

Section 1 - PRODUCT AND COMPANY IDENTIFICATION**Material Name**

QSOL™ 220 Cleaning Solvent

Product Code

6540

Synonyms

PCBTF (Parachlorobenzotrifluoride)

Recommended Use

Cleaning and degreasing metal parts. QSOL 220 is certified by California's South Coast Air Quality Management District (SCAQMD) as a Clean Air Solvent (CAS). Also see Section 9: Volatile Organic Compounds. If this product is used in combination with other products, refer to the Safety Data Sheet for those products. Data Sheet for those products. SDS for use in Canada and the U.S.

Restrictions on Use

None known.

MANUFACTURER

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Section 2 - HAZARDS IDENTIFICATION**Classification in accordance with Schedule 1 of Hazardous Products Regulations (HPR) (SOR/2015-17) and 29 CFR 1910.1200**

Flammable Liquids - Category 3

Acute Toxicity (Dermal) - Category 4

Reproductive Toxicity - Category 2

GHS Label Elements**Symbol(s)**

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Signal Word

Warning

Hazard Statement(s)

Flammable liquid and vapor. Harmful in contact with skin. Suspected of damaging fertility or the unborn child.

Precautionary Statement(s)

Prevention

Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.

Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges. Use non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection.

Response

In case of fire: Use carbon dioxide, regular foam, dry chemical, water spray, or water fog. IF exposed or concerned: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before use. Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Storage

Store in a well-ventilated place. Keep cool. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

None known.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
98-56-6	Benzene, 1-chloro-4-(trifluoromethyl)-	93-97
556-67-2	Octamethylcyclotetrasiloxane	3-7

Section 4 - FIRST AID MEASURES

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before use. Call a POISON CENTER or doctor/physician if you feel unwell.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute

Harmful in contact with skin.

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Delayed

Reproductive effects

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Flammable liquid and vapor. Avoid friction, static electricity and sparks. The vapor is heavier than air.

Vapors or gases may ignite at distant ignition sources and flash back. Runoff to sewer may cause a fire or explosion hazard. Empty containers may contain product residue.

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce chlorine gas, fluorine gas, formaldehyde, silicon oxides, carbon monoxide, and unidentified organic compounds.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Apply water from a protected location or from a safe distance. Dike for later disposal.

Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal. There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see SECTION 15: REGULATORY INFORMATION.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes

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of product, metal containers, including trucks and tank cars, should be grounded and bonded. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, shoes. Do not smoke when using this product. Do not breathe vapor or mist.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed when not in use and during transport. Store containers below 85°F (30°C). Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See SECTION 14: TRANSPORTATION INFORMATION for Packing Group information.

Incompatible Materials

Acids, alkalis, oxidizing agents, reactive metals.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Canada, ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide general ventilation. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of vapors or mists. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

Respiratory Protection

Use NIOSH-certified, full-face, air-purifying respirators with P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Glove Recommendations

Where skin contact is likely, wear chemical impervious protective gloves; use of natural rubber (latex) or equivalent gloves is not recommended. To avoid prolonged or repeated contact with product where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits or other protective clothing.

Protective Materials

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, gloves, and lab coat or apron.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Physical State	Liquid
Odor	Naphthalenic odor	Color	Clear, colorless

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Odor Threshold	Not available	pH	Not available
Melting Point	-36 °C (-33 °F Approximate)	Boiling Point	139 °C (282 °F Approximate)
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	0.9 (Butyl acetate = 1)	Flammability (solid, gas)	Not available
Autoignition Temperature	500 °C (932 °F Minimum)	Flash Point	39 °C (103 °F Minimum)
Lower Explosive Limit	0.9 vol%	Decomposition temperature	Not available
Upper Explosive Limit	10.5 vol%	Vapor Pressure	5.3 mmHg @ 68 °F (20 °C Approximate)
Vapor Density (air=1)	6.2 (Approximate Air = 1)	Specific Gravity (water=1)	1.3 (Approximate Water = 1)
Water Solubility	(Slight)	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Coefficient of Water/Oil Dist	3.7 (Approximate)	Density	11.2 lb/gal (US Approximate)
		Molecular Weight	Not available

Volatile Organic Compounds (As Regulated)
100 WT%; 011.2 lb/ US gal; 0 1300 g/l
VOC Vapor Pressure @ 20°C = 5.3 mm Hg As per 40 CFR Part 51.100(s).
This product has been certified as a Clean Air Solvent, having passed a chemical analysis performed by California's South Coast Air Quality Management District (SCAQMD) Laboratory. It complies with the Volatile Organics (VOC) requirement of 1171 – Solvent Cleaning Operations.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

Will not polymerize under normal temperature and pressure conditions.

Conditions to Avoid

Heat, sparks, or flame and incompatible materials.

Incompatible Materials

Acids, alkalis, oxidizing agents, or reactive metals.

Hazardous decomposition products

None under normal temperatures and pressures. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.

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Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

This product contains a siloxane compound which may generate formaldehyde vapors when exposed to temperatures exceeding 302°F in the presence of air; Formaldehyde is a known cancer hazard, causes irritation and sensitization to the respiratory system, causes throat irritation, and is extremely hazardous.

