

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** TuffRez 200, 201, 203 FAST SET - Hardener/Side B  
**Version #** 1.0  
**Revision date** 12-Jan-2009  
**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
Isophorone diamine	2855-13-2	< 20
Phenol, nonyl	84852-15-3	< 20
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	< 2.5
Non-hazardous and other components below reportable levels		> 60
<b>Composition comments</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	

## 3. HAZARDS IDENTIFICATION

**Emergency overview** Kidney injury may occur. Danger of serious damage to health by prolonged exposure. May cause breathing disorders and lung damage. May cause liver damage. Causes skin and eye burns.

**Potential short term health effects**

- Eyes** This product causes eye burns. Risk of serious damage to eyes.
- Skin** Causes skin burns.
- Inhalation** May cause breathing disorders and lung damage.
- Ingestion** Do not ingest. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

**Target organs** Eyes. Kidney. Liver. Respiratory system. Skin.

**Main symptoms** Liver injury may occur. Kidney injury may occur.

## 4. FIRST AID MEASURES

**First aid**

- Eye contact** Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.
- Skin contact** Get medical attention immediately. Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin.
- Inhalation** Move to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately. Oxygen or artificial respiration if needed. If breathing is difficult, give oxygen. Get medical attention, if needed.
- Ingestion** Do not induce vomiting without medical advice. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim ingested the substance. If material is ingested, immediately contact a physician or poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

**Notes to physician** Symptoms may be delayed.

**General advice** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Keep victim warm. In case of shortness of breath, give oxygen. Immediate medical attention is required.

## 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Small Fires:  Large Fires: Carbon dioxide (CO <sub>2</sub> ). Alcohol foam. Water spray. Water Fog. Polymer foam. Dry chemical powder.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do it without risk. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in flame. 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. Cool containers with flooding quantities of water until well after fire is out. Do not scatter spilled material with high pressure water streams.
<b>Specific methods</b>	In the event of fire, cool tanks with water spray. Water mist may be used to cool closed containers.
<b>Flash point</b>	268 °F (131.1 °C)

## 6. ACCIDENTAL RELEASE MEASURES

<b>Evacuation procedures</b>	Stay upwind. Keep out of low areas. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
<b>Containment procedures</b>	Prevent entry into waterways, sewers, basements or confined areas. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift.
<b>Personal precautions</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak.
<b>Methods for cleaning up</b>	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. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation wear suitable respiratory equipment. Do not get this material in your eyes, on your skin, or on your clothing. Do not handle or store near an open flame, heat or other sources of ignition. Surfaces may become slippery after spillage.
<b>Storage</b>	Keep out of the reach of children. 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. Do not freeze.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure limits

#### ACGIH - Threshold Limits Values - Ceilings (TLV-C)

M-Xylene-.alpha., .alpha.'-diamine 1477-55-0 0.1 Mg/m<sup>3</sup> Ceiling

#### ACGIH - Threshold Limits Values - TLV Basis - Critical Effects

M-Xylene-.alpha., .alpha.'-diamine 1477-55-0 irritation; blood

### Personal protective equipment

<b>Respiratory protection</b>	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. In case of insufficient ventilation wear suitable respiratory equipment.
<b>Hand protection</b>	Protective gloves.
<b>Eye protection</b>	Wear chemical goggles. Face-shield.
<b>Skin and body protection</b>	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear appropriate chemical resistant gloves. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Wear suitable protective clothing.

**General** Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Avoid contact with the skin and the eyes.

**Hygiene measures** Avoid contact with the skin and the eyes. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. When using do not smoke.

## 9. PHYSICAL & CHEMICAL PROPERTIES

Density	8.2028 lb/gal
Form	Liquid.
Specific gravity	0.9843

## 10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Stability	Stable at normal conditions.
Conditions to avoid	Direct sources of heat.
Hazardous polymerization	Will not occur.
Incompatibility	Alcohols. Cresol. Glycol. Isocyanates. Phenol. Vinyl acetates.

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity	Causes burns.
Local effects	Liver toxicity.

