (or equivalent) Respiratory Requirements: APR with appropriate cartridge or supplied air
 Suit Type: PVA, Teflon, Viton, PE/EVAL, Barricade, CPF3, Responder, Trelchem, Tychem Storage Location: Two USTs: south of the building

FIRE: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
SPECIAL CONCERNS/HAZARDS:

MEDICAL: Remove contaminated clothing and wash skin with soap and water. If in eyes, rinse thoroughly for at least 15 minutes. Consult a physician.