Skin Contact

Harmful in contact with skin.

Eye Contact

No information on significant adverse effects.

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Benzene, 1-chloro-4-(trifluoromethyl)- (98-56-6)

Oral LD50 Rat 13 g/kg; Dermal LD50 Rabbit >2 mL/kg (death occurred (1 female rabbit)); Inhalation LC50 Rat 33 mg/L 4 h

Octamethylcyclotetrasiloxane (556-67-2)

Oral LD50 Rat 1540 mg/kg; Dermal LD50 Rabbit 794 µL/kg; Inhalation LC50 Rat 36 g/m3 4 h

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Inhalation - Vapor	> 20 mg/L
Oral	> 2000 mg/kg

Immediate Effects

Harmful in contact with skin.

Delayed Effects

Suspected of damaging fertility. Suspected of damaging the unborn child.

Irritation/Corrosivity Data

May cause irritation of the skin and eyes. May cause respiratory tract irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

This product contains a siloxane compound which may generate formaldehyde vapors when exposed to temperatures exceeding 302°F in the presence of air; Formaldehyde is a known carcinogen.

Germ Cell Mutagenicity

Based on best current information, there are no mutagenic effects associated with this product.

Tumorigenic Data

No information on significant adverse effects.

Reproductive Toxicity

Available data characterizes this substance as a reproductive hazard.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

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Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No additional information is available for this product.

Medical Conditions Aggravated by Exposure

May cause skin disorders, reproductive disorders.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

Benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6
Invertebrate:	EC50 48 h Daphnia magna 3.68 mg/L IUCLID
Octamethylcyclotetrasiloxane	556-67-2
Fish:	LC50 96 h Brachydanio rerio >500 mg/L; LC50 96 h Lepomis macrochirus >1000 mg/L

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

This material is believed not to bioaccumulate.

Mobility

Expected to have high mobility in soil.

Other Toxicity

VOC: 100 wt%, 1300 g/L as per 40 CFR part 51.100(s). VOC (Volatile Organic Compounds) compliant for California's South Coast Air Quality Management District (SCAQMD) and is certified as a Clean Air Solvent.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of in accordance with all applicable federal, state and local regulations. Hazardous Waste Number(s): D001, F001. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product. Contact Safety-Kleen regarding proper recycling or disposal.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: COMBUSTIBLE LIQUID, N.O.S. , (Contains:) , p-Chloro-a,a,a-trifluorotoluene)

Hazard Class: Combustible liquid

UN/NA #: NA1993

Packing Group: III

Required Label(s): Combustible liquid

Further information: Non-Bulk Shipments: Cleaning compounds (aromatic halocarbon, siloxane) (not US DOT regulated- 49 CFR 173.150(f))

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IATA Information:

Shipping Name: FLAMMABLE LIQUID, N.O.S. , (Contains: p-Chloro-a,a,a-trifluorotoluene)

Hazard Class: 3

UN#: UN1993

Packing Group: III

Required Label(s): 3

IMDG Information:

Shipping Name: FLAMMABLE LIQUID, N.O.S. , (Contains: p-Chloro-a,a,a-trifluorotoluene)

Hazard Class: 3

UN#: UN1993

Packing Group: III

Required Label(s): 3

TDG Information:

Shipping Name: FLAMMABLE LIQUID, N.O.S. , (Contains:) , p-Chloro-a,a,a-trifluorotoluene)

Hazard Class: 3

UN#: UN1993

Packing Group: III

Required Label(s): 3

Further information: Shipments in Small Means of Containment: Not TDG Regulated (TDGR 1.33)

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Octamethylcyclotetrasiloxane	556-67-2
IBC Code:	Category Y

Further information

ERG: 128; Reference: North American Emergency Response Guidebook

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

p-Chloro-a,a,a-trifluorotoluene	98-56-6
TSCA 12b:	Section 4 , 1 % de minimis concentration
Octamethylcyclotetrasiloxane	556-67-2
TSCA 12b:	Section 4 , 1 % de minimis concentration

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Flammable; Acute toxicity; Reproductive Toxicity

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

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California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

WARNING! This product can expose you to chemicals including p-Chloro-a,a,a-trifluorotoluene which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component Analysis - Inventory

p-Chloro-a,a,a-trifluorotoluene (98-56-6)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA			MX	NZ	PH	TH-TECI	TW	VN (Draft)
No			No	Yes	Yes	Yes	Yes	Yes

Octamethylcyclotetrasiloxane (556-67-2)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No
KR - REACH CCA			MX	NZ	PH	TH-TECI	TW	VN (Draft)
No			Yes	Yes	Yes	Yes	Yes	Yes

Canada Regulations

CEPA - Priority Substances List

None of this product's components are on the list.

Ozone Depleting Substances

None of this product's components are on the list.

Council of Ministers of the Environment - Soil Quality Guidelines

None of this product's components are on the list.

Council of Ministers of the Environment - Water Quality Guidelines

None of this product's components are on the list.

Section 16 - OTHER INFORMATION

NFPA Ratings: Health: 1 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Regulatory review and update.

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan

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Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.