

MATERIAL SAFETY DATA SHEET

West System Inc.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WEST SYSTEM® 207 Clear Hardener®
PRODUCT CODE: 207
CHEMICAL FAMILY: Amine.
CHEMICAL NAME: Modified polyamine.
FORMULA: Not applicable.

MANUFACTURER:
West System Inc.
102 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS:
Transportation
CHEMTREC: 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS Hazard Rating: Health - 3 Flammability - 1 Reactivity - 0

DANGER! Corrosive. Severe eye irritant. Severe skin irritant. Severe respiratory irritant. May cause skin sensitization. Harmful if swallowed. Harmful if absorbed through the skin. Clear, liquid, ammonia odor.

PRIMARY ROUTE(S) OF ENTRY: Skin contact, eye contact, inhalation.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: Exposure to high concentrations of vapor causes irritation to the respiratory tract. Coughing and chest pain may result.

CHRONIC INHALATION: Prolonged or repeated exposure to high concentrations of vapors may cause lung tissue damage. Exposure to low vapor concentrations may cause a sore throat.

ACUTE SKIN CONTACT: Moderately corrosive. Prolonged contact may cause skin damage with burns and blistering. Wide spread contact may result in material being absorbed in harmful amounts.

CHRONIC SKIN CONTACT: May cause persistent irritation or dermatitis. Repeated contact may cause allergic reaction/sensitization and possible skin tissue destruction, and may cause internal organ damage. Large dose skin contact may result in material being absorbed in harmful amounts.

EYE CONTACT: Causes severe irritation, pain and possible permanent injury. Vapor absorption into the eye can cause blurred vision and injury.

INGESTION: Moderately toxic. May cause bleeding of the gastrointestinal tract. May cause burning of the mouth and throat. Aspiration hazard.

SYMPTOMS OF OVEREXPOSURE: Development of allergic reaction or sensitization. Skin irritation and redness. Respiratory irritation or tightness of chest. Conjunctivitis or corneal damage. Internal organ complications.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Chronic respiratory disease (e.g., bronchitis, asthma). Skin conditions and allergies. Eye disorders.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION
Polymer of epichlorohydrin, bisphenol-A, and TMD	111850-23-8	
Polyoxypropylenediamine	9046-10-0	
Isophoronediamine	2855-13-2	
Trimethylhexamethylenediamine	25513-64-8	
Hydroxybenzene	108-95-2	

4. FIRST AID MEASURES

FIRST AID FOR EYES: Immediately flush with water for at least 15 minutes. Get prompt medical attention.

FIRST AID FOR SKIN:..... Remove contaminated clothing. Immediately wash skin with soap and water. Do not apply greases or ointments. Get medical attention if severe exposure.

FIRST AID FOR INHALATION:..... If symptoms occur as noted in Section 3, remove to fresh air. Get medical attention if symptoms persist or worsen.

FIRST AID FOR INGESTION:..... Give conscious person at least 2 glasses of water. Do not induce vomiting. Aspiration hazard. If vomiting should occur spontaneously, keep airway clear. Get medical attention.

5. FIRE FIGHTING MEASURES:

FLASH POINT:..... > 200°F (PMCC)

EXTINGUISHING MEDIA:..... Dry chemical, alcohol foam, carbon dioxide (CO₂), dry sand, limestone powder.

FIRE AND EXPLOSION HAZARDS:..... Burning will generate toxic fumes. Combustion products may include, but are not limited to: oxides of nitrogen, carbon monoxide, carbon dioxide, volatile amines, ammonia, nitric acid, nitrosamines. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. If hardener is spilled into or mixed with sawdust, heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

SPECIAL FIRE FIGHTING PROCEDURES:..... Use full-body protective gear and a self-contained breathing apparatus. Use of water may generate toxic aqueous solutions. Do not allow water run-off from fighting fire to enter drains or other water courses.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES:..... Stop leak without additional risk. Wear proper personal protective equipment. Dike and contain spill. Ventilate area. Large spill - dike and pump into appropriate container for recovery. Small spill - recover or use inert, non-combustible absorbent material (e.g., sand, clay) and shovel into suitable container. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. Wash spill residue with warm, soapy water if necessary.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (min./max.):..... 40°F (4°C) / 90°F (32°C)

STORAGE:..... Minimum feasible handling temperatures should be maintained. If stored above 100°F, nitrogen atmosphere is recommended. Keep containers tightly closed.

