

**RAMUC®**



**RAMUC TYPE A - WHITE 1 GAL 26515**

Version  
REVISION DATE: 10/20/2005

Print Date 10/20/2005

**SECTION 1 - PRODUCT IDENTIFICATION**

Trade name : RAMUC TYPE A - WHITE 1 GAL 26515  
Product code :  
COMPANY : Republic Powdered Metals  
2628 Pearl Road  
Medina, OH 44256  
Telephone : (800) 551-7081  
Emergency Phone: : 1-800-551-7081  
After Hours: Chemtrec 1-800-424-9300  
Product use : Coating

**SECTION 2 - HAZARDS IDENTIFICATION**

**Emergency Overview**

White. Liquid. May cause moderate irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

**Acute Potential Health Effects/ Routes of Entry**

Inhalation : May cause moderate irritation to the respiratory system. May cause nausea, headaches, and dizziness. May cause drowsiness, weakness, and fatigue.  
Eyes : Vapor and/or mist may cause eye irritation. Direct contact may cause temporary redness and discomfort.  
Ingestion : May cause irritation to the mouth, throat and stomach. May cause gastrointestinal irritation, nausea, and vomiting.  
Skin : May cause moderate irritation.

**Aggravated Medical Conditions**

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

**Chronic Health Effects**

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Prolonged or repeated exposure to xylene may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney damage. Xylene overexposure may affect fetal development. Prolonged or repeated exposure to butyl benzyl phthalate may cause reduced body weights and adverse effects on the liver, kidney, spleen, pancreas, and reproductive organs. Di(2-ethylhexyl) phthalate, (dioctyl phthalate) given in the diet, produced increased incidence of liver cancers in female rats and male and female mice. An increased incidence of liver cancers or neoplasms were observed in male rats. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Prolonged or repeated exposure may cause defatting, drying, and irritation of the skin, dermatitis,

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central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney, and testes damage. Toluene overexposure may cause burns of the skin, respiratory tract damage. May be harmful to the human fetus based on animal tests and limited epidemiology data. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

**Target Organs:** Skin, Eye, Lung, Liver, Kidney, Nerve, Reproductive

**SECTION 3 - PRODUCT COMPOSITION**

Chemical Name	CAS-No.	Weight %
Xylene	1330-20-7	30.0 - 60.0
Chlorinated Rubber	68441-58-7	15.0 - 40.0
Titanium dioxide	13463-67-7	15.0 - 40.0
Ethylbenzene	100-41-4	7.0 - 13.0
Diocetyl phthalate	117-81-7	5.0 - 10.0
Butyl benzyl phthalate	85-68-7	1.0 - 5.0
Toluene	108-88-3	1.0 - 5.0

**SECTION 4 - FIRST AID MEASURES**

Get immediate medical attention for any significant overexposure.

Inhalation	:	Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
Eye contact	:	Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
Skin contact	:	Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	:	Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

**SECTION 5 - FIRE FIGHTING MEASURES**

Flash point	:	82.5 °C, 181 °F
Method	:	Tag Closed Cup
Lower explosion limit	:	1.00 %(V) Solvent
Upper explosion limit	:	7 %(V) Solvent
Autoignition temperature	:	Not available.
Extinguishing media	:	If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	:	Smoke, fumes. Carbon monoxide and carbon dioxide can form. Nitrogen oxides can form.

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- Protective equipment for firefighters : Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). Water may be used to cool containers to minimize pressure build-up.
- Fire and explosion conditions : Vapor concentrations in enclosed areas may ignite explosively. Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Closed container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

**SECTION 7 - HANDLING AND STORAGE**

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. To prevent generation of static discharges, use bonding/grounding connection when pouring liquid. Extinguish all ignition sources including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment. Keep container closed when not in use. Vapor may migrate to sources of ignition. Do not smoke, weld, generate sparks, or use flame near container. Store in sealed containers in a cool, dry, ventilated warehouse location.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Personal protection equipment**

- Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved organic vapor or supplied air respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Wear appropriate eye protection. Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Protective measures : Use professional judgment in the selection, care, and use. Inspect and replace equipment at regular intervals.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use local exhaust when the general ventilation is inadequate.

**Exposure Limits**

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<u>Chemical Name</u>	<u>CAS Number</u>	<u>Regulation</u>	<u>Limit</u>	<u>Form</u>
Xylene	1330-20-7	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 150 ppm 435 mg/m3	
Titanium dioxide	13463-67-7	ACGIH TWA: OSHA PEL: OSHA TWA: OSHA TWA:	10 mg/m3 15 mg/m3 15 mg/m3 5 mg/m3	Total dust. Total dust. Respirable fraction.
Ethylbenzene	100-41-4	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 125 ppm 435 mg/m3	
Diocyl phthalate	117-81-7	ACGIH TWA: OSHA PEL:	5 mg/m3 5 mg/m3	
Toluene	108-88-3	ACGIH TWA: OSHA TWA:	50 ppm 200 ppm	

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Form	: Liquid
Color	: White
Odor	: Aromatic Solvent
pH	: Not available.
Vapour pressure	: Not available.
Vapor density	: Heavier than air
Melting point/range	: Not available.
Freezing point	: Not available.
Boiling point/range	: 282.5 °F, 139 °C
Water solubility	: Negligible
Specific Gravity	: 1.22
% Volatile Weight	: 46 %

**SECTION 10 - REACTIVITY / STABILITY**

Substances to avoid	: Oxidizing agents.Strong acids.Strong bases.
Stability	: Stable under normal conditions. Avoid welding arcs, flames or other high temperature sources.
Hazardous polymerization	: Will not occur.

