

| Section 1: | Product Information |
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| Name: | RC-50E Body Primer |
| Description: | Formulated polyurethane |
| Use: | Primer for auto body |
| MSDS number: | YHAI-61 |
| Appearance and odor: | Black liquid, Sweet odor |
| Emergency telephone: | 1-800-424-9300 CHEMTREC |
| Product information: | 859-879-2853 |
| Effective date: | 5/20/2011 |
| Supersedes date: | 8/1/2008 |

| Section 2: | Hazardous Ingredients |
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A hazard evaluation of this product has been performed. The components listed below are identified as hazardous chemicals under the criteria of the OSHA hazard communication standard (29 CFR 1910.1200).

| <u>Common name / Chemical name</u> | <u>CAS number</u> | <u>Approximate %</u> |
|-------------------------------------------------------------------|--------------------------|-----------------------------|
| Ethyl acetate/Acetic acid ethyl ester | 141-78-6 | 60- 90 |
| Tris (4-isocyanatephenyl) Thiophosphate | 4151-51-3 | 5-10 |
| Carbon black | 1333-86-4 | 5-10 |
| Butyl acetate, N- / 1-Butyl acetate | 123-86-4 | 1-5 |
| Methylene bis-phenyl isocyanate/ Diphenyl-methane diisocyanate | 101-68-8 | 0.9 |

| Section 3: | Emergency and First Aid Procedure |
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Eye contact:

Flush eyes with water for at least 15 minutes. Lift eyelids frequently. Get prompt medical attention.

Skin contact:

Remove contaminated clothing and shoes. Wash affected area with soap and water. If irritation develops, consult a physician. Wash contaminated clothing separately before reuse.

Inhalation:

Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration, preferably mouth to mouth.

Ingestion:

Do not induce vomiting. Seek medical attention. Do not give anything by mouth if the person is drowsy, unconscious, or has no gag reflex.

Ingestion creates a high risk of aspiration and subsequent chemical pneumonitis. However, if more than one milliliter per kilogram of body weight of the hydrocarbon was ingested, careful emesis or lavage is recommended because of the toxic effects produced by the hydrocarbon.

Note to physician:

Bronchial constriction may develop after extensive exposure to isocyanate, even in individuals who have not been shown to be previously sensitized. Use bronchodilators.

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| Section 4: | Health Effects Summary | | |
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| Primary route(s) of exposure: | Eye - yes | Skin - yes | Inhalation - yes |
|--------------------------------------|------------------|-------------------|-------------------------|

Eye contact:

Can cause mild to moderate irritation.
 Corneal opacification and vascularization can occur.
 Vapors and/or mists can cause mild to moderate irritation.

Skin contact:

Can cause mild to moderate irritation.
 Prolonged or repeated contact can defat the skin, cause irritation, and lead to the development of dermatitis.
 Contact can cause hypersensitivity (i.e., allergic) reactions in susceptible individuals.

Inhalation:

Can cause irritation to the nose, throat, and upper respiratory tract.
 Inhalation can cause dizziness, headaches, and incoordination.
 Nausea, vomiting, and gastrointestinal upset can occur.
 Can cause wheezing, coughing, shortness of breath, and the feeling of tightness in the chest.
 Exposure can cause respiratory hypersensitivity (i.e., allergic) reactions in susceptible individuals.

Ingestion:

Ingestion can cause mild to moderate irritation of the mouth, throat, and esophagus.
 Can cause nausea, vomiting, and gastrointestinal upset.
 Dizziness, faintness, drowsiness, and incoordination (ataxia) can occur.

Additional effects:

Depending on the route, frequency, and duration of exposure, toxicity may effect in the following organs and/or systems:

- Liver.
- Kidney.
- Blood and/or hematopoietic system.
- Respirator system.
- Skin.
- Immune system (e.g. allergic reactions).

