SAFETY DATA SHEET

1. Product and Company Identification

PRODUCT NUMBER:	2960	**COMPANY PHONE:**	1-800-241-8180
PRODUCT NAME:	KLEAR KUT	**EMERGENCY TELEPHONE:**	1-800-241-8180
PRODUCT DESCRIPTION:	Versatile Natural Solvent	**INFOTRAC:**	1-800-535-5053
COMPANY INFORMATION:	**PRO CHEM, INC.** 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004		

2. Hazards Identification

GHS CLASSIFICATION:
2.6 – Flam. Liq. 3
3.2 – Skin Irrit. 2
3.3 – Eye Dam. 1
3.4.S – Skin Sens. 1
3.10 – Asp. Tox. 1
4.1.A – Aqu. Acute 1
4.1.C – Chron. Acute 1

SIGNAL WORD:
DANGER

SYMBOL:

This product is considered hazardous according to OSHA's Hazard Communication Standard as well as European Union Directives 67/548/EEC and 1999/45/EC and international GHS standards and was prepared using Regulations 1907/2006 and 1272/2008.

N – Dangerous to the Environment
Xn – Harmful
Xi – Irritant

MOST IMPORTANT HAZARDS:

Flammable
Irritating to skin
Risk of serious damage to the eyes
May cause sensitization by skin contact
Very toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment
Harmful: may cause lung damage if swallowed

HAZARD STATEMENTS:

Flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Do NOT induce vomiting
If skin irritation occurs: Get medical advice/attention
Dispose of contents/containers in accordance with local/regional/national/international regulations

HAZARDS NOT OTHERWISE SPECIFIED:

This material is combustible, which is defined as having a flash point of 37.8ºC - 93.3ºC (100ºF- 200ºF).
Combustible materials are hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

3. Composition / Information on Ingredients

CHEMICAL NAME	CAS#	EC#	% BY WT	CLASSIFICATION
Citrus, ext.2	94266-47-4	232-433-81,3	40-95	Xn; N; R10-38-43-50/53-65
Alcohols, C12-15, ethoxylated	68131-39-5	500-195-74	5-40	Xi; N; R41-50

1 EC # associated with CAS 8028-48-6 (orange, sweet, ext.)
2 d-Limonene is the primary component of Citrus, ext. in Klear Kut
3 ECHA Registration #: 01-2119493353-35-0008
4 ECHA Pre-Registration #: 05-2115974034-47-0000
See Section 2 for the full text of the R phrases mentioned in this Section.

4. First Aid Measures

EMERGENCY OVERVIEW

WARNING: As with any chemical, employees should thoroughly wash hands with soap and water after handling this material.

EYES: Remove any contact lenses at once. Flush eyes with water for at least 15 minutes. If irritation persists, seek medical attention.

SKIN: Wash affected area with copious amounts of soap and water. If irritation develops, seek medical attention.

INHALATION:

If symptoms of overexposure are experienced, move to fresh air.

INGESTION:

Seek medical attention immediately. DO NOT induce vomiting. Rinse mouth with water. DO NOT offer water or anything to drink that might cause vomiting. DO NOT administer anything by mouth to an unconscious person. DO NOT leave victim unattended.

5. Fire-Fighting Measures

SUITABLE FIRE EXTINGUISHING MEDIA:

Carbon dioxide, foam or dry chemical. Caution: Carbon dioxide will displace air in confined spaces and may create an oxygen deficient atmosphere.

UNSUITABLE FIRE EXTINGUISHING MEDIA:

Water.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

Forms acrid fumes, carbon monoxide and carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Vapors may be irritating to eyes, skin and respiratory tract. Firefighters should wear self-contained breathing apparatus (SCBA) and full fire-fighting turnout gear.

6. Accidental Release Measures

PERSONAL PRECAUTIONS:

Use personal protection recommended in Section 8. Product is slippery when spilled. Isolate the hazard area. Deny entry to unnecessary and unprotected personnel.

ENVIRONMENTAL PRECAUTIONS AND CLEAN-UP METHODS:

Prevent further leakage or spillage. Keep away from drains, surface- and groundwater and soil. Dike spill area and cap leaking containers as necessary to prevent further spreading of spilled material. Absorb spilled liquid with suitable material such as dirt or sand. Eliminate all ignition sources. Use equipment rated for use around combustible materials. Place in appropriate disposal container. Oil soaked rags may spontaneously combust; place in appropriate disposal container. There are no special reporting requirements for spills of this material.

