

MATERIAL SAFETY DATA SHEET

Date-Issued: 11/30/2003
MSDS Ref. No: V-1
Revision No: New MSDS
:Vitalsize

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Vitalsize
GENERAL USE: For professional drycleaning use only.
PRODUCT DESCRIPTION: Sizing
PRODUCT CODE: VSZ-US

MANUFACTURER

R. R. Street & Co. Inc.
184 Shuman Boulevard
Naperville, IL 60563

Product Stewardship: 800-323-7206

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947
Transportation Emergency: 800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS#</u>
Tetrachloroethylene	<55	127-18-4

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Substance may cause substantial eye irritation and possible damage.

SKIN: May cause skin irritation or damage. Prolonged or repeated contact may cause dermatitis.

SKIN ABSORPTION: Tetrachloroethylene may be absorbed through skin but it is not likely that skin absorption would be sufficient to cause effects described from breathing or swallowing.

INGESTION: Causes severe gastrointestinal irritation; may cause irregular heartbeat, cardiac arrest, unconsciousness or death. May also cause adverse effects on the liver, kidney, nervous system and other internal organs. If ingested, vomiting may occur; vomit may be aspirated into lungs causing chemical pneumonia.

INHALATION: High concentrations may cause central nervous system depression, irregular heartbeat, cardiac arrest, unconsciousness or death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation and pain.

SKIN: Irritation, redness and burning sensation.

SKIN ABSORPTION: Symptoms may be similar to other routes of exposure.

INGESTION: Nausea, vomiting, cramps and diarrhea.

INHALATION: Irritation of the eyes, nose and throat, headache, drowsiness, dizziness and light headedness.

MEDICAL CONDITIONS AGGRAVATED: Acute and chronic liver and kidney disease, rhythm disorders of the heart, neuritis. Exposure can result in cardiac sensitization and increase the risk of cardiac arrest.

ROUTES OF ENTRY: Inhalation and skin.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing. Wash with soap and water.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately. Chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potentially adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: None (TCC).

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE CLASS: Not applicable.

EXTINGUISHING MEDIA: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Hydrogen chloride, phosgene and chlorine.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**SMALL SPILL:**

Absorb the liquid and scrub the area with detergent and water.

LARGE SPILL:

Contain spill. Avoid breathing vapor. Clean up spills immediately with absorbent material, observing precautions in the Protective Equipment section. Place absorbed material in closed containers for disposal. Do not flush to sewer. Avoid contamination of ground and surface waters.

7. HANDLING AND STORAGE

HANDLING: Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in labeled, tightly sealed containers in a cool, dry, well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE GUIDELINES:****OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)**

	<u>EXPOSURE LIMITS</u>					
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
Tetrachloroethylene	TWA	100		25 ^[1]		
	STEL	200 ^[2]		100		

TABLE FOOTNOTES:

1. A3: Confirmed animal carcinogen with unknown relevance to humans.
2. Ceiling concentration. 300 ppm peak concentration allowed for 5 minutes in any 3-hour period.

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields (or goggles) and a face shield.

SKIN: Viton[®], PVA, or Barrier[™] gloves.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not smoke in presence of vapor. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Have eye wash station available. Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Viscous liquid.

ODOR: Perc.

APPEARANCE: Clear.

COLOR: Yellow.

pH: Not applicable.

PERCENT VOLATILE: ~40

VAPOR PRESSURE: ~13 mm Hg at 20°C

VAPOR DENSITY: 5.8 (Air=1)

BOILING POINT: 121°C (250°F)

FREEZING POINT: <0°C (32°F)

SOLUBILITY IN WATER: Negligible.

EVAPORATION RATE: 1.4 Butyl acetate = 1

SPECIFIC GRAVITY: 1.23

VISCOSITY: ~350cps at 20°C (68°F)

COEFF. OIL/WATER: No data available.

ODOR THRESHOLD: 50 ppm

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: Contact with open flame, electric arcs, other hot surfaces which can cause thermal decomposition.

STABILITY: Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, phosgene and chlorine.

INCOMPATIBLE MATERIALS: Strong alkalies, strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: >6000 mg/kg (rabbit)

ORAL LD₅₀: ≥8850 mg/kg (rat)

INHALATION LC₅₀: >5000 ppm (rat)

CHRONIC

TARGET ORGANS: Liver and kidney damage have been reported in cases of accidental excessive overexposure to tetrachloroethylene. Adverse effects on the liver and kidneys have also been reported in lab animal studies. Overexposure to tetrachloroethylene may also have adverse effects on the lungs, nervous system, and color vision.

CARCINOGENICITY

IARC: Tetrachloroethylene is classified as 2A.

NTP: Tetrachloroethylene is on the NTP list.

OSHA: Not listed as a carcinogen.

SYNERGISTIC MATERIALS: Consumption of alcohol may increase the potential for development of toxic effects resulting from exposure to tetrachloroethylene.

REPRODUCTIVE EFFECTS: Available human data is inconclusive. Animal studies have not shown evidence of adverse effects. Developmental effects have been reported in lab animal studies.

GENERAL COMMENTS: Refer to Section 3 of this MSDS and the MSDS provided by your tetrachloroethylene (perc) supplier for additional information on potential health effects.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Tetrachloroethylene has moderate persistence in the environment.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recovered liquids may be sent to a licensed reclaimer or incineration facility. Contaminated material must be disposed of in a permitted waste management facility. Consult federal, state and local authorities for approved procedures.

EMPTY CONTAINER: Do not cut or weld full or empty drums.

RCRA/EPA WASTE INFORMATION: Contains material(s) listed by RCRA as a hazardous waste.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Tetrachloroethylene

PRIMARY HAZARD CLASS/DIVISION: 6.1

UN/NA NUMBER: UN1897

PACKING GROUP: III

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 18 gal

MARINE POLLUTANT #1: Tetrachloroethylene

OTHER SHIPPING INFORMATION: Containers larger than 15 gallons contain a Reportable Quantity of tetrachloroethylene.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Tetrachloroethylene

PRIMARY HAZARD CLASS/DIVISION: 6.1

UN/NA NUMBER: UN1897

PACKING GROUP: III

AIR (ICAO/IATA)**PROPER SHIPPING NAME:** Tetrachloroethylene**PRIMARY HAZARD CLASS/DIVISION:** 6.1**UN/NA NUMBER:** UN1897**PACKING GROUP:** III**IATA NOTE:** Consult IATA for quantity limitations.**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:** FIRE: NO PRESSURE GENERATING: NO**REACTIVITY:** NO ACUTE: YES CHRONIC: YES**313 REPORTABLE INGREDIENTS:** Tetrachloroethylene is reportable.**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)****CERCLA RQ:** Tetrachloroethylene has an RQ of 100 lbs.**REPORTABLE SPILL QUANTITY:** 18 gals**RCRA STATUS:** See section 13.**STATE REGULATIONS****MASSACHUSETTS:** Contains one or more substances named on the Massachusetts Substance List.**CALIFORNIA: PROPOSITION 65 STATEMENT:** Tetrachloroethylene is on Proposition 65 list.**CANADA****WHMIS CLASS:** Class D, Division 2**MEXICO**

Regulated for transportation.

16. OTHER INFORMATION

HMIS RATINGS:	
HEALTH:	3
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTION:	H

NFPA