Aggravation of existing conditions:

Some of the components in this product may aggravate existing medical conditions. Individuals with medical conditions involving the following organ(s) and/or system(s) should take appropriate precautions when this product:

- Liver.
- Kidney.
- Blood and/or hematopoietic system.
- Respiratory system.
- Skin.
- Immune system and/or specific chemical allergies.

Always wear appropriate protective equipment, as recommended by your industrial hygiene or safety personnel, when exposure to this product can occur.

Methylene bisphenyl isocyanate**Toxic effects:**

Eye contact and prolonged or repeated skin contact may cause irritation. Skin contact may result in allergic skin reactions or respiratory sensitization. Exposure to vapors or mists above established exposure levels may cause eye, upper respiratory tract, lung irritation and respiratory sensitization in susceptible individuals. Allergic respiratory reactions may occur below established guidelines in sensitized individuals. Symptoms may include coughing, difficulty in breathing, tightness in the chest. Sensitized individuals should not be exposed to any concentration of this material.

Acute toxicity studies:

| | | |
|----------------|-------|-----------------------|
| Oral-mouse | LD50: | 2200 mg/kg |
| Oral-rabbit | LD50: | > 9400 mg/kg |
| Inhalation-rat | LC50: | 178 mg/m ³ |

Chronic toxicity studies:

A mixture of polymeric and monomeric MDI (50:50) administered as an aerosol for 90-days caused inflammation of the lungs and nasal cavities of rats. In another similar study, rats were exposed to aerosolized polymeric MDI for two years. A statistically significant increase in benign (non-cancerous) tumors of the lung was observed; but only in male rats.

Other toxicity studies:

MDI, with metabolic activation, displayed positive mutagenic activity when assayed in the AMES test. MDI has also been shown to induce chromosomal aberrations in human lymphocyte cultures. The incidence of these aberrations was significantly increased following the addition of a metabolic activator. MDI, with and without metabolic activation, increased the incidence of sister-chromatid exchanges.

Carcinogenicity - listed by:

ACGIH: no IARC monographs: no NTP annual report: no OSHA: no

Section 6: Occupational Control Procedures**Eye protection:**

Wear chemical splash goggles.

An eye wash facility should be readily available.

Skin protection:

Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, always consult glove manufacturer to determine the proper type for specific operation.

Respiratory protection:

Avoid breathing vapor and/or mist.

When established airborne exposure limits are surpassed (see airborne exposure limits in this section), wear NIOSH/MSHA approved equipment. Determine the appropriate type equipment for specific application by consulting the respirator manufacturer. Observe the respirator use limitations specified by NIOSH/MSHA or the manufacturer.

High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. In addition, respiratory protection programs must be in compliance with 29 CFR 1910.134.

Ventilation:

Maintain airborne concentration below the established exposure limits (See airborne exposure limits in this section) by providing adequate ventilation. General (dilution) ventilation may be acceptable. However, local exhaust ventilation is recommended when vapors, mists, or dusts can be released.

Personal hygiene:

Wash thoroughly after handling, especially before eating, drinking, smoking, or using restroom facilities.

Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing. Discard contaminated shoes.

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Airborne exposure limits

Ethyl acetate

| | | |
|----------------|---------|------------|
| ACGIH TLV-TWA: | 400 ppm | 1440 mg/m3 |
| OSHA PEL: | 400 ppm | 1400 mg/m3 |

Tris (4-isocyanatophenyl) thiophosphate

| | |
|----------------|-----------------|
| ACGIH TLV-TWA: | not established |
| OSHA PEL: | not established |

Carbon black

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|----------------|-----------|
| ACGIH TLV-TWA: | 3.5 mg/m3 |
| OSHA PEL: | 3.5 mg/m3 |

Butyl acetate, N-

| | | |
|----------------|---------|-----------|
| ACGIH TLV-TWA: | 150 ppm | 713 mg/m3 |
| STEL: | 200 ppm | 950 mg/m3 |
| OSHA PEL: | 150 ppm | 710 mg/m3 |
| STEL: | 200 ppm | 950 mg/m3 |

Methylene bisphenyl isocyanate

| | | | |
|----------------|-----------|-------------|---------|
| ACGIH TLV-TWA: | 0.005 ppm | 0.051 mg/m3 | |
| STEL: | ppm | | |
| OSHA PEL: | 0.02 ppm | 0.2 mg/m3 | ceiling |

Note: Because of this product's physical composition, the release or generation of a dust is not expected to occur under normal conditions of use.

