

Material Safety Data Sheet
Cytoseal™ XYL

Section 1 - Chemical Product and Company Identification

MSDS Name:

Cytoseal™ XYL

Catalog Numbers:

8312-16E, 8312-4

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
1330-20-7	Xylenes (o-, m-, p- isomers)	65-70	215-535-7		
28262-63-7	Acrylic resin	25-30	Not available		
128-37-0	Antioxidant	5-10	204-881-4		
85-68-7	Butyl benzyl phthalate	<1.0	201-622-7		

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Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Colorless liquid

Warning! Flammable liquid and vapor. Causes eye, skin, and respiratory tract irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. May be harmful if absorbed through skin or if inhaled. May cause central nervous system depression. May cause reproductive and fetal effects. Flash Point: 66°F.

Target Organs: Central nervous system, Respiratory system, Eyes, Skin

Potential Health Effects

Eye:

Splashes of xylene in human eyes generally cause transient superficial injury.

Skin:

May be harmful if absorbed through the skin. Xylene contact causes defatting of the skin with irritation, dryness, and cracking. Blistering may occur, particularly if exposure to concentrated xylene is prolonged and the exposed area of skin is occluded.

Ingestion:

Aspiration hazard. May cause irritation of the digestive tract. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation:

Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. Odor thresholds ranging from 0.07 to 40 ppm have been reported for xylenes. Inhalation overexposure may lead to central nervous system depression, producing effects such as dizziness, headache, confusion, incoordination, nausea, weakness, and loss of consciousness. Extreme exposures may cause other CNS effects including death.

Chronic:

May cause reproductive and fetal effects. Chronic exposure to xylene may cause defatting dermatitis, reversible eye damage, dyspnea (labored breathing), confusion, dizziness, apprehension, memory loss, headache, tremors, weakness, anorexia, nausea, ringing in the ears, irritability, thirst, mild changes in liver function, kidney impairment, anemia, and hyperplasia, but not destruction, of the bone marrow.

Section 4 - First Aid Measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

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Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. Vapors may form an explosive mixture with air. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire. May accumulate static electricity.

Extinguishing Media:

Water may be ineffective. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: 1.0 Upper: 6.0

Flash Point:

66°F (18.89°C)

NFPA Rating:

(estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces. U.S. regulations require reporting spills and releases to soil, water and air in excess of reportable quantities. This material creates a fire hazard because it floats on water. If possible, try to contain floating material.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist.

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Storage:

Keep away from sources of ignition. Keep container closed when not in use. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Xylenes (o-, m-, p- isomers)	100 ppm TWA; 150 ppm STEL	None listed	100 ppm TWA; 435 mg/m ³ TWA;
Acrylic resin	None listed	None listed	None listed
Antioxidant	2 mg/m ³ TWA (inhalable fraction and vapor)	10 mg/m ³ TWA	None listed
Butyl benzyl phthalate	None listed	None listed	None listed

OSHA Vacated PELs

Xylenes (o-, m-, p- isomers): 100 ppm TWA; 435 mg/m³ TWA
Antioxidant: 10 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Colorless
Odor: Aromatic odor
pH: No information found
Vapor Pressure: 6.7 mm Hg @ 21°C
Vapor Density: heavier than air
Evaporation Rate: slower than ether

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Viscosity: No information found
Boiling Point: 231°F
Freezing/Melting Point: No information found
Decomposition Temperature: No information found
Solubility in water: Insoluble.
Specific Gravity/Density: 0.864 kg/l
Molecular Formula: Solution
Molecular Weight: No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

High temperatures, ignition sources

Incompatibilities with Other Materials

Strong oxidizing agents, nitric acid

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 1330-20-7: ZE2100000
CAS# 28262-63-7 unlisted
CAS# 128-37-0: GO7875000
CAS# 85-68-7: TH9990000

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LD50/LC50:

CAS# 1330-20-7:

Draize test, rabbit, eye: 87 mg Mild
Draize test, rabbit, eye: 5 mg/24H Severe
Draize test, rabbit, skin: 100% Moderate
Draize test, rabbit, skin: 500 mg/24H Moderate
Inhalation, rat: LC50 = 5000 ppm/4H
Oral, mouse: LD50 = 2119 mg/kg
Oral, rat: LD50 = 4300 mg/kg
Skin, rabbit: LD50 = >1700 mg/kg.

CAS# 28262-63-7:

No information found

CAS# 128-37-0:

Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 500 mg/48H Moderate
Oral, mouse: LD50 = 650 mg/kg
Oral, mouse: LD50 = 1040 mg/kg
Oral, rabbit: LD50 = 2100 mg/kg
Oral, rat: LD50 = 890 mg/kg.

CAS# 85-68-7:

Oral, mouse: LD50 = 4170 mg/kg
Oral, rat: LD50 = 2330 mg/kg
Skin, rabbit: LD50 = >10 gm/kg
Skin, rat: LD50 = 6700 mg/kg.

