MATERIAL SAFETY DATA SHEET

Date Issued: 07/28/2010
MSDS No: 23972

TOH:CHO 1:1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TOH:CHO 1:1
PRODUCT CODE: 23972, 930

MANUFACTURER
Tarr Acquisition, LLC
4115 W. Turney Ave.
Phoenix, AZ 85019
Service Number: 602-233-2000

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEMTREC (US Transportation) :(800) 424 - 9300
CANUTEC (Canadian Transportation) :(613) 996 - 6666

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: WARNING! Flammable liquid and vapor. Harmful if swallowed, inhaled or absorbed through skin. Affects central nervous system, liver and kidneys. Causes irritation to skin, eyes and respiratory tract.

POTENTIAL HEALTH EFFECTS

EYES: Irritant. May cause redness, irritation and/or pain. Contact may cause corneal injury.

SKIN: Liquid is mildly irritating to the skin. Prolonged or repeated contact can cause dermatitis. Harmful if absorbed through the skin.

INGESTION: May cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, or diarrhea. May cause headache, weakness, ataxia (failure of muscular coordination), delirium, fever, dehydration, and hypothermia.

INHALATION: Harmful if inhaled. Material is irritating to mucous membranes and the upper respiratory tract. Symptoms may include dizziness, headache, nausea and mental confusion.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE TOXICITY: This material is an irritant. Eye contact with the liquid may result in moderate to severe irritation and reversible cornel injury. Vapors are mildly irritating to the eyes. The liquid is a moderate skin irritant and repeated or prolonged contact can cause irritation or dermatitis.

CHRONIC EFFECTS: Prolonged or repeated exposure may cause skin rash or dermatitis. Damage to the liver and kidneys may occur. Based on animal studies, overexposure could lead to liver and/or kidney damage.

MEDICAL CONDITIONS AGGRAVATED: Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Preexisting diseases in or history of ailments involving skin, central nervous system, liver and kidney or pulmonary function may be more susceptible to the effects of this substance.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Cyclohexanone	45 - 55	108-94-1	203-631-1
Terpineol	40 - 50	98-55-5	
Terpineol, gamma	5 - 10	586-81-2	
(beta) - Terpineol	< 1	138-87-4	

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get immediate medical attention.

SKIN: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INGESTION: Do not give liquids if victim is unconscious or drowsy. Otherwise, have victim wash out mouth with water. Ensure that the mouth rinse water is not swallowed. Then have them drink 1-3 glasses of water to dilute stomach contents. NEVER GIVE ANYTHING BY MOUTH IF UNCONSCIOUS OR CONVULSING. Get Immediate medical attention.

INHALATION: Remove from exposure to fresh air. If not breathing or if breathing is difficult, oxygen should be administered by qualified personnel. Consult doctor.

NOTES TO PHYSICIAN: In small ingestion the major concern is aspiration and gastrointestinal decontamination is not recommended. With larger ingestion there is potential for systemic toxicity from gastrointestinal absorption and decontamination is suggested, keeping in mind that aspiration is still a concern.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 43.9°C (111°F) Lowest flash of chemical constituents within product.

FLAMMABLE LIMITS: 1.1 to 9.4

Notes: Estimated.

EXTINGUISHING MEDIA: Use CO2, foam, or dry chemical. Water can be used to cool a fire, but for extinguishment, foam or dry chemical are preferred.

OTHER CONSIDERATIONS: Vapors from product heated above flashpoint may travel to a source of ignition and flash back.

EXPLOSION HAZARDS: When heated above the flash point, releases flammable vapors. Above the flash point, vapor-air mixtures are explosive within flammable limits noted within msds. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. Sensitive to static discharge.

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

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: WARNING. Flammable. Ventilate area of leak or spill. Remove all sources

of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency. Dike around large spills to prevent spreading. Absorb small spills with inert material (clay, sand). Prevent contamination of surface waters.

RELEASE NOTES: US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reporting quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate fro incompatibles. Containers should be bonded and ground for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. containers of this material may be hazardous when empty since they retain product residues (vapors, liquids); observe all warnings and precautions listed for the product.

HANDLING: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

STORAGE: Keep in a tightly closed container. Store in a cool, dry, ventilated area away form sources of heat or sources of ignition. Protect against physical damage. Store separately from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

COMMENTS: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize or expose such containers to heat or flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
Cyclohexanone	TWA	50 ppm [1]	200 mg/m3 [1]	20 ppm	50 mg/m3	NL ppm	NL mg/m3
	STEL	ppm	mg/m3	ppm	mg/m3	NL ppm	NL mg/m3
OSHA TABLE COMMENTS: 1. NL = Not Listed							

ENGINEERING CONTROLS: Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your safety representative.)

