



# Material Safety Data Sheet

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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### TP-90B RUBBER CHEMICAL

Revision date: 06/25/2011

**Supplier** Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19106-2399 United States of America

**For non-emergency information contact:** 215-592-3000

### Emergency telephone number

Spill Emergency 215-592-3000  
Health Emergency 215-592-3000  
Chemtrec 800-424-9300

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS-No.	Concentration
Hexaoxatricosane	143-29-3	95.0 - 99.0%
Diethylene glycol monobutyl ether	112-34-5	1.0 - 5.0%
Formaldehyde	50-00-0	< 0.1%

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## 3. HAZARDS IDENTIFICATION

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### Emergency Overview

### Appearance

**Form** liquid  
**Colour** light yellow  
**Odour** Mild odor

**Hazard Summary****WARNING!**

Material can cause the following:  
 slight irritation  
 Material is possibly harmful if swallowed.  
 Inhalation of vapor or mist can cause headache, nausea and irritation of the nose, throat and lungs.  
 - decreased physical activity  
 - lacrimation  
 ataxia  
 Difficulty in breathing  
 central nervous system (CNS) effects  
 Prolonged or repeated exposure can cause the following:  
 kidney damage  
 liver damage  
 blood disorders  
 adverse reproductive effects  
 teratogenic effects

**Potential Health Effects****Primary Routes of Entry:**

Inhalation  
 Skin contact  
 Eye contact

**Eyes:** Material can cause the following:  
 slight irritation

**Skin:** Material can cause the following:  
 slight irritation

**Ingestion:** Material is possibly harmful if swallowed.  
 Material can cause the following:

Abdominal pain  
 Vomiting  
 nausea  
 diarrhea  
 central nervous system (CNS) effects  
 Salivation  
 Convulsions  
 Difficulty in breathing  
 - decreased physical activity  
 - lacrimation  
 ataxia

**Inhalation:** Inhalation of vapor or mist can cause the following:  
 irritation of nose, throat, and lungs  
 nausea  
 dizziness  
 Difficulty in breathing

**Chronic Exposure:** Repeated overexposure to diethylene glycol monobutyl ether can cause the following: - kidney damage - liver damage - blood changes  
 Results from screening testing suggest potential adverse effects on the nervous system (uncoordinated movement, prostration, salivation, lethargy, reduced activity and/or twitching), reproduction/fertility (lowered maternal pregnancy rates), and developmental teratogenicity or birth defects (limb

malformations in offspring) in laboratory rats treated with TP-90B(TM). The NOAEL in this study was 100 mg/kg for all listed effects. (Repeated exposure (OECD 422))

Formaldehyde	US CA CRT	Carcinogenic.
Formaldehyde	ACGIH	Sensitiser.
Formaldehyde	ACGIH	Suspected human carcinogen.
Formaldehyde	IRIS	Probable human carcinogen - limited human evidence.
Formaldehyde	NIOSH	Potentially carcinogenic.
Formaldehyde	NTP CARC	Anticipated carcinogen.
Formaldehyde	OSHA	Potential cancer hazard.
Formaldehyde	IARC	Sufficient data.
Formaldehyde	IARC	Carcinogenic to humans.
Formaldehyde	IRIS	B1: Probable human carcinogen - based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in animals [1986 Guidelines]

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#### 4. FIRST AID MEASURES

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**Inhalation:** Move to fresh air. Give artificial respiration if breathing has stopped. Get prompt medical attention. In case of shortness of breath, give oxygen.

**Skin contact:** Remove contaminated clothing. Wash off with soap and plenty of water. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Consult a physician.

**Eye contact:** Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.

**Ingestion:** Drink 1 or 2 glasses of water. Consult a physician. If vomiting occurs spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

**Notes to physician:** Glycol ethers can cause delayed liver and kidney damage.

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#### 5. FIRE-FIGHTING MEASURES

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<b>Flash point</b>	>93 °C ( 199.76 °F ) Method Not Specified
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available

**Suitable extinguishing media:** Use the following extinguishing media when fighting fires involving this material:

- Foam
- Water spray
- Dry chemical
- Carbon dioxide (CO2)

**Specific hazards during fire fighting:** Closed containers may rupture via pressure build-up when exposed to fire or extreme heat. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.

