

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	TuffRez 233AR Polyurethane Coating Abrasion Resistant - Hardener/Side B
Version #	2.0
Revision date	19-Jun-2008
Company information	PolySpec 6614 Gant Road Houston, TX 77066 US
Emergency	Chemtrec (800) 424-9300 International (703) 527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS #	Percent
Propylene glycol monomethyl ether acetate	108-65-6	< 10
Xylene	1330-20-7	< 10
Ethyl benzene	100-41-4	< 1
Non-hazardous and other components below reportable levels		> 90
Composition comments	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	

3. HAZARDS IDENTIFICATION

Emergency overview	Irritating to eyes. Irritating to skin. Irritating to respiratory system. May be ignited by heat, sparks or flames. Flammable/Combustible Material.
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Potential short term health effects

Eyes	Causes eye irritation.
Skin	Irritating to skin.
Inhalation	Irritating to respiratory system.
Ingestion	Do not ingest.

4. FIRST AID MEASURES

First aid	
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes.
Skin contact	Remove and isolate contaminated clothing and shoes. If skin irritation persists, call a physician. Wash off immediately with plenty of water.
Inhalation	If breathing is difficult, give oxygen. Move to fresh air.
Ingestion	Drink plenty of water. Do not induce vomiting without medical advice.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Unusual fire & explosion hazards	Vapor or gas may spread to distant ignition sources and flash back. Runoff to sewer may cause fire or explosion hazard. Containers may explode when heated.
Suitable extinguishing media	Carbon dioxide (CO2). Alcohol foam. Dry chemical.
Fire fighting equipment/instructions	Move containers from fire area if you can do it without risk. In the event of fire, wear self contained breathing apparatus. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in flame. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire.
Flash point	115 °F (46.1 °C) Pensky-Martens Closed Cup

6. ACCIDENTAL RELEASE MEASURES

Evacuation procedures	Keep unnecessary personnel away. Ventilate closed spaces before entering. Stay upwind. Keep out of low areas.
Containment procedures	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Personal precautions	Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for cleaning up	Avoid dust formation. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dike far ahead of liquid spill for later disposal. Never return spills in original containers for re-use. Should not be released into the environment.

7. HANDLING AND STORAGE

Handling	Do not handle or store near an open flame, heat or other sources of ignition. Do not breathe gas/fumes/vapor/spray. All equipment used when handling the product must be grounded. Wear personal protective equipment. Avoid contact with eyes. Surfaces may become slippery after spillage.
Storage	Keep away from heat and sources of ignition. Keep in a cool, well-ventilated place. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. The pressure in sealed containers can increase under the influence of heat. Do not freeze.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

ACGIH - Threshold Limits Values - Short Term Exposure Limits (TLV-STEL)

Ethyl benzene	100-41-4	125 Ppm STEL
Xylene	1330-20-7	150 Ppm STEL

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Ethyl benzene	100-41-4	100 Ppm TWA
Xylene	1330-20-7	100 Ppm TWA

ACGIH - Threshold Limits Values - TLV Basis - Critical Effects

Ethyl benzene	100-41-4	Irritation; CNS
Xylene	1330-20-7	irritation

OSHA - Final PELs - Time Weighted Averages (TWAs)

Ethyl benzene	100-41-4	100 Ppm TWA; 435 mg/m ³ TWA
Xylene	1330-20-7	100 Ppm TWA; 435 mg/m ³ TWA

Personal protective equipment

Respiratory protection	A NIOSH- approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
Hand protection	Protective gloves.
Eye protection	Wear chemical goggles.
Skin and body protection	Wear suitable protective clothing. Wear appropriate chemical resistant clothing.
General	Structural firefighters protective clothing will only provide limited protection. Avoid contact with the skin and the eyes.

Engineering measures to reduce exposure Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Hygiene measures When using do not smoke. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes.

9. PHYSICAL & CHEMICAL PROPERTIES

Boiling point	408 °F (208.9 °C)
Density	8.736 lb/gal
Form	Liquid.
Specific gravity	1.04
Vapor pressure	9.75 Mm Hg

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Stability	Risk of ignition.
Conditions to avoid	High temperatures. Direct sources of heat.
Hazardous polymerization	Will not occur.
Incompatibility	None known.

11. TOXICOLOGICAL INFORMATION

Local effects Irritating to respiratory system. Irritating to eyes. Irritating to skin.

Component analysis - LD50

NIOSH - Selected LD50s and LC50s

Ethyl benzene	100-41-4	Oral LD50 Rat: 3500 mg/kg; Dermal LD50 Rabbit: 17800 µL/kg
Propylene glycol monomethyl ether acetate	108-65-6	Oral LD50 Rat: 8532 mg/kg; Dermal LD50 Rabbit: >5 g/kg
Xylene	1330-20-7	Inhalation LC50 Rat: 5000 ppm/4H; Oral LD50 Rat: 4300 mg/kg; Dermal LD50 Rabbit: >1700 mg/kg

Carcinogenicity

ACGIH - Threshold Limits Values - Carcinogens

Ethyl benzene	100-41-4	A3 - Confirmed animal carcinogen with unknown relevance to humans
Xylene	1330-20-7	A4 - Not Classifiable as a Human Carcinogen

Routes of exposure Inhalation. Skin contact.