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**SECTION 11 - TOXICOLOGICAL INFORMATION**

Xylene, CAS-No.: 1330-20-7	
Acute oral toxicity (LD-50 oral)	3,523 - 8,600 mg/kg ( Rat )
Acute inhalation toxicity (LC-50)	6,350 mg/l ( Rat )
Ethylbenzene, CAS-No.: 100-41-4	
Acute oral toxicity (LD-50 oral)	3,500 mg/kg ( Rat )
Acute dermal toxicity (LD-50 dermal)	17,800 mg/kg ( Rabbit )
Diocetyl phthalate, CAS-No.: 117-81-7	
Acute oral toxicity (LD-50 oral)	25,000 mg/kg ( Rat )
Acute dermal toxicity (LD-50 dermal)	25,000 mg/kg ( Rabbit )
Butyl benzyl phthalate, CAS-No.: 85-68-7	
Acute oral toxicity (LD-50 oral)	13,500 mg/kg ( Rat )
Toluene, CAS-No.: 108-88-3	
Acute oral toxicity (LD-50 oral)	2,600 - 7,500 mg/kg ( Rat )
Acute inhalation toxicity (LC-50)	26,700 mg/l ( Rat )
Acute dermal toxicity (LD-50 dermal)	12,124 mg/kg ( Rabbit )

**SECTION 12 - ECOLOGICAL INFORMATION**

No Data Available

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Disposal Method : Subject to hazardous waste treatment, storage, and disposal requirements under RCRA. Recycle or incinerate waste at EPA approved facility or dispose of in compliance with federal, state and local regulations.

**SECTION 14 - TRANSPORTATION / SHIPPING DATA**

**TDG / DOT Shipping Description:**  
PAINT, 3, UN1263, PG III

**SECTION 15 - REGULATORY INFORMATION****North American Inventories:**

All components are listed or exempt from the TSCA inventory.  
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

**U.S. Federal Regulations:**

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SARA 313 Components : Xylene 1330-20-7  
 Ethylbenzene 100-41-4  
 Dioctyl phthalate 117-81-7  
 Toluene 108-88-3

SARA 311/312 Hazards : Acute Health Hazard  
 Fire Hazard

OSHA Hazardous Components :

Xylene 1330-20-7  
 Titanium dioxide 13463-67-7  
 Ethylbenzene 100-41-4  
 Dioctyl phthalate 117-81-7  
 Toluene 108-88-3

OSHA Status: Considered : Irritant  
 hazardous based on the  
 following criteria:

OSHA Flammability : IIIA

Regulatory VOC (less water and : 568 g/l  
 exempt solvent)

VOC Method 310 : 46 %

**U.S. State Regulations:**

MASS RTK Components : Xylene 1330-20-7  
 Titanium dioxide 13463-67-7  
 Ethylbenzene 100-41-4  
 Dioctyl phthalate 117-81-7  
 Butyl benzyl phthalate 85-68-7  
 Toluene 108-88-3

Penn RTK Components : Xylene 1330-20-7  
 Chlorinated Rubber 68441-58-7  
 Titanium dioxide 13463-67-7  
 Ethylbenzene 100-41-4  
 Dioctyl phthalate 117-81-7  
 Butyl benzyl phthalate 85-68-7  
 Toluene 108-88-3

NJ RTK Components : Xylene 1330-20-7  
 Chlorinated Rubber 68441-58-7  
 Titanium dioxide 13463-67-7  
 Ethylbenzene 100-41-4  
 Dioctyl phthalate 117-81-7  
 Toluene 108-88-3

Chemicals known to the State of California to cause cancer birth defects and/or other reproductive harm:

100-41-4 Ethylbenzene  
 117-81-7 Dioctyl phthalate

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108-88-3  
56-23-5  
1333-86-4  
14464-46-1  
14808-60-7

Toluene  
Carbon tetrachloride  
Carbon Black  
Silica (crystalline-cristobalite)  
Crystalline Silica (Quartz)/ Silica Sand

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating :**

Health	2
Flammability	2
Reactivity	1
PPE	

0 = Minimum  
1 = Slight  
2 = Moderate  
3 = Serious  
4 = Severe

**Further information:**

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

**Prepared by: Rich Mikol**

**Legend**

ACGIH - American Conference of Governmental Hygienists  
NTP - National Toxicology Program  
DOT - Department of Transportation  
DSL - Domestic Substance List  
EPA - Environmental Protection Agency  
HMIS - Hazardous Materials Information System  
IARC - International Agency for Research on Cancer  
MSHA - Mine Safety Health Administration  
NDSL - Non-Domestic Substance List  
NIOSH - National Institute for Occupational Safety and Health  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit  
RCRA - Resource Conservation and Recovery Act  
RTK - Right To Know  
SARA - Superfund Amendments and Reauthorization Act  
STEL - Short Term Exposure Limit  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average  
V - Volume  
VOC - Volatile Organic Compound  
WHMIS - Workplace Hazardous Materials Information System