Quality Coolants

Safety Data Sheet
RV Concentrate

USA – According to the OSHA Hazard Communications Standard (HCS) (HAZCOM 2012).

SECTION 1: IDENTIFICATION

Product name: Quality Coolants RV Concentrate

Product description: propylene glycol heat transfer fluid

Recommended use: heat transfer fluid, registered under NSF's Nonfood Compounds Program

Uses advised against: any use other than recommended above.

Manufacturer or supplier identification

Quality Coolants
471 S Hwy 16
San Saba, TX 76877
Telephone number: 325-372-5786

Emergency telephone

Chemtrec (domestic): 1-800-424-9300 (24 hour)
Chemtrec (international): 1-703-527-3887 (24 hour)

SECTION 2: HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200): this material not hazardous.

Hazards not otherwise classified: none known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance or mixture: this product is a mixture.

Component	CAS Number	Concentration (WT%)
Propylene glycol	57-55-6	90-95%
Performance additive/inhibitor	proprietary	< 10%

SECTION 4: FIRST AID MEASURES

Inhalation: move person to fresh air and keep at rest in a position comfortable for breathing. If effects occur consult a physician.

Skin contact: flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: flush eyes with plenty of water, occasionally lift the upper and lower eyelids. Check for and remove contact lenses. Continue to flush for at least ten minutes. Get medical attention if irritation occurs.

Ingestion: wash out mouth with water. Get medical attention if adverse effects persist or are severe.

Most important symptoms/effects, acute & delayed: aside from the information found above and "Indication of immediate medical attention and special treatment needed" (below), any additional important symptoms and effects are described in section 11, Toxicological Information.

Indication of immediate medical attention & special treatment: no specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam (alcohol resistant foams (ATC type) are preferred; general purpose synthetic foams (including AFFF) or protein foams may function but will be less effective.

Unsuitable extinguishing media: do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture

Hazardous combustion products: during a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to carbon monoxide, carbon dioxide, phosphorus oxides and metal oxides.

Unusual fire and explosion hazards: in a fire or if heated, a pressure increase will occur, and the container may burst. This material is harmful to aquatic life. Firewater contaminated with this material must be contained and prevented from being discharged to any water body, sewer or drain.

Advice for firefighters

Special protective equipment: wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Special precautions: keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: use appropriate safety equipment. For additional information, refer to section 8, Exposure Controls/Personal Protection.

Environmental precautions: prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See section 12, Ecological Information.

Methods and materials for containment and cleaning up

Small spills: absorb with materials such as cat litter, sawdust, vermiculite. Zorb-all®. Collect in suitable and properly labeled containers.

Large spills: dike area to contain spill. Recover spilled material if possible. See section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: use appropriate personal protective equipment (section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment.

Conditions for safe storage: store in original container protected from direct sunlight in a dry, cool and well-ventilated area. Keep away from incompatible materials (section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Component	Regulation	Type of Listing	Value
propylene glycol	USWEEL	TWA	10 mg/m3

Engineering controls: good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Eye: use safety glasses (with side shields).

Hands: chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body: personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other: appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory: use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General hygiene: wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should

be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color)	Clear, colorless liquid
Odor	characteristic
Odor threshold	No data available
pH	9.0-10.5
Melting/Freezing point (50% solution)	-28.6°F
Boiling point (50% solution)	222°F
Flash point	Not flammable
Flammability (solid, gas)	not applicable
Flammability (liquids)	No data available
Lower explosion limit	not explosive
Upper explosion limit	not explosive
Vapor pressure	not available
Relative vapor density (air = 1)	not available
Relative density (water = 1)	1.055
Solubility	completely soluble in water

The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: stable under recommended storage conditions (section 7). Hygroscopic.

Possibility of hazardous reactions: polymerization will not occur.

Conditions to avoid: exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.
Incompatible materials: strong acids, strong bases, strong oxidizers.

Hazardous decomposition products: decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to aldehydes, alcohols, ethers, organic acids.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure: ingestion, inhalation, skin contact, eye contact.

Acute toxicity (represents short term exposures with immediate effects)

Acute oral toxicity: very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Component: propylene glycol LD50, rat, > 20,000 mg/kg.

Acute dermal toxicity: prolonged skin contact is unlikely to result in absorption of harmful amounts. For the major component (propylene glycol) LD50, rabbit, > 20,000 mg/kg.

Acute inhalation toxicity: at room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat). For the major component (propylene glycol) LC50, rat, 4 hour, vapor, 6.15 mg/l no deaths occurred following exposure to a saturated atmosphere.

Skin corrosion/irritation: prolonged contact may cause redness and irritation.

Serious eye damage/eye irritation: may cause eye irritation.

Sensitization: not available.

Specific target organ systemic toxicity (single exposure): not available.

Specific target organ systemic toxicity (repeated exposure): in rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Carcinogenicity: no components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.

Teratogenicity: not available.

Reproductive toxicity: not available

Mutagenicity: not available.