**Special protective equipment for fire-fighters:** In the event of fire, wear self-contained breathing apparatus.

**Further information:** Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray.  
Remain upwind.  
Avoid breathing smoke.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations.

If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

### Environmental precautions

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

### Methods for cleaning up

Evacuate personnel to safe areas.

Ventilate the area.

Floor may be slippery; use care to avoid falling.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Avoid breathing vapor.

## 7. HANDLING AND STORAGE

### Handling

Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. NOTE: Material will emit trace amounts of formaldehyde if heated to temperatures above 225F/107C. Higher temperatures will increase the amount of formaldehyde evolved.

### Storage

**Storage conditions:** Avoid temperature extremes during storage; ambient temperature preferred.

Store out of direct sunlight in a cool place. Keep containers tightly closed in a cool, well-ventilated place.

Keep in a dry place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value
Hexaoxatricosane	Rohm and Haas	TWA	0.5 ppm

Component	Regulation	Type of listing	Value
	Rohm and Haas	STEL	1.5 ppm
Diethylene glycol monobutyl ether	Rohm and Haas	TWA Vapor and aerosol.	35 ppm
Component	Regulation	Type of listing	Value
Formaldehyde	Rohm and Haas	TLV-C	0.3 ppm
	ACGIH	Ceiling	0.3 ppm
	NIOSH/GUIDE	REL	0.016 ppm
	NIOSH/GUIDE	REL	0.016 ppm
	NIOSH/GUIDE	Ceil_Time	0.1 ppm
	NIOSH/GUIDE	Ceil_Time	0.1 ppm
	OSHASP	REF	
	OSHASP	TWA	0.75 ppm
	OSHASP	STEL	2 ppm
	OSHASP	OSHA_ACT	0.5 ppm
	Z1A	TWA	0.75 ppm
	Z1A	STEL	2 ppm

**Exposure controls**

**Engineering measures:** Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

**Protective measures:** Facilities storing or utilizing this material should be equipped with an eyewash facility.

**Individual protection measures**

**Eye/face protection:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

**Skin protection**

**Hand protection:** Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl-rubber Neoprene gloves Nitrile rubber Polyvinyl chloride VITON Synthetic Rubber (registered Trademark of Dupont Dow Elastomers) Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

**Other protection:** Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

**Respiratory protection:** A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a

properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid
Colour	light yellow
Odour	Mild odor
pH	not applicable
Melting point/range	-47 - -44 °C ( -53 - -47 °F)
Boiling point/boiling range	285 °C ( 545 °F)
Flash point	>93 °C ( 199.76 °F) Method Not Specified
Evaporation rate	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Relative density	0.97
Water solubility	insoluble
Partition coefficient: n-octanol/water	log Pow: 1.65 Calculated
Viscosity, dynamic	no data available
Percent volatility	<1 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

## 10. STABILITY AND REACTIVITY

<b>Hazardous reactions</b>	This material is considered stable.
<b>Materials to avoid</b>	Avoid contact with the following: Strong Oxidizers Acids
<b>Hazardous decomposition products</b>	Thermal decomposition may yield the following:, formaldehyde-like,
<b>Polymerisation</b>	Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

Results from screening testing suggest potential adverse effects on the nervous system (uncoordinated movement, prostration, salivation, lethargy, reduced activity and/or twitching), reproduction/fertility (lowered maternal pregnancy rates), and developmental teratogenicity or birth defects (limb

malformations in offspring) in laboratory rats treated with TP-90B(TM). The NOAEL in this study was 100 mg/kg for all listed effects. (Repeated exposure (OECD 422))

**Acute oral toxicity** LD50 rat > 2,000 mg/kg  
CNS effects at 550 and 2000 mg/kg (convulsions, lacrimation, salivation)

**Acute inhalation toxicity** LC50 rat 4 h >50 mg/l  
aerosol

**Acute dermal toxicity** LD50 rat > 2,000 mg/kg

**Skin irritation** rabbit No skin irritation

**Eye irritation** rabbit slight irritation

**Sensitisation** Skin sensitization - guinea pig: Not a sensitizer

**Mutagenicity**

In vivo tests did not show mutagenic effects Not mutagenic in Ames Test.

