



MADE FROM RECYCLED TIRES

MATERIAL SAFETY DATA SHEET

1. Company and Product Information

Manufacturer: Vulcana, LLC
201 Walnut Avenue
Cranford, NJ 07016 USA
TEL: 908.928.0550

Product Name: Re# 30% [RePOUND by Vulcana®]

Revision Date: 5/23/2011

Chemical Description: Rubber compound composed of recycled tire and natural rubber

Product Color: Black

Form: Strips

Specific Gravity: 1.133

2. Composition/Information on Ingredients

HMIS Ratings: (0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe)

Health	Flammability	Reactivity	PPE
2	1	0	X

(Consult Supervisor)

Exposure Limits (none if blank):

Chemical Name:	CAS No:	ACGIH TLV:	OSHA PEL:
5-Ethylidenebicyclo[2,2,1]hept-2-ene	16219-75-3	5 ppm Ceiling	
9-Octadecenamide,(Z)-		3 mg/m3 TWA (resp), 10 mg/m3 TWA (total)	5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
Amorphous Silica		6 mg/m3 TWA, 3,000 mg/m3 IDLH	6 mg/m3 TWA
Carbon Black	1333-86-4	3.5 mg/m3 TWA (total)	3.5 mg/m3 TWA (total)
Hydrated amorphous silica	7631-86-9	3 mg/m3 TWA (resp), 10 mg/m3 TWA (inhalable) 3 mg/m3 (TWA Respirable nuisance particulate)	6 mg/m3 (Total)
N-(Cyclohexylthio)phthalimide	17796-82-6	8 mg/m3	
N-tert-Butyl-2-Benzothiazolesulfenamide		10 mg/m3 TWA	5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
Paraffin Wax	8002-74-2	2 mg/m3 TWA (fume)	2 mg/m3 TWA (fume)
Particulates NOC		3 mg/m3 TWA (fumes)	
Pentaerythritol-bis-tetrahydrobenzaldehyde-acetale		3 mg/m3 TWA (resp), 10 mg/m3 TWA (total)	5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
PNOR			5 mg/m3 (resp), 15 mg/m3 (total)
PNOS		3 mg/m3 (resp), 10 mg/m3 (inhalable)	
Severely Solvent Refined Residuum	64742-01-4	5 mg/m3 (mist)	5 mg/m3 (mist)

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Chemical Name:	CAS No:	ACGIH TLV:	OSHA PEL:
Sulfur	7704-34-9	3 mg/m3 TWA (resp), 10 mg/m3 TWA (total)	5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
Trimethyldihydroquinoline	26780-96-1	3 mg/m3 TWA (resp), 10 mg/m3 TWA (total)	5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
Zinc Oxide	1314-13-2	2 mg/m3 TWA, 10 mg/m3 STEL (dust)	5 mg/m3 TWA (respirable), 15 mg/m3 TWA (total dust)
Propionic Acid		30 mg/m3	
Cadmium	7440-43-9	0.01 mg/m3 TWA, 0.05 ppm STEL	
Lead	7439-92-1		5 mg/m3 TWA (resp), 15 mg/m3 TWA (total)
Oil mist, mineral		5 mg/m3 TWA	5 mg/m3 TWA

3. Hazards Identification

Emergency Overview

This compound has not been tested in its present form and is not expected to pose a significant health hazard when normal industrial hygiene practices are followed. Information provided on physical and health effects of this product is based on individual components. All ingredients are bound in the compound matrix, and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon processing; therefore, necessary precautions (mechanical, ventilation, respiratory protection, etc.) to protect employees must be assessed.

Physical Hazards Based on Raw Materials (none if blank):

Health Hazards Based on Raw Materials (none if blank):

Avoid breathing mist or fumes/vapors from hot material. Contact with heated material may cause thermal burns. Ingestion may irritate the GI tract and cause pain, nausea, vomiting, thirst, diarrhea and renal injury. May aggravate preexisting respiratory, skin or eye conditions. May be toxic by ingestion. Ingestion of metal oxide permeates the placenta and is excreted through maternal milk. May be an inhalation hazard.

Irritation: May cause eye, skin, respiratory and gastrointestinal irritation.

Toxicity: May be toxic by ingestion.

Sensitization: Possible skin sensitization.

Primary Route(s) of Exposure: Skin, Eyes, and Inhalation

Acute Overexposure Based on Raw Materials (none if blank):

Other:

Persons with known allergies to sulfide drugs may also have allergic reactions to elemental sulfur. Ingested sulfur (10-20 grams) converts to sulfides in the GI tract and may cause renal injury.

Inhalation may cause nausea. Inhalation may aggravate preexisting respiratory conditions and may cause metal fume fever.

Chronic Overexposure Based on Raw Materials (none if blank): **Skin** **Respiratory**
Repeated, prolonged exposure may cause sensitization of (if checked): **X** **X**

Chronic exposure may cause metal and zinc fume fever, oxide pox, latent liver dysfunction, fibrotic nodules, lipid pneumonia or granuloma, chemical pneumonitis, skin defatting, decreased eye visibility, conjunctivitis, unpleasant deposits in eyes or ears.