7. Handling and Storage

HANDLING:

Keep away from heat, sparks and flame. Open container slowly to release pressure caused by temperature variations. Do not allow this material to come in contact with eyes. Avoid prolonged contact with skin. Use in well-ventilated areas. Do not breathe vapors. Drum lining may occasionally chip and fall to the bottom of container; product should be filtered or strained before blending or repackaging. As with any chemical, employees should thoroughly wash hands with soap and water after handling this material.

STORAGE:

Product may be packaged in phenolic-lined steel containers or fluorinated plastic containers. Store in a well-ventilated area with proper sprinkler/fire deterrent system. Storage temperature should not exceed the flash point for extended periods of time. Keep container closed when not in use. Air should be excluded from partially filled containers by displacing with nitrogen or carbon dioxide. Do not cut, drill, grind or weld on or near this container; residual vapors may ignite.

8. Exposure Controls / Personal Protection

Exposure Guidelines

d-Limonene 8h TWA=30 ppm (AIHA Standard)

Ethoxylated C12-15 alcohol 8 h TWA: Not established

EYE PROTECTION: Wear safety glasses or goggles.

SKIN PROTECTION: Nitrile gloves are recommended. Boots, apron, or bodysuit should be worn as necessary.

RESPIRATORY PROTECTION: Not normally required. If adequate ventilation is unavailable, use NIOSH approved air purifying respirator with organic vapor cartridge or canister.

ENGINEERING CONTROLS: Normal room ventilation is usually adequate. Provide exhaust ventilation or other engineering controls to keep the airborne concentration below any regulated limits. Keep away from sparks and flames.

GENERAL HYGIENE CONSIDERATIONS: Wash hands thoroughly after handling. Have eyewash and emergency shower facilities immediately available. Launder contaminated clothing before use.

9. Physical & Chemical Properties

APPEARANCE:	Clear liquid	**FLAMMABLE LIMITS::**	Not determined
Physical State:	Liquid	**OPTICAL ROTATION:**	+90º to +93º at 25ºC
Color:	Yellow to amber	**FLASH POINT(closed cup):**	>48ºC
ODOR:	Citrus aroma	**EVAPORATION RATE:**	Estimated slower than butyl acetate
pH:	5 (10% in water)	**FREEZING POINT:**	Not determined
MELTING POINT:	Not Determined	**VAPOR PRESSURE:**	<2mmHg at 20ºC
BOILING POINT:	>100ºC	**SOLUBILITY (water):**	Forms emulsion
PARTITION COEFFICIENT (n-octanol/water):	Preparation is a surfactant dissolved in a terpene.	**SPECIFIC GRAVITY:**	0.850 to 0.860 at 25ºC
VISCOSITY:	Not determined	**REFRACTIVE INDEX:**	1.469 to 1.472 at 20ºC

Note: These properties represent a typical sample of the product, but actual values may vary. Certificates of Analysis and Specification Sheets are available upon request.

10. Stability & Reactivity Information

CHEMICAL STABILITY:

Stable.

INCOMPATIBLE MATERIALS:

Strong oxidizing agents and strong acids, including acidic clays, peroxides, halogens, vinyl chloride, and iodine pentafluoride.

CONDITIONS TO AVOID:

Keep away from heat, sparks and flames.

DECOMPOSITION PRODUCTS:

Oxides of d-limonene, which can result from improper storage and handling, are known to cause skin sensitization. No decomposition if stored properly.

POSSIBILITY OF HAZARDOUS REACTIONS:

BHT, an antioxidant, can be added to prevent oxidation. Avoid long-term exposure to air. If storing partially-filled containers, fill headspace with an inert gas such as nitrogen or carbon dioxide.

11. Toxicological Information

ACUTE EFFECTS:

d-Limonene has been shown to have low oral toxicity (LD50>5 g/kg) and low dermal toxicity (LD50> 5g/kg) when tested on rabbits. d-Limonene has also shown low toxicity by inhalation (RD50>1 g/kg) when tested on mice. Product may be a skin and eye irritant. Inhalation may cause irritation of the nose, throat, and respiratory tract. LC50: Not established.

Ethoxylated C12-15 alcohol has been found to be severely irritating to the eyes of rabbits. Acute Oral Toxicity: LD50 - > 3200 mg/kg (rats)

CHRONIC EFFECTS:

This product is not classified as a carcinogen by IARC or U.S. ACGIH, NTP or OSHA. This product has not been shown to produce genetic changes when tested on bacterial or animal cells. This product does not contain known reproductive or developmental toxins.