12. ECOLOGICAL INFORMATION

Ecotoxicity Components of this product are hazardous to aquatic life.

Environmental effects Harmful to aquatic life.

Ecotoxicity - Freshwater Fish Species Data

Ethyl benzene	100-41-4	96 Hr LC50 rainbow trout: 14.0 mg/L (Static);96 Hr LC50 fathead minnow: 9.09 mg/L (flow-through);96 Hr LC50 bluegill: 150.0 mg/L (Static)
Xylene	1330-20-7	96 Hr LC50 fathead minnow: 13.4 mg/L (flow-through);96 Hr LC50 rainbow trout: 8.05 mg/L (flow-through);96 Hr LC50 bluegill: 16.1 mg/L (flow-through)

Ecotoxicity - Microtox Data

Ethyl benzene	100-41-4	30 Min EC50 Photobacterium phosphoreum: 9.68 mg/L
Xylene	1330-20-7	24 Hr EC50 Photobacterium phosphoreum: 0.0084 mg/L

Ecotoxicity - Water Flea Data

Ethyl benzene	100-41-4	48 Hr EC50 water flea: 2.1 mg/L
Xylene	1330-20-7	48 Hr EC50 water flea: 3.82 mg/L

13. DISPOSAL CONSIDERATIONS

Waste codes D001: Waste Flammable material with a flash point <140 F

Disposal instructions Dispose in accordance with all applicable regulations. If discarded, this product is considered a RCRA ignitable waste, D001. Incinerate the material under controlled conditions in an approved incinerator. Dispose of this material and its container at hazardous or special waste collection point. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. TRANSPORTATION INFORMATION

Department of Transportation (DOT) Requirements

Proper shipping name	PAINT RELATED MATERIAL
Hazard class	3
Special provisions	B1, B52, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242
Quantity limits passenger	60 L
Quantity limits cargo	220 L
Vessel stowage location	A
UN number	UN1263
Packaging group	III
Labels required	3
ERG number	128

DOT



International Air Transport Association (IATA) Requirements

Proper shipping name	PAINT RELATED MATERIAL
Hazard class	3
Special provisions	B1, B52, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242
Quantity limits passenger	60 L
Quantity limits cargo	220 L
Vessel stowage location	A
UN number	UN1263
Packaging group	III
Labels required	3
Passenger Cargo Pkg Inst	Y309
LQ	309
Packaging Instructions	310
Pkg Inst Cargo Only	

IATA



International Maritime Dangerous Goods (IMDG) Code Requirements

Proper shipping name	PAINT
Hazard class	3
Special provisions	163, 640E
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242
Quantity limits passenger	60 L
Quantity limits cargo	220 L
Vessel stowage location	A
Item	F1
UN number	UN1263
Packaging group	III
Labels required	3
Hazard ID	30
Transport Category	3

IMDG



15. REGULATORY INFORMATION

US federal regulations

CERCLA/SARA - Section 313 - Emission Reporting

Ethyl benzene	100-41-4	0.1 % de minimis concentration
Xylene	1330-20-7	1.0 % de minimis concentration

Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Ethyl benzene	100-41-4	202-849-4
Propylene glycol monomethyl ether acetate	108-65-6	203-603-9
Xylene	1330-20-7	215-535-7

Inventory - United States - Section 8(b) Inventory (TSCA)

Ethyl benzene	100-41-4	T
Propylene glycol monomethyl ether acetate	108-65-6	P
Xylene	1330-20-7	Present

Occupational safety and health administration (OSHA)

29 CFR 1910.1200 Yes
hazardous chemical

CERCLA (superfund) reportable quantity

None

Superfund amendments and reauthorization act of 1986 (SARA)

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

International regulations

Canada - 2004 NPRI (National Pollutant Release Inventory)

Ethyl benzene	100-41-4	Part 1, Group 1 Substance
Xylene	1330-20-7	Part 1, Group 1 Substance; Part 5 Substance

Canada - WHMIS - Ingredient Disclosure List

Ethyl benzene	100-41-4	0.1 % (English Item 697, French Item 854)
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State regulations

California - Proposition 65 - Carcinogens List

Ethyl benzene	100-41-4	carcinogen, initial date 6/11/04
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Massachusetts - Right To Know List

Ethyl benzene	100-41-4	Present
Xylene	1330-20-7	Present

New Jersey - Right to Know Hazardous Substance List

Ethyl benzene	100-41-4	sn 0851
Xylene	1330-20-7	sn 2014

Pennsylvania - RTK (Right to Know) List

Ethyl benzene	100-41-4	Environmental hazard
Xylene	1330-20-7	Environmental hazard

16. OTHER INFORMATION

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

Issue date

19-Jun-2008