Aspiration hazard: based on physical properties, not likely to be an aspiration hazard.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Product: no data available.

Propylene glycol

Acute toxicity to fish: material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 hour, 40,613 mg/l, OECD Test Guideline 203.

Acute toxicity to aquatic invertebrates: LC50, Ceriodaphnia dubia (water flea), static test, 48 hour, 18,340 mg/l, OECD Test Guideline 202.

Acute toxicity to algae/aquatic plants: ErC50, Pseudokirchneriella subcapitata (green algae), 96 hour, growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201.

Toxicity to bacteria: NOEC, Pseudomonas putida, 18 hour, > 20,000 mg/l.
Chronic toxicity to aquatic invertebrates: NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 day, number of offspring, 13,020 mg/l.

Persistence and degradability

Product: no data available.

Propylene glycol: material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

Bioaccumulative potential

Product: no data available.

Propylene glycol: bioconcentration potential is low (BCF < 100 or Log Pow < 3). Partition coefficient: n-octanol/water (log Pow): -1.07 measured. Bioconcentration factor (BCF): 0.09 estimated.

Mobility in soil

Product: no data available.

Propylene glycol: given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient (Koc): < 1 estimated.

Other adverse effects: none known.

SECTION 13: DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and by-products must comply with the requirements of environmental protection and waste disposal legislation and regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled; incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned. Empty containers or liners may retain product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

US Department of Transportation (DOT): not regulated.

Transportation of Dangerous Goods (TDG): not regulated.

International Maritime Dangerous Goods (IMDG): not regulated.

International Air Transportation Associations (IATA): not regulated.

SECTION 15: REGULATORY INFORMATION

TSCA (Toxic Substances Control Act): all product ingredients are listed and active.

SARA (Superfund Amendments and Reauthorization Act)

SARA Section 302 Extremely Hazardous Substances: no product ingredients listed.

SARA Section 313 Toxic Chemicals: no product ingredients listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) reportable quantity Ingredients: no product ingredients listed.

RCRA (Resource Conservation and Recovery Act): no product ingredients listed.

CAA (Clean Air Act) Section 112(r): no product ingredients listed.

USA State Regulations

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act): no product ingredients listed.

Right to Know (Massachusetts): no product ingredients listed.

Right to Know (Pennsylvania and New Jersey): propylene glycol, CAS 57-55-6.

SECTION 16: OTHER INFORMATION

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HMIS classification: Health 1* (chronic health hazard), Flammability 1, Physical Hazards 0

HMIS rating scale (0 = minimal hazard; 4 = severe hazard)

NFPA classification: Health 1, Fire Hazard 1, Instability 0

NFPA rating scale (0 = minimal hazard; 4 = severe hazard)

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Table of Abbreviations & Acronyms

%WT: percent by weight
ACGIH: American Conference of Governmental Industrial Hygienists
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS: Australian Inventory of Chemical Substances (AICS)
BCF: bioconcentration factor
BOD: biological oxygen demand (BOD)
CAS: Chemical Abstract Service
CASRN: Chemical Abstract Service Registry Number
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CFR: Code of Federal Regulations
cSt: centistoke
CWA: Clean Water Act
DOT: Department of Transportation
ECx: effect concentration associated with x% response (e.g. EC50)
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European LIst of Notified Chemical Substances
ENCS: Existing and New Chemical Substances Inventory (Japan)
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right-to-Know Act
g/cm3: grams per cubic centimeter
GLP: good laboratory practice
HMIS: Hazardous Material Information System
IARC: International Agency for Research of Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IDHL: immediately dangerous to health or life
IECSC: Inventory of Existing Chemical Substances in China
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
KECL: Korea Existing Chemicals List
kg/m3: kilograms per cubic meter
Koc: partition coefficient
kPa: kilopascal
LC50: 50% lethal concentration. Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals.
LD50: 50% lethal dose. Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals.
LL: Lethal Loading
mg/kg: milligrams per kilogram
mg/l: milligrams per liter
mg/m3: milligrams per cubic meter
mm2/s: millimeter squared per second
mPa-s: millipascal-second
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NOAEL: no observed adverse effect level
NOEC: no observed effect concentration
NOEL: no observed effect level
NZIoC: New Zealand Inventory of Chemicals
OAT: organic acid technology
OECD: Organization for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPG: pounds per gallon
Ppm: parts per million
RCRA: Resource Conservation and Recovery Act
RQ: reportable quantity
S*: skin notation
SARA: Superfund Amendments and Reauthorization Act
SDS: safety data sheet
STEL: short term exposure limits
STOT: specific target organ toxicity
TCLo: lowest concentration resulting in a toxic effect
TCSI: Taiwan Chemical Substance Inventory
TDG: Transportation of Dangerous Goods (Canada)
TLV: threshold limit values
TSCA: Toxic Substance Control Act
TWA: time weight average
UVCB: substance of unknown or variable composition, complex reaction products or biological material
VOC: volatile organic compound