### Component analysis - LD50

#### NIOSH - Selected LD50s and LC50s

M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Inhalation LC50 Rat: 700 ppm/1H; Oral LD50 Rat: 930 mg/kg; Dermal LD50 Rabbit: 2 g/kg
Phenol, nonyl	84852-15-3	Oral LD50 Rat: 1300 mg/kg

Chronic toxicity	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury.
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Subchronic toxicity	Kidney injury may occur.
Further information	Symptoms may be delayed.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
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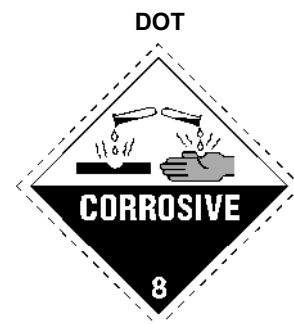
## 13. DISPOSAL CONSIDERATIONS

Disposal instructions	Dispose in accordance with all applicable regulations. 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.
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## 14. TRANSPORTATION INFORMATION

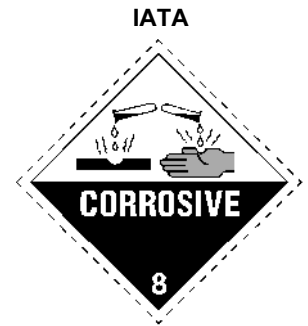
### Department of Transportation (DOT) Requirements

Proper shipping name	PAINT
Hazard class	8
Special provisions	B52, IB3, T4, TP1
Packaging exceptions	154
Packaging non bulk	173
Packaging bulk	241
Quantity limits passenger	5 L
Quantity limits cargo	60 L
Vessel stowage location	A
UN number	UN3066
Packaging group	III
Labels required	8
ERG number	153



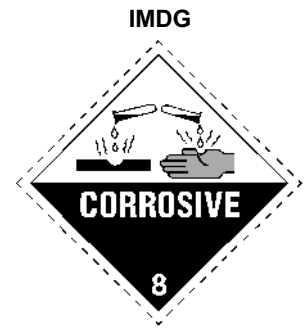
### International Air Transport Association (IATA) Requirements

Proper shipping name	PAINT RELATED MATERIAL CORROSIVE
Hazard class	8
Special provisions	B52, IB3, T4, TP1
Packaging exceptions	154
Packaging non bulk	173
Packaging bulk	241
Quantity limits passenger	5 L
Quantity limits cargo	60 L
Vessel stowage location	A
UN number	UN3066
Packaging group	III
Labels required	8
Passenger Cargo Pkg Inst LQ	Y818 818
Packaging Instructions	820
Pkg Inst Cargo Only	



### International Maritime Dangerous Goods (IMDG) Code Requirements

Proper shipping name	PAINT
Hazard class	8
Special provisions	163,
Packaging exceptions	154
Packaging non bulk	173
Packaging bulk	241
Quantity limits passenger	5 L
Quantity limits cargo	60 L
Vessel stowage location	A
Item	C9
UN number	UN3066
Packaging group	III
Labels required	8
Hazard ID	80
Transport Category	3



## 15. REGULATORY INFORMATION

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
CERCLA/SARA Hazardous Substances - Not applicable.

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

Isophorone diamine	2855-13-2	220-666-8
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	216-032-5
Phenol, nonyl	84852-15-3	284-325-5

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

Isophorone diamine	2855-13-2	Present
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present
Phenol, nonyl	84852-15-3	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 - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**NFPA ratings** Health: 3  
Flammability: 1  
Instability: 0

#### International regulations

##### Canada - WHMIS - Ingredient Disclosure List

Isophorone diamine	2855-13-2	1 % (English Item 899, French Item 1048)
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	1 % (English Item 1697, French Item 1725)

#### State regulations

##### Massachusetts - Right To Know List

M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present
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##### New Jersey - Right to Know Hazardous Substance List

Isophorone diamine	2855-13-2	sn 1067
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	sn 1320

##### Pennsylvania - RTK (Right to Know) List

M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present
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## 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

12-Jan-2009

#### MSDS sections updated

This document has undergone significant changes and should be reviewed in its entirety