

RAMUC®



RAMUC PRO 2000 - WHITE 1 GL CN

Version 1

Print Date 10/20/2005

REVISION DATE: 07/22/2005

SECTION 1 - PRODUCT IDENTIFICATION

Trade name : RAMUC PRO 2000 - WHITE 1 GL CN
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 contact/exposure to aromatic petroleum distillates may cause defatting, drying, and irritation of the skin, dermatitis, and central nervous system (CNS) effects. Chlorinated paraffin wax in product was reported by NTP to cause cancer in experimental animals when ingested. Inhalation of crystalline silica (quartz) can cause cancer based on animal data, and IARC concludes sufficient evidence in humans (Group 1). Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible

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human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Prolonged and repeated exposure to excessive airborne concentrations of talc can result in scarring of the lungs (pneumoconiosis) or the covering of the lungs (pleural thickening). 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	15.0 - 40.0
Titanium dioxide	13463-67-7	15.0 - 40.0
Chlorinated Rubber	68441-58-7	10.0 - 30.0
Talc	14807-96-6	10.0 - 30.0
Chlorinated paraffin	63449-39-8	7.0 - 13.0
Ethylbenzene	100-41-4	5.0 - 10.0
Tremolite (non-asbestiform)	14567-73-8	3.0 - 7.0
Aromatic petroleum distillates	64742-95-6	3.0 - 7.0
1,2,4-Trimethylbenzene	95-63-6	1.0 - 5.0
Toluene	108-88-3	<1.0
Anthophyllite	17068-78-9	<1.0
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	<1.0

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	:	< 100.5 °F, < 38 °C
Method	:	Tag Closed Cup
Lower explosion limit	:	0.60 %(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.

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- Hazardous combustion products : Smoke, fumes. Carbon monoxide and carbon dioxide can form. Nitrogen oxides can form.
- 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.
Talc	14807-96-6	ACGIH TWA: OSHA TWA: OSHA TWA: OSHA PEL: OSHA PEL:	2 mg/m3 0.1 mg/m3 0.3 mg/m3 15 mg/m3 5 mg/m3	Respirable fraction. Respirable. Total dust. Total dust. Respirable fraction.
Ethylbenzene	100-41-4	ACGIH TWA: ACGIH STEL: OSHA PEL:	100 ppm 125 ppm 435 mg/m3	
1,2,4-Trimethylbenzene	95-63-6	ACGIH TWA:	25 ppm	
Toluene	108-88-3	ACGIH TWA: OSHA TWA:	50 ppm 200 ppm	
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	ACGIH TWA: OSHA TWA: OSHA TWA: OSHA PEL: OSHA PEL:	0.05 mg/m3 0.1 mg/m3 0.3 mg/m3 15 mg/m3 5 mg/m3	Respirable fraction. Respirable. Total dust. Total dust. Respirable fraction.

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	: 139.5 - 305 °F, 60 - 152 °C
Water solubility	: Negligible

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Specific Gravity : 1.35
 % Volatile Weight : 41 %

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.

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)
 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

RCRA Class : D001: Reportable Quantity = 100 lbs. (Characteristic of ignitability)
 This classification applies only to the material as it was originally produced.
 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

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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:

SARA 313 Components	:	Xylene	1330-20-7
		Ethylbenzene	100-41-4
		Tremolite (non-asbestiform)	14567-73-8
		1,2,4-Trimethylbenzene	95-63-6
		Anthophyllite	17068-78-9

SARA 311/312 Hazards	:	Acute Health Hazard
		Fire Hazard

OSHA Hazardous Components :

Xylene	1330-20-7
Titanium dioxide	13463-67-7
Talc	14807-96-6
Ethylbenzene	100-41-4
Tremolite (non-asbestiform)	14567-73-8
1,2,4-Trimethylbenzene	95-63-6
Toluene	108-88-3
Anthophyllite	17068-78-9
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7

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

OSHA Flammability : II

Regulatory VOC (less water and
exempt solvent) : 561 g/l
VOC Method 310 : 41 %

Chemical is listed as an IARC, NTP, OSHA, or ACGIH Carcinogen:

Tremolite (non-asbestiform)	14567-73-8
Anthophyllite	17068-78-9
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7

U.S. State Regulations:

MASS RTK Components	:	Xylene	1330-20-7
		Titanium dioxide	13463-67-7
		Talc	14807-96-6
		Ethylbenzene	100-41-4
		Tremolite (non-asbestiform)	14567-73-8
		1,2,4-Trimethylbenzene	95-63-6

Penn RTK Components	:	Xylene	1330-20-7
		Titanium dioxide	13463-67-7

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	Chlorinated Rubber	68441-58-7
	Talc	14807-96-6
	Chlorinated paraffin	63449-39-8
	Ethylbenzene	100-41-4
	Tremolite (non-asbestiform)	14567-73-8
	Aromatic petroleum distillates	64742-95-6
	1,2,4-Trimethylbenzene	95-63-6
NJ RTK Components	:	
	Xylene	1330-20-7
	Titanium dioxide	13463-67-7
	Chlorinated Rubber	68441-58-7
	Talc	14807-96-6
	Chlorinated paraffin	63449-39-8
	Ethylbenzene	100-41-4
	Tremolite (non-asbestiform)	14567-73-8
	Anthophyllite	17068-78-9
	Crystalline Silica (Quartz)/ Silica Sand	14808-60-7

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

100-41-4	Ethylbenzene
14567-73-8	Tremolite (non-asbestiform)
108-88-3	Toluene
17068-78-9	Anthophyllite
14808-60-7	Crystalline Silica (Quartz)/ Silica Sand
56-23-5	Carbon tetrachloride
1333-86-4	Carbon Black
71-43-2	Benzene

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

PEL - Permissible Exposure Limit
 RCRA - Resource Conservation and Recovery Act
 RTK - Right To Know
 SARA - Superfund Amendments and Reauthorization Act

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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

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