



Spartan Chemical Company, Inc.

Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
ORANGE TOUGH 90
 Product Number: 2290

Product Division:
 Janitorial

Spartan Chemical Company, Inc.
 1110 Spartan Drive
 Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990
 Medical Emergency: 1-(888)-314-6171 (24 hours)
 Chemical Leak/Spill Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Non Hazardous Products

NFPA Ratings:	HMIS Ratings:
Health: 2 - Moderate Fire: 2 - Moderate Reactivity: 0 - Minimal	Health: 2 - Moderate Fire: 2 - Moderate Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			NTP, IARC or OSHA Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
d-limonene	85-95	5989-27-5	Not Established	Not Established	Not Established	No
Nonyl phenol ethoxylate	10-15	127087-87-0	Not Established	Not Established	Not Established	No
Alcohol ethoxylate	1-5	68439-46-3	Not Established	Not Established	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point: 310 °F	Vapor Pressure: Unknown
Vapor Density (AIR = 1): Unknown	Solubility in Water: Emulsifiable
pH: NA	Specific Gravity (H ₂ O=1): 0.86
Evaporation Rate (but.ace.=1): <1	Percent Solid by Weight: 10-15
Physical State: Liquid	
Appearance & Odor: Clear orange liquid, orange citrus odor	

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: 124°F	Method Used: ASTM-D56
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Water, carbon dioxide or dry chemical	
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.	
Unusual Fire & Explosive Hazards: Combustible liquid and vapor. Keep away from heat, sparks or flame. Combustion products are toxic.	

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value:	Not Established	Primary Routes of Entry:	Inhalation, Skin Contact, Eyes & Oral
Effects of Overexposure-Conditions to Avoid:	Causes eye irritation: Symptoms may include pain, redness and swelling of the conjunctiva. Causes skin irritation: Symptoms may include redness, pain and swelling. Harmful if swallowed: Symptoms include pain, nausea, vomiting and diarrhea. Breathing product vapors or mist may cause respiratory irritation: Symptoms may include nasal discomfort and coughing. Contains d-limonene which may cause skin sensitization with repeated contact. Avoid contact with eyes, skin and clothing. Avoid breathing product vapors or mists. Do not swallow. Use with adequate ventilation. Wash thoroughly after handling.		
Conditions Aggravated by Use:	Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.		
Emergency & First Aid Procedures :			
Eyes:	Flush eyes with plenty of 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. Drink one or two glasses of water to dilute product. Get medical attention. Never give anything by mouth to an unconscious person.		
Inhalation:	Move person to fresh air. Get medical attention if irritation persists.		

SECTION VI: REACTIVITY DATA

Stability:	Stable	Incompatible Materials:	Strong acids and oxidizing agents
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide	Hazardous Polymerization:	Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:	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 state authorities prior to disposal of any d-limonene containing product into the sanitary sewer system. Dispose of in compliance with all federal state and local laws and regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Not normally required when good general ventilation is provided. However if exposure limits are exceeded (see Section II) or if respiratory irritation occurs, the use of a NIOSH approved respirator suitable for the use-conditions and chemicals listed in Section II should be considered.
Ventilation:	Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type):	Rubber or other impervious gloves.
Eye Protection(Specify Type):	Splash goggles are recommended to prevent eye contact.
Other Protective Equipment:	Use of impervious apron, face shield and other protective equipment should be considered in order to prevent or minimize contact with this product. See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing:	Combustible liquid and vapors. Flash Point 124°F. Keep away from heat, sparks or flame. Store in a cool, dry area. Keep container tightly closed. Do not store above 120°F. Product will expand and may cause container to swell and possibly rupture. Do not mix with other chemicals.
Other Precautions:	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. Keep out of reach of children.

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ORANGE TOUGH 90
Ref: 29 CFR 1910.1200 (OSHA)

Name: Ronald T. Cook
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Title: Manager, Regulatory Affairs
Supercedes: 09/22/2008

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