Section 7: Fire Protection Information

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|-----------------------------------|---------------------------|-----------------------------------|
| Flash point: | 24oF, -4oC | Test method: setaflash closed cup |
| Explosive limits: | LEL (%) - not established | UEL (%) - not established |
| Auto-ignition temperature: | not established | |

Extinguishing media:

Small fires: use dry chemical, carbon dioxide, halon, water spray, or foam.

Large fires: use water spray, fog, or alcohol foam.

Special fire fighting procedures:

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual fire and explosion hazards:

When exposed to flames or high temperatures encountered during fire conditions, sealed containers may rupture because of the build up of internal pressure. Cool containers with water. Vapors may be heavier than air and may travel considerable distances from the material handling point. A spark, flame, cigarette, electric motor, static discharge, engine, pilot light, hot surface, or other ignition source can ignite vapors.

Section 8: Reactivity Data

Stable under normal conditions of storage and use: yes

Materials to avoid:

- Amines.
- Acids.
- Strong bases.
- Water.

Hazardous polymerization:

Hazardous polymerization will not occur.

RC-50E MSDS

Thermal decomposition products:

If heated to high temperatures, this product may emit the following compounds:

Flammable solvent vapors.

Isocyanate containing compounds.

Oxides of nitrogen.

Oxides of sulfur.

Phosgene.

Smoke, soot, & toxic fumes (e.g. carbon dioxide & carbon monoxide).

Section 9: Spill and Leak Procedures

Response to spills:

Stop discharge, if it can be performed safely, and contain material. Use an absorbent such as fuller's earth, clay, or other appropriate synthetic absorbent. Place contaminated material in a suitable container for disposal. Appropriate safety measures and protective equipment should be used (see section 6).

Do not flush to streams, rivers, or other bodies of water.

Precautions:

Eliminate all sources of ignition.

If the airborne concentration exceeds established exposure limits (TLV or PEL), or if high airborne concentrations can occur, evacuate employees and ventilate the area.

A supplied air respirator or self-contained breathing apparatus (SCBA) should be used for entry into enclosed spaces, or in areas with inadequate ventilation.

Disposal methods:

If discarded in its original unused form, this product exhibits the characteristics of a RCRA hazardous waste as defined under:

40 CFR 261.21 (i.e. ignitable - D001)

Therefore, it must be managed (stored/ treated/disposed/etc.) at a properly permitted facility, in compliance with all-applicable federal, state, and local requirements. Be sure to contact the appropriated government environmental agencies if further guidance is required.

It is recommended that an alternative be selected according to the waste management hierarchy.

Section 10: Special Precautions

Recommended storage practice and conditions:

Store in cool, dry, well ventilated area. Do not store near heat or ignition sources, or in direct sunlight. Always keep containers tightly closed to avoid contamination.

Special warning: Hot organic chemical vapors or mists can suddenly and without warning combust when mixed with air. Ignition can occur at typical elevated temperature process conditions. Any proposed use in such processes should be evaluated thoroughly to assure safe operating conditions.

Do not store above: 95oF, 35oC

Container use procedures:

Containers should be supported and grounded before opening, dispensing, mixing, pouring, and emptying.

Open with no-sparking tools. If the container is warm, open bung slowly to release internal pressure.

Empty container precautions:

This container is hazardous when empty. Do not use heat, sparks, open flames, torches, or cigarettes on or near empty container. Empty containers can retain product residues. Do not reuse empty container for food, clothing, or products for human or animal consumption or where skin contact may occur.