HANDLING PRECAUTIONS:..... Use only with adequate ventilation. Do not breath vapors or mists from heated material. Avoid contact with skin and eyes. Wash thoroughly after handling. When mixed with epoxy resin this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

EYE PROTECTION GUIDELINES:..... Chemical splash goggles or full-face shield.

SKIN PROTECTION GUIDELINES:..... Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES:..... General mechanical or local exhaust ventilation. In the absence of adequate ventilation, use a NIOSH approved air purifying respirator with an organic vapor cartridge.

ADDITIONAL PROTECTIVE MEASURES:..... Use where there is immediate access to safety shower and emergency eye wash. Provide proper wash/cleanup facilities for proper hygiene. Contact lens should not be worn when working with this material.

OCCUPATIONAL EXPOSURE LIMITS:..... Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM..... Liquid.
COLOR..... Clear.
ODOR..... Ammonia-like.
BOILING POINT..... > 480°F.
MELTING POINT/FREEZE POINT..... No data.
pH..... Alkaline
SOLUBILITY IN WATER..... Appreciable.
SPECIFIC GRAVITY..... 0.98.
BULK DENSITY..... 8.15 pounds/gallon.

VAPOR PRESSURE < 1 mmHg @ 20°C.
 VAPOR DENSITY Heavier than air.
 VISCOSITY 260 cPs.
 % VOLATILE BY WEIGHT ASTM 2369-07 was used to determine the Volatile Matter Content of mixed epoxy resin and hardener. 105 Resin and 207 Hardener, mixed together at 3.6:1 by weight, has a density of 976 g/L (8.15 lb/gal). The combined VOC content for 105/207 is 9.13 g/L (0.08 lb/gal).

10. STABILITY AND REACTIVITY

STABILITY: Stable.
 HAZARDOUS POLYMERIZATION: Will not occur.
 INCOMPATIBILITIES: Strong oxidizers, acids.
 DECOMPOSITION PRODUCTS: Very toxic fumes and gases generated when burned, undergoing uncontrolled exothermic reactions, or otherwise heated to decomposition. Decomposition products may include, but not limited to: oxides of nitrogen, volatile amines, ammonia, nitric acid.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product.

Oral: Expected to be moderately toxic.
 Inhalation: Expected to be moderately toxic.
 Dermal: Expected to be moderately toxic.

Adsorption of phenolic solutions through the skin may be very rapid and can cause death. Lesser exposures can cause damage to the kidney, liver, pancreas and spleen; and cause edema of the lungs. Chronic exposures can cause death from liver and kidney damage.

CARCINOGENICITY:

NTP No.
 IARC No.
 OSHA No.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION:

Environmental Fate: 108-95-2 Phenol: Biodegradability = 99.5% at 7 days.

Wastes from this product may present long term environmental hazards. Do not allow into sewers, on the ground or in any body of water.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

DOT
 D.O.T. SHIPPING NAME: Polyamines, liquid, corrosive, n.o.s.
 TECHNICAL SHIPPING NAME: Polyoxypropylenediamine
 D.O.T. HAZARD CLASS: Class 8
 U.N./N.A. NUMBER: UN 2735
 PACKING GROUP: PG II

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15. REGULATORY INFORMATION

OSHA STATUS: Corrosive; irritant; possible sensitizer; possible liver or kidney toxin.

TSCA STATUS:..... All components are listed on TSCA inventory or otherwise comply with TSCA requirements.

Canada WHMIS Classification: D2A, D2B, E

SARA TITLE III:

SECTION 313 TOXIC CHEMICALS:..... This product contains hydroxybenzene (phenol) and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>COMPONENT NAME</u> <u>/CAS NUMBER</u>	<u>CONCENTRATION</u>	<u>STATE CODE</u>
Phenol 108-95-2	<10%	NJ, RI, PA, MA, IL

16. OTHER INFORMATION:

REASON FOR ISSUE:..... Changes made to sections 5, 6, 11, 14 & 15. This MSDS pertains 207 batches with lot number 229034 and greater.

PREPARED BY: G. M. House

APPROVED BY: G. M. House

TITLE: Health, Safety & Environmental Manager

APPROVAL DATE: February 10, 2011

SUPERSEDES DATE: January 3, 2008

MSDS NUMBER: 207-11a

Note: The Hazardous Material Indexing System (HMIS), cited in the Emergency Overview of Section 3, uses the following index to assess hazard rating: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; and 4 = Severe.

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