

1. PRODUCT AND COMPANY IDENTIFICATION

Product name PolySpec Hardener #3
Version # 1.0
Revision date 24-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
Cumene hydroperoxide	80-15-9	< 90
Cumene	98-82-8	< 10
Non-hazardous and other components below reportable levels		> 2.5
Composition comments	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	

3. HAZARDS IDENTIFICATION

Emergency overview Irritating to skin. Irritating to respiratory system. Harmful in contact with eyes.

Danger of serious damage to health by prolonged exposure. Toxic by inhalation, in contact with skin and if swallowed. May cause breathing disorders and lung damage. May be ignited by heat, sparks or flames. Flammable/Combustible Material. May cause brain and central nervous system damage.

Potential short term health effects

Eyes Toxic in contact with eyes. Contact may irritate or burn eyes. Eye contact may result in corneal injury.

Skin Toxic in contact with skin. Components of the product may be absorbed into the body through the skin. Irritating to skin.

Inhalation Toxic by inhalation. May cause breathing disorders and lung damage. Irritating to respiratory system.

Ingestion Toxic if swallowed. Do not ingest.

Target organs Central nervous system. Eyes. Respiratory system. Skin.

Main symptoms Chronic exposure to neurotoxins damages the brain and the central nervous system.

4. FIRST AID MEASURES

First aid

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately. Get medical attention if irritation develops or persists.

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. Wash off immediately with plenty of water. If skin irritation persists, call a physician.

Inhalation Call a physician or Poison Control Center immediately. Move to fresh air. Oxygen or artificial respiration if needed. 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. If breathing is difficult, give oxygen. Get medical attention, if needed.

Ingestion If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. 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. Drink plenty of water.

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. Immediate medical attention is required.

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 Small Fires: Dry chemical, CO₂, water spray or regular foam.

Large Fires: Water spray, fog or regular foam.

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 162 °F (72.2 °C)

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 Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. 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.

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.

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. Do not get this material in your eyes, on your skin, or on your clothing. In case of insufficient ventilation wear suitable respiratory 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. Keep out of the reach of children. Do not freeze.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

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

Cumene 98-82-8 50 Ppm TWA

ACGIH - Threshold Limits Values - TLV Basis - Critical Effects

Cumene 98-82-8 Irritation; CNS

OSHA - Final PELs - Skin Notations

Cumene 98-82-8 prevent or reduce skin absorption

OSHA - Final PELs - Time Weighted Averages (TWAs)

Cumene 98-82-8 50 Ppm TWA; 245 mg/m³ 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. Face-shield.

Skin and body protection	Wear suitable protective clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. 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. Keep away from food and drink. Avoid contact with the skin and the eyes.

9. PHYSICAL & CHEMICAL PROPERTIES

Density	8.33 lb/gal
Form	Liquid.
Specific gravity	1
Vapor density	5.4
Vapor pressure	13.9 Mm Hg

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Stability	Risk of ignition. Unstable.
Conditions to avoid	High temperatures. Direct sources of heat.
Hazardous polymerization	Will not occur.
Incompatibility	Amines. Peroxides. Strong acids. Strong oxidizing agents. Will form explosive mixtures in air.

11. TOXICOLOGICAL INFORMATION

Local effects	Toxic by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes. Components of the product may be absorbed into the body through the skin. Irritating to respiratory system. Irritating to skin.
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Component analysis - LD50

NIOSH - Selected LD50s and LC50s

Cumene	98-82-8	Inhalation LC50 Mouse: 10 g/m ³ /7H; Oral LD50 Rat: 1400 mg/kg; Oral LD50 Mouse: 12750 mg/kg; Dermal LD50 Rabbit: 12300 µL/kg
Cumene hydroperoxide	80-15-9	Inhalation LC50 Rat: 220 ppm/4H; Inhalation LC50 Mouse: 200 ppm/4H; Oral LD50 Rat: 382 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.
Further information	Symptoms may be delayed.
Routes of exposure	Inhalation. Skin contact. Ingestion.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
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Environmental effects

Ecotoxicity - Freshwater Fish Species Data

Cumene	98-82-8	96 Hr LC50 fathead minnow: 6.32 mg/L (flow-through)
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Ecotoxicity - Microtox Data

Cumene	98-82-8	5 Min EC50 Photobacterium phosphoreum: 0.89 mg/L; 15 min EC50 Photobacterium phosphoreum: 1.10 mg/L; 30 min EC50 Photobacterium phosphoreum: 1.48 mg/L
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Ecotoxicity - Water Flea Data

Cumene	98-82-8	48 Hr EC50 water flea: 0.6 mg/L
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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	ORGANIC PEROXIDE TYPE F, LIQUID
Hazard class	5.2
Special provisions	IB52, IP5, T23
Packaging exceptions	152
Packaging non bulk	225
Packaging bulk	225
Quantity limits passenger	10 L
Quantity limits cargo	25 L
Vessel stowage location	D
Vessel stowage other	12, 40
UN number	UN3109
Packaging group	II
Labels required	5.2
ERG number	145

DOT



International Air Transport Association (IATA) Requirements

Proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID
Hazard class	5.2
Special provisions	IB52, IP5, T23
Packaging exceptions	152
Packaging non bulk	225
Packaging bulk	225
Quantity limits passenger	10 L
Quantity limits cargo	25 L
Vessel stowage location	D
Vessel stowage other	12, 40
UN number	UN3109
Packaging group	II
Labels required	5.2
Passenger Cargo Pkg Inst LQ	—
Packaging Instructions	502
Pkg Inst Cargo Only	

IATA



International Maritime Dangerous Goods (IMDG) Code Requirements

Proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID
Hazard class	5.2
Special provisions	IB52, IP5, T23
Packaging exceptions	152
Packaging non bulk	225
Packaging bulk	225
Quantity limits passenger	10 L
Quantity limits cargo	25 L
Vessel stowage location	D
Vessel stowage other	12, 40
UN number	UN3109
Packaging group	II
Labels required	5.2

IMDG



15. REGULATORY INFORMATION

US federal regulations

CERCLA/SARA - Section 313 - Emission Reporting

Cumene	98-82-8	1.0 % de minimis concentration
Cumene hydroperoxide	80-15-9	1.0 % de minimis concentration

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

Cumene	98-82-8	202-704-5
Cumene hydroperoxide	80-15-9	201-254-7

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

Cumene	98-82-8	Present
Cumene hydroperoxide	80-15-9	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 - Yes
Pressure Hazard - No
Reactivity Hazard - Yes

NFPA ratings

Health: 3
Flammability: 2
Instability: 2

International regulations

Canada - 2004 NPRI (National Pollutant Release Inventory)

Cumene	98-82-8	Part 1, Group 1 Substance
Cumene hydroperoxide	80-15-9	Part 1, Group 1 Substance

Canada - WHMIS - Ingredient Disclosure List

Cumene	98-82-8	1 % (English Item 909, French Item 1054)
Cumene hydroperoxide	80-15-9	1 % (English Item 450, French Item 982)

State regulations

Massachusetts - Right To Know List

Cumene	98-82-8	Present
Cumene hydroperoxide	80-15-9	Present

New Jersey - Right to Know Hazardous Substance List

Cumene	98-82-8	sn 0542
Cumene hydroperoxide	80-15-9	sn 0543

Pennsylvania - RTK (Right to Know) List

Cumene	98-82-8	Environmental hazard
Cumene hydroperoxide	80-15-9	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

24-Jun-2008