

**SPARTAN CHEMICAL COMPANY, INC.
WHMIS MATERIAL SAFETY DATA SHEET**

SECTION I: PRODUCT INFORMATION

**PRODUCT IDENTIFIER
ORANGE TOUGH 90**

PRODUCT USE: Water-Rinsable, Natural Solvent Degreaser

MANUFACTURER'S NAME & ADDRESS
Spartan Chemical Company, Inc.
1110 Spartan Drive, Maumee, OH 43537 USA

MEDICAL EMERGENCY TELEPHONE
888/314-6171 (24 Hours)
PRODUCT INFORMATION
800/537-8990

SECTION II: HAZARDOUS INGREDIENTS

CAS REGISTRY NO.	% W	CHEMICAL NAME(S)	TLV			LD50	LC50
			TWA mg/m ³	STEL mg/m ³	Ceiling mg/m ³		
5989-27-5	85-95	d-Limonene	----	Not Established	-----	Not available	Not available
127087-87-0	10-15	Nonylphenol ethoxylate	----	Not Established	-----	Not available	Not available
68439-46-3	1-5	Alcohol ethoxylate	----	Not Established	-----	Not available	Not available

SECTION III: PHYSICAL DATA

BOILING POINT 154 °C (310°F)	SPECIFIC GRAVITY (H₂O = 1) 0.86	PERCENT SOLID BY WEIGHT 10-15
VAPOUR PRESSURE Not established	EVAPORATION RATE (butyl acetate = 1) < 1	FREEZING POINT Not available
VAPOUR DENSITY (AIR = 1) Not established	SOLUBILITY IN WATER Complete	ODOUR THRESHOLD Not available
pH N/A	APPEARANCE AND ODOUR Orange liquid, orange odor	PHYSICAL STATE GAS__ LIQUID <u>X</u> SOLID_____
COEFFICIENT OF WATER/OIL DISTRIBUTION Not available		

SECTION IV: FIRE & EXPLOSION DATA

FLASH POINT 51 °C (124°F)	METHOD USED ASTM - D56	FLAMMABLE LIMITS Not established
EXTINGUISHING MEDIA Foam, dry chemical, CO ₂ , water fog or spray.	CONDITIONS OF FLAMMABILITY Not applicable	AUTO-IGNITION TEMPERATURE Not applicable
HAZARDOUS COMBUSTION PRODUCTS Not established		EXPLOSION DATA Not applicable
SPECIAL FIRE FIGHTING PROCEDURES Use self-contained breathing apparatus for maximum respiratory protection. Water may be used to cool containers if not ruptured or leaking.		
UNUSUAL FIRE AND EXPLOSION HAZARDS Combustible liquid and vapor. Keep away from heat, sparks or flame.		

SECTION V: REACTIVITY DATA

STABILITY: STABLE X **CONDITIONS OF INSTABILITY** **CONDITIONS OF REACTIVITY**
Not established Not established

INCOMPATIBILITY (MATERIALS TO AVOID) Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS Carbon dioxide, carbon monoxide

SECTION VI: TOXICOLOGICAL PROPERTIES

PRIMARY ROUTES OF ENTRY: Eye Contact, Skin Contact, Ingestion, Inhalation

EXPOSURE LIMIT

Not established for mixture.

EFFECTS OF ACUTE EXPOSURE:

EYE CONTACT: Causes severe eye irritation with symptoms such as pain, redness and swelling.

INGESTION: Harmful if swallowed. Symptoms may include nausea, diarrhea, and intestinal upset.

SKIN CONTACT: Causes skin irritation with symptoms such as pain, redness and swelling.

INHALATION: Breathing vapors or mist may cause respiratory irritation.

EFFECTS OF CHRONIC EXPOSURE

None known

IRRITANCY OF PRODUCT

Causes skin and eye irritation

SENSITIZATION TO PRODUCT

Contains d-limonene which may cause skin sensitization with repeated contact.

CARCINOGENICITY

No

REPRODUCTIVE TOXICITY

Not available

TERATOGENICITY

Not available

MUTAGENICITY

Not available

SYNERGISTIC PRODUCTS

Not available

SECTION VII: PREVENTIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT / ENGINEERING CONTROLS:

Wear rubber or other impervious gloves and splash goggles. Provide good general ventilation. Local exhaust ventilation may be necessary for some operations. If respiratory irritation can not be prevented by ventilation, use of a NIOSH approved respirator suitable for the conditions of use and chemicals in Section II should be considered.

LEAK AND SPILL PROCEDURE: Dike and contain spill with inert material (sand, earth, commercial absorbent, etc.) and transfer to containers for disposal. Keep spills out of storm sewers and waterways.

WASTE DISPOSAL METHOD: Do not dispose of this product by pouring on the ground, into storm sewers, waterways or other surface waters. Consult with local, federal and provincial authorities prior to disposal of any d-limonene containing product into the sanitary sewer system. Assure conformance with applicable regulations.

HANDLING PROCEDURES: Avoid contact with eyes, skin and clothing. Do not swallow. Avoid breathing product vapors or mist. Wash thoroughly after handling. Mops, towels or rags dampened with this product are combustible and may also be subject to spontaneous combustion. Thoroughly rinse these materials with water to remove product before disposal or discard in special containers designed for this purpose.

STORAGE REQUIREMENTS: Flash point 51 °C (124°F) Keep container closed when not in use. Do not store above 49°C (120°F). Product will expand with temperature increase and may cause container to swell and possibly rupture. In case of container expansion, carefully vent container. All handling equipment should be electrically grounded. Keep out of reach of children.

SPECIAL SHIPPING INFORMATION: Flammable liquids, n.o.s., 3.3 ,UN 1993, III (contains d-limonene)

SECTION VIII: FIRST AID MEASURES

EYES: Flush eyes with water for at least 15 minutes. Remove contact lenses. Get medical attention.

SKIN: Remove contaminated clothing. Flush skin with water for at least 15 minutes. Get medical attention if irritation persists. Wash contaminated clothing before reuse.

INGESTION: Do not induce vomiting unless advised to do so by a doctor or poison control center. Drink one or two glasses of water to dilute product. Get medical attention. Do not give anything by mouth to an unconscious person.

INHALATION: In case of respiratory irritation or dizziness, move person to fresh air. Get medical attention if irritation persists.

SECTION IX: PREPARATION INFORMATION

ORANGE TOUGH 90

DATE OF PREPARATION: March 20, 2014

SUPERCEDES: March 7, 2011

PREPARED BY Ronald T. Cook / Manager, Regulatory Affairs / Spartan Chemical Company, Inc.

TELEPHONE NUMBER 800/537-8990