Carcinogenicity:

CAS# 1330-20-7: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 28262-63-7: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 128-37-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 85-68-7: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

175 workers were exposed to 21 ppm of xylene for 7 years. Subjective symptoms such as anxiety, forgetfulness, inability to concentrate and dizziness were reported. Xylenes accounted for >70% of the total exposure. Liver & kidney effects were not reported

Teratogenicity:

No increased incidence of birth defects was reported in a study of lab workers exposed to xylene during early pregnancy. Exposure to other solvents and chemicals also occurred. An increased incidence of spontaneous abortions was reported. Animal information suggests that xylene is not teratogenic or embryotoxic at exposure levels that are not harmful to the mother. Boys of moms highly exposed to phthalates show stunted genitals. The higher the levels of phthalates in the mothers during the final months of pregnancy, the less masculine their boys were when examined by pediatricians. (Pittsburgh Post-Gazette 5/27/05)

Reproductive:

An increase in menstrual disorders has been reported in women exposed to organic solvents such as benzene, toluene, and xylenes. It is not possible to attribute these effects to xylenes in particular.

Mutagenicity:

Xylene does not appear to be a mutagen.

Neurotoxicity:

Xylene may be ototoxic (damages hearing or enhances sensitivity to noise) in chronic occupational exposures, probably from a neurotoxic mechanism.

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Other:

See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Ecotoxicity:

Fish: Rainbow trout: LC50 = 13.5 mg/L; 96 Hr; Unspecified
Fish: Goldfish: LD50 = 13 mg/L; 24 Hr; Unspecified
Fish: Fathead Minnow: LC50 = 46 mg/L; 1 Hr; Static bioassay

Acute and long-term toxicity to fish and invertebrates: LD50 for goldfish is 13 mg/L/24 Hr.

Cas#1330-20-7:

LC50(96Hr.) rainbow trout = 8.05 mg/L, Static condition;
LC50(96Hr.) fathead minnow = 16.1 mg/L, flow-through conditions; LC50(96Hr.) bluegill = 16.1 mg/L, flow-through;
EC50 (48 Hr.) water flea = 3.82 mg/L, flow-through conditions;
EC50(24 Hr.) photobacterium phosphoreum = 0.0084 mg/L, Microtox test.

Environmental:

In air, xylenes degrade by reacting with photochemically produced hydroxyl radicals. In soil it will volatilize and leach into groundwater. Little bioconcentration is expected.

Physical:

ATMOSPHERIC FATE: According to a model of gas/particle partitioning of semivolatile organic compounds in the atmosphere, xylene, which has an experimental vapor pressure of 7.99 mm Hg at 25 deg C, will exist solely as a vapor in the ambient atmosphere. Vapor-phase xylene is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the atmospheric lifetime of xylene is about 14-26 hours. Ambient levels of xylene are detected in the atmosphere due to large emissions of this compound.

Other:

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 1330-20-7: waste number U239 (Ignitable waste, Toxic waste).

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Section 14 - Transport Information

US DOT

Canadian TDG

Proper Shipping

Name: XYLENES

Hazard Class: 3

UN Number: UN1307

Packing Group: II

XYLENES,
SOLUTION

3

UN1307

II

USA RQ: CAS# 1330-20-7: 100 lb final RQ; 45.4 kg final RQ

USA RQ: CAS# 85-68-7: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 1330-20-7 is listed on the TSCA Inventory.
CAS# 28262-63-7 is listed on the TSCA Inventory.
CAS# 128-37-0 is listed on the TSCA Inventory.
CAS# 85-68-7 is listed on the TSCA Inventory.

Health and Safety Reporting List

CAS# 85-68-7: Effective 4/29/83, Sunset 4/29/93

Chemical Test Rules

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 1330-20-7: 100 lb final RQ; 45.4 kg final RQ
CAS# 85-68-7: 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 1330-20-7: immediate, delayed, fire.
CAS# 128-37-0: immediate.

SARA Section 313

This material contains Xylenes (o-, m-, p- isomers) (CAS# 1330-20-7, 65-70%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 1330-20-7 is listed as a hazardous air pollutant (HAP).

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Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 1330-20-7 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

CAS# 85-68-7 is listed as a Priority Pollutant under the CWA.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Xylenes (o-, m-, p- isomers) can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Antioxidant can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Butyl benzyl phthalate can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Massachusetts.

California Prop 65

WARNING: This product contains Butyl benzyl phthalate, a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: XN

Risk Phrases: R 10 Flammable.

R 20/21 Harmful by inhalation and in contact with skin.

R 36/38 Irritating to eyes and skin.

Safety Phrases: S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

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Canadian DSL/NDSL

CAS# 1330-20-7 is listed on Canada's DSL List.
CAS# 28262-63-7 is listed on Canada's DSL List.
CAS# 128-37-0 is listed on Canada's DSL List.
CAS# 85-68-7 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B2, D2B, D2A.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 1330-20-7 is not listed on the Canadian Ingredient Disclosure List.
CAS# 128-37-0 is listed on the Canadian Ingredient Disclosure List.
CAS# 85-68-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

Color information has been
MSDS Creation Date: March 1, 2007
Revision Date: March 1, 2007

Revisions were made in Sections:

3, 5, 9, 11, 14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.