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## 12. ECOLOGICAL INFORMATION

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**Elimination information (persistence and degradability)**

**Biodegradability** OECD Test Guideline 301B or Equivalent  
80 - 90 %  
Readily biodegradable  
10-day Window: Fail

**Bioaccumulation** No applicable data.

**Ecotoxicity effects**

**Toxicity to fish** LC50 Rainbow trout (*Oncorhynchus mykiss*) 96 h OECD Test Guideline 203  
491 mg/l

**Toxicity to fish** NOEC Rainbow trout (*Oncorhynchus mykiss*) 96 h OECD Test Guideline 203  
43 mg/l

**Toxicity to algae** EC50 Algae (*Selenastrum capricornutum*) 96 h OECD Test Guideline 201  
53 mg/l

**Toxicity to algae** NOEC Algae (*Selenastrum capricornutum*) 96 h OECD Test Guideline 201  
11.4 mg/l

**Toxicity to algae** EC50 Algae (*Selenastrum capricornutum*) 72 h OECD Test Guideline 201  
48 mg/l

**Toxicity to aquatic invertebrates** EC50 *Daphnia magna* (Water flea) 48 h OECD Test Guideline 202  
87 mg/l

**Toxicity to aquatic invertebrates**      NOEC Daphnia magna (Water flea) 48 h OECD Test Guideline 202  
<24 mg/l

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### 13. DISPOSAL CONSIDERATIONS

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**Environmental precautions:** CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

#### Disposal

**Waste Classification:** When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

For disposal, incinerate this material at a facility that complies with local, state, and federal regulations. (See 40 CFR 268)

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

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### 14. TRANSPORT INFORMATION

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#### DOT

Not regulated for transport

#### IMO/IMDG

Not regulated (Not dangerous for transport)

*Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations*

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### 15. REGULATORY INFORMATION

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#### Workplace Classification

OSHA:      This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

WHMIS:      This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

**SARA TITLE III: Section 311/312 Categorizations (40CFR370):** Acute Health Hazard  
Chronic Health Hazard

#### SARA TITLE III: Section 313 Information (40CFR372)

This product contains a chemical which is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: (Quantity present is found elsewhere on this MSDS.)

SARA Title III Components:      Diethylene glycol monobutyl ether      112-34-5

**CERCLA Information (40CFR302.4)**

This material is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. This material is or contains chemical(s) listed in 40 CFR Table 302.4 or nondesignated RCRA ICR substance(s). (Nondesignated ICR substances apply to materials that will not be reused.) The Reportable Quantity(s) (RQ) are listed below. Releases in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.

Formaldehyde 50-00-0 100 lbs RQ

**US. Toxic Substances Control Act (TSCA):** All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**Pennsylvania**

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

**California (Proposition 65)**

This product contains a component or components known to the state of California to cause cancer:  
 Components: Formaldehyde 50-00-0

**16. OTHER INFORMATION**

HMIS: \* = Chronic Effects (See Hazards Identification)

**HMIS Hazard Rating**

Health	Fire	Reactivity	Physical Hazard	PPE
*2	1	0		

**Legend**

ACGIH	American Conference of Governmental Industrial Hygienists
BAC	Butyl acetate
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit (STEL):
TLV	Threshold Limit Value
TWA	Time Weighted Average (TWA):
	Bar denotes a revision from prior MSDS.

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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.

Version: 3.0  
Print Date: 07/06/2011

Layout 311016