SKIN: Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY: If exposure may or does exceed occupational exposure limits (Sec. 8) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-suppling respirator or an air-purifying respirator for organic vapors.

PROTECTIVE CLOTHING: Wear appropriate protective clothing to prevent skin exposure.

WORK HYGIENIC PRACTICES: Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Avoid prolonged or repeated breathing of vapors

COMMENTS: Use general or local mechanical exhaust ventialtion capable of maintaining emissions in the work area below the OSHA-PEL or ACGIH-TLV.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Boiling Point (°C)	Auto Ignition (°C)	Solubility in Water	Specific Gravity
Cyclohexanone	43.9 TAG CC	155	420	15% in water @ 10 deg. C (50 deg. F)	0.94

PHYSICAL STATE: Liquid

COLOR: Clear, colorless to slightly yellow-colored liquid.

BOILING POINT: 155°C to 224°C 760 mm Hg

FLASHPOINT AND METHOD: 43.9°C (111°F) Lowest flash of chemical constituents within product.

SOLUBILITY IN WATER: Slight

EVAPORATION RATE: Less than 1 (n-Butyl Acetate = 1)

DENSITY: 7.8 lbs./gal.

SPECIFIC GRAVITY: 0.900 to 0.980

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

POLYMERIZATION: Not reported.

CONDITIONS TO AVOID: Avoid heat, flames, ignition sources and incompatibles.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and unidentified organic compounds may be formed during combustion.

INCOMPATIBLE MATERIALS: Strong oxidizing agents. May cause spontaneous ignition and violent reactions. May attack plastics, resins, and rubber.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
Cyclohexanone	1620 mg/kg (Rat)	1 mL/kg (Rabbit)	8000 ppm / 4 hours (rat)
Terpineol	5170 mg/kg (rat), Oral, mouse: LD50 = 2830 mg/kg.		

EYE EFFECTS: Cyclohexanone: Eye Rabbit (Standard Draize): 20 mg, severe

SKIN EFFECTS: Cyclohexanone: Skin Rabbit (Open Draize): 500 mg, mild

CHRONIC: Guinea pigs exposed to 4000 ppm of Cyclohexanone for a 6-hour period showed signs of CNS depression, lacrimation, salivation, depression of the body temperature and respiratory heart rate, and opacity of the cornea. Mice, guinea pigs, and cats exposed to 3800 ppm exhibited the same effects. Based on animal studies, overexposure could lead to liver and/or kidney damage.

CARCINOGENICITY

IARC: The International Agency for Research of Cancer (IARC) Carcinogenicity Classification for Cyclohexanone is: IARC 3: Classification not possible from current data.

12. ECOLOGICAL INFORMATION

BIOACCUMULATION/ACCUMULATION: Terpineol estimated bioconcentration factor is 8.5 - 53 (Webb, M. et al Water Res. 1976, 10, 303).

Cyclohexanone has an estimated bioconcentration factor (BCF) of less than 100. It is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC_{50}: 10-100 mg/l at 10 deg. C (rainbow trout) static bioassay (GEMS: Graphical Exposure Modelling System 1982, US EPA Washington, DC). Results shown are for Terpineol.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of waste material according to local, State, Federal, and Provincial Environmental Regulations.

EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

RCRA/EPA WASTE INFORMATION: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are

listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

GENERAL COMMENTS: Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquids, N.O.S.

TECHNICAL NAME: (Cyclohexanone)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

NAERG: 128

LABEL: Flammable liquid

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

Flammable Liquid

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: This product should be reported as an immediate (acute) health hazard, delayed (chronic) health hazard, and a fire hazard.

FIRE: Yes **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: To the best of our knowledge, chemicals in this product are not listed as toxic chemicals under Section 313 of SARA Title III.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: To the best of our knowledge, none of the chemicals in this product are listed as an extremely hazardous substance under Section 302 of SARA Title III nor does this product contain any other such substances.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
Cyclohexanone	45 - 55	5,000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Cyclohexanone	108-94-1
Terpineol	98-55-5
Terpineol, gamma	586-81-2
(beta) - Terpineol	138-87-4

TSCA STATUS: This product and/or its components is listed on TSCA.

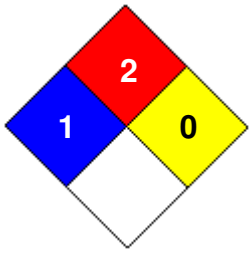
GENERAL COMMENTS: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

PREPARED BY: Compliance Dept.

REVISION SUMMARY: New MSDS

NFPA CODES



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