Supplemental section 10 information:

HMIS classification - health: 2*; flammability: 3; reactivity: 0.

* = chronic effects

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Section 11: Physical Data

% Non-volatile (by weight): < 33
pH: not applicable
Vapor density (air=1): not established
Solubility in water: insoluble
Evaporation rate (n-butyl acetate=1): > 1
Vapor pressure (mmHg @25oC): not established
Specific gravity (water=1); > 1
Approximate boiling point: not established

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

Section 12: Label and Transportation Information

DOT shipping name: adhesive, containing a flammable liquid
DOT label: flammable liquid
DOT identification No.: UN 1133

Supplemental section 12 information:

HM-181, IATA/ICAO and IMO - proper shipping name: adhesive, containing a flammable liquid; Hazard class: 3 (IATA HM-181), 3.2 (IMO); subsidiary risk: none; UN No.: 1133; Packaging group: II; label(s): flammable liquid.

Section 13: Regulatory Information

Toxic substance control act (TSCA)

Chemical component(s) in this product are on the section 8 (b) chemical substance inventory listing (40 CFR 710).

SARA title information

Section 313 - toxic chemicals

Pursuant to section 313 of SARA title", this product does not contain a toxic chemical in excess of 1 percent of the mixture (0.1 percent, if the listed toxic chemical is a carcinogen).

Section 302 - extremely hazardous substances

Pursuant to section 302 of SARA title", this product does not contain an extremely hazardous substance.

Section 311/312 - hazard categories

Pursuant to section 311/312 of SARA title", the physical and health hazard categories for this product are identified below:

Fire hazard: yes
Sudden release of pressure hazard: yes
Reactivity hazard: no
Immediate (acute) health hazard: yes
Delayed (chronic) health hazard: yes

Hazardous materials information review regulation - Canada

This material safety data sheet provides information that complies with the requirement set forth under the Canadian workplace hazardous materials information system (WHMIS).

Claim for exemption registry No.: not applicable
Expiration date: not applicable

Section 14: Users Responsibility

A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be.

Disclaimer of liability

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations of warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

If you have questions with regard to health effects, or other information presented in this document, contact:

Neil Dalton

Director of Environment, Health and Safety

Yokohama Tire Corporation

1500 Indiana Avenue

Salem, VA 24153

Tel.) 540-375-8209

Fax.)540-375-0226

RC-50NM MSDS

State of California addendum to the material safety data sheet

Product name: **RC-50E Body Primer**

Effective date: 5/20/2011

The California safe drinking water and toxic enforcement act of 1986, otherwise known as proposition 65, requires that persons potentially exposed to certain substances be made aware of the chronic effects of the substances specified by the state of California.

This product contains substances "known to the state of California to cause cancer, birth defects or other reproductive harm."

Ingredients

Carbon Black

RC-50NM MSDS

Commonwealth of Pennsylvania addendum to the material safety data sheet

Product name: **RC-50E Body Primer**
Effective date: 5/20/2011

All of the materials in this product that are required by the commonwealth of Pennsylvania to be identified are listed below. In addition, some of the materials identified may have been placed by the Commonwealth of Pennsylvania on their hazardous substance list.

| <u>Ingredients</u> | <u>CAS Number</u> | <u>Weight %</u> |
|------------------------------------------------------------------|-------------------|-----------------|
| Ethyl acetate / Acetic acid ethyl ester | 141-78-6 | 60 - 90 |
| Non-hazardous trade secret ingredient(s) | Proprietary | 5-10 |
| Tris(4-isocyanatophenyl) thiophosphate | 4151-51-3 | 5-10 |
| Carbon black | 1333-86-4 | 5-10 |
| Butyl acetate, N- / 1-Butyl acetate | 123-86-4 | 1-5 |
| Methylene bisphenyl isocyanate / diphenylmethane diisocyanate | 101-68-8 | 0.9 |

The specific chemical identity of any substance not identified with a chemical abstract service number is being held as a trade secret.