12. Ecological Information

ECOTOXICITY:

This product may be very toxic to aquatic life. However due to the physical properties of the product (density and volatility) it will not remain in the environment for an extended period of time.

PERSISTENCE/DEGRADABILITY:

Product is readily biodegradable.

BIOACCUMLATION/ACCUMULATION:

The octanol-water partition coefficient (Kow) for d-limonene is 4.23. The potential for bioaccumulation in the environment is possible. However, the metabolism of citrus extractives into non-accumulating metabolites greatly reduces the risk of bioaccumulation.

MOBILITY IN ENVIRONMENT:

Citrus extractives volatilize rapidly. Citrus extractives are expected to volatilize from soil or water to the air and oxidize to carbon dioxide in the presence of sunlight. Ethoxylated C12-15 alcohol does not volatilize rapidly. Ethoxylated C12-15 alcohol is water soluble and is expected to find its way to the water compartment and readily biodegrade.

13. Disposal Consideration

Incinerate or dispose of in accordance with local regulations. Oil soaked rags or contaminated packaging should be disposed of properly to prevent spontaneous combustion.

14. Transportation Information

The listed transportation classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptions.

Road – ADR/DOT (ground); RID (rail)

UN NUMBER: UN2319
UN PROPER SHIPPING NAME: TERPENE HYDROCARBONS, N.O.S.
HAZARD CLASS: 3
PACKING GROUP: III
Label/Placard: 3 Flammable Liquid
Label/Placard: exception §173.150(f) applies (DOT only)

Sea – IMDG (sea)

UN NUMBER: UN2319
UN PROPER SHIPPING NAME: TERPENE HYDROCARBONS, N.O.S.
HAZARD CLASS: 3
PACKING GROUP: III
Marine pollutant: Yes
Label/Placard: 3 Flammable Liquid

Air – IATA / ICAO (air)

UN NUMBER: UN2319
UN PROPER SHIPPING NAME: TERPENE HYDROCARBONS, N.O.S.
HAZARD CLASS: 3
PACKING GROUP: III
Label/Placard: 3 Flammable Liquid

15. Regulatory Information

Global Inventories

This product is included in the following inventories:

USA (TSCA)1,2	Canada (DSL)1,2	
Europe (EINECS/ELINCS/Polymer/NLP)3	Australia (AICS)3	Korea (KECL)3
Philippines (PICCS)	Japan (ENCS)2	China (IECSC)
New Zealand (HSNO)		

1 Citrus, ext. listed as CAS 68647-72-3 (terpenes and terpenoids, sweet orange-oil)
2 Citrus, ext. listed as CAS 5989-27-5 (d-limonene)
3 Citrus, ext. listed as CAS 8028-48-6 (orange, sweet,ext.)
The U.S. FDA lists d-Limonene as GRAS in 21 CFR sections 182.20 and 182.60

United States Regulations

Proposition 65: California Safe Drinking Water and Toxic Enforcement Act of 1986

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

SARA Title III (Section 313)

This substance contains no materials subject to the reporting requirements of SARA Title III (Section 313).

16. Other Information

Legend

ACIGH – American Conference of Governmental Industrial Hygienists
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AIHA – American Industrial Hygiene Association
BHT – Butylated Hydroxytoluene
CAS # - Chemical Abstracts Service
CFR – United States Code of Federal Regulations
DOT – United States Department of Transportation
EC# - European Commission (aka EINECS, European Inventory of Existing Commercial chemical Substances)
ECHA - European Chemicals Agency
FDA – United States Food and Drug Administration
GHS - Globally Harmonized System of Classification and Labeling of Chemicals
GRAS – Generally Recognized as Safe
IARC – International Agency for Research on Cancer
IATA – International Air Transport Association
ICAO – International Civil Aviation Organization
IMDG – International Maritime Code for Dangerous Goods
NFPA – National Fire Protection Association
NIOSH – United States National Institute for Occupational Safety and Health
NTP – United States National Toxicology Program
OSHA – United States Occupational Health and Safety Administration
RID – Regulations Concerning the International Transport of Dangerous Goods by Rail
TWA –Time Weighted Average

N/A = Not Applicable; N/D = Not Determined

Caution: The user should conduct his/her own experiments and establish proper procedures and control before attempting use on critical parts.

NFPA	Health Hazards: 1	Flammability: 2	Instability: 0	Physical & Chemical Properties:

DISCLAIMER:

To the best of our knowledge, information contained herein is accurate. However, there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard, which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product, which may not be covered by this SDS. The user is responsible for full compliance.