Medical Condition(s) Prone to Aggravation: Skin conditions

Toxicity Information (none if blank): **LD50 (Oral, Rat)** **LC50 (Inhalation, Rat)**

Polyethylene Glycol	>15 g/kg	
Oleamide	>2 g/kg	
Pentaerythritol-bis-tetrahydrobenzaldehyde acetal	>2,000 mg/kg	
Polymerized 2,2,4-trimethyl-1,2-dihydroquinoline (TMQ)	>2,000 mg/kg (rat)	
Octylated Diphenylamine (ODP)	>5,000 mg/kg	
Zinc Oxide (ZnO)	>5,000 mg/kg	2,500 mg/kg (mouse)
Sulfur (S)	>5,000 mg/kg (rat)	
Ethylene propylene ethylidene norbornene terpolymer rubber (EPDM)	>5000 mg/kg estimated	
N-t-butyl-2-benzothiazolesulfenamide (TBBS)	>6,000 mg/kg (rat)	
Carbon black	>8,000 mg/kg	
N-(Cyclohexylthio)phthalimide	2.6 g/kg	
Blend of vanilla rheoderant and an inert mineral filler in powder form	5,000 mg/kg (rat)	

Carcinogenic Information (none if blank):

Carcinogenic Component	IARC	NTP	OSHA	ACGIH
Amorphous Silica	Group 3			
Carbon Black	Group 2B			Group A4

4. First Aid

Eye: Rinse with plenty of water. Seek medical attention if irritation persists.

Ingestion: Rinse with plenty of water. Seek medical attention.

Inhalation: Remove to fresh air. Seek medical attention if irritation persists.

Skin: Wash with soap and water. Seek medical attention if irritation persists.

5. Fire-Fighting Measures

Extinguishing Media: Water fog, foam, carbon dioxide, or dry chemical.

Unusual Fire and Explosion Hazards (none if blank):

Fire involving rubber is accompanied by the evolution of an acrid black smoke.

Fire Fighting Protective Equipment:

A self-contained breathing apparatus (SCBA) in positive pressure mode and full fire fighting protective gear should be worn when fighting fires.

Special Fire-Fighting Procedures (none if blank):

Flash Point Information (minimum of available raw material flash points):

80°F

6. Accidental Release Measures

Spill Clean-up:

Sweep up by mechanical means.

Waste Disposal:

Put into proper containers and dispose of in accordance with all local, state and federal regulations.

7. Handling and Storage

Storage Conditions:

Store in a cool dry environment in original closed packaging.

Do not store at high temperatures or near strong acids and oxidizers.

Handling:

Persons handling equipment should wear protective equipment specified in Section 8. Good housekeeping and hygienic practices should be observed. Avoid heat, sparks and flame.

Other Handling Storage Comments (none if blank):

8. Exposure Controls and Personal Protection

Eye: Safety Glasses

Gloves: Impervious Gloves

Clothing: Long sleeved shirt and long pants.

Respiratory: A NIOSH/MSHA approved respirator above PEL or TLV or as necessary.

Special Plant Equipment: Eye bath and safety showers in immediate area.

Hygienic Practices: Wash after handling product. After work, cloths should be changed and washed before reuse. Do not smoke, eat or use alcohol while handling product.

Polymer bound products preclude exposure to powder, dust-related, mechanical contact hazards. Fumes and vapors at processing temperatures may cause irritation to the eyes, skin, nose, throat, and respiratory tract. With inadequate ventilation, nausea, dizziness or headaches are possible.

9. Stability and Reactivity

Hazardous Decomposition Products:

Stability Polymerization: The finished product is stable; hazardous polymerization will not occur.

Raw Material Component Stability Comments:

Incompatibility:

Strong oxidizers

Oxides of (if checked): *CO_x X* *NO_x X* *SO_x X*

Other:

Acids, ketones, aldehydes, organic oxidation products, hydrocarbons, polymer fragments

Aromatic and aliphatic hydrocarbons

Asphyxiants

Hydrogen Sulfide, Sulfur Dioxide

MBTS, t-butylamine, MBT, benzothiazole

Organic products of decomposition.

Oxides of Zinc, undetermined aliphatic fragments, toxic oxides and fumes of components

10. Ecological Information (none if blank):

Clean Water Regulations:

Clean Air Regulations:

11. Disposal Information:

Disposal Method: Dispose of product or empty containers in accordance with local, state and federal regulations.

RCRA Regulated Components (none if blank):

Superfund Reportable Quantity Chemicals, 40 CFR Sec. 302.4 (none if blank):

Zinc and compounds

12. Transportation Information (none if blank):

DOT/TDG:

IATA (Air):

13. Regulatory Information:

TSCA: All ingredients listed.

SARA Title III (none if blank):

Section 302 Extremely Hazardous Substances, 40 CFR Part 355:

Section 313 Toxic Chemicals, 40 CFR Sec. 37:

Regulated Chemical	% in Compound
Zinc Compounds (60-100%) Lead (trace) Cadmium compound (trace)	1-5 %

California Proposition 65 - Chemicals Known to the State to Cause Cancer and/or Reproductive Toxicity (none if blank):

Cadmium (1 ppm max)

Lead (2 ppm max)

TSCA Preliminary Assessment Information Reporting, 40 CFR Sec.712 (none if blank):

14. Other Information

Abbreviations: ND – Not determined, NA – Not applicable, NE – Not established

References:

Code of Federal Regulations, Transportation (49 CFR Parts 100 to 185, October 2000), NIOSH Pocket Guide to Chemical Hazards (June 1997), HMIS Implementation Manual (2nd Edition), ChemCheck Handbook, Specialty Technical Publishers, IARC WEB site, NTP WEB site

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