SAFETY DATA SHEET
SUPER CHILL

Revision Date: June 8, 2015 **Version:** 2.1
Supersedes: May 4, 2012

Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: SUPER CHILL™
Part Number: 945KIT
Product Use: A/C Stop Leak and Performance Booster
Manufacturer: Cliplight Manufacturing
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Section 2 – Hazards Identification

GHS Classification

Aerosols: Category 3
Skin irritation: Category 3
Eye damage/irritation: Category 2A
Carcinogenicity: Category 2
Specific Target Organ Toxicity-Repeated Exposure: Category 2, Respiratory System
Aspiration Hazard: Category 1

Label elements:

Danger

Hazard statements:
H229: Pressurized container: May burst if heated
H316: Causes mild skin irritation
H319: Causes serious eye irritation
H351: Suspected of causing cancer
H373: May cause damage to the respiratory system on repeated or prolonged exposure
H304: May be fatal if swallowed and enters airways

Precautionary statements:
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after reuse.
P260 Do not breathe gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves and clothing and eye protection.
P321 Get medical advice if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical attention.

P301 + P310 + P331 IF SWALLOWED: Immediately call a doctor. DO NOT induce vomiting
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents and container in accordance with local, state and national regulations.

Section 3 – Composition/Information on Ingredients

Ingredient Name	CAS No.	EC No.	Composition, wt%
1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0	35-50
Xylene	1330-20-7	215-535-7	<7
Ethylbenzene	100-41-4	202-849-4	<2
Cyclohexanone	108-94-1	203-631-1	<1
Methylene chloride	75-09-2	200-838-9	<1

Remaining components of this product are not classified as hazardous under the GHS, 29 CFR 1910.1200, WHMIS 2015, or (EC) No 1272/2008.

Section 4 – First-Aid Measures

Inhalation
Move person to fresh air. Give artificial respiration if breathing has stopped. Get prompt medical attention.

Eye Contact
Immediately flush eyes with a large amount of water for at least 15 minutes. If symptoms exist and/or persist, get prompt medical attention.

Skin Contact
Remove contaminated clothing. Flush skin with warm, not hot, water then wash thoroughly with soap and water. If frostbite has occurred or irritation persists, seek medical attention.

Ingestion
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician immediately.

Acute and Delayed Symptoms
Symptoms of inhalation include dizziness, confusion, drowsiness, nausea, or unconsciousness. At higher levels, heartbeat irregularity may be a result with additional symptoms such as heart-thumping.

Skin contact can lead to symptoms such as frostbite, irritation, redness or swelling.

Eye contact can lead to symptoms such as frostbite, irritation and redness.

Special Treatment Needed
Because inhalation may lead to cardiac irregularities, treatment of patients with catecholamine drugs should be avoided.

Section 5 – Fire-Fighting Measures

Extinguishing media
DO NOT USE WATER STREAM. Use polar solvent foam, carbon dioxide, dry chemical or water spray.

Special hazards arising from the substance or mixture
Toxic fumes are generated when material is exposed to fire and fire conditions.

Advice for firefighters
Wear self-contained breathing apparatus and protective clothing as required.
Vapours may travel considerable distance to a source of ignition and flash back.
Part of the product is liquid under ambient conditions and is flammable. If the product's liquid portion is exposed to fire or an ignition source that results in flammability, extinguish with polar solvent foam, carbon dioxide, dry chemical, or water spray. The pressurized cans may rupture when exposed to fire or excessive heat. Use water spray to cool containers exposed to fire.

Section 6 – Accidental Release Measures

Personal precautions
Evacuate the spill area. Floor may be slippery if non-volatile components in product have wetted the floor; use care to avoid falling. Shut off all sources of ignition. Wear chemical-resistant gloves and chemical safety goggles or safety glasses with side shields. Provide adequate ventilation.

Environmental precautions
Avoid runoff to sewers and waterways. Do not let product enter drains.

Methods and materials for containment and cleaning up
Ventilate the spill area. Avoid breathing vapour. Contain non-volatile material immediately with inert adsorption materials. Transfer liquids and solid adsorption materials and diking material to separate suitable containers for disposal. Use non-sparking tools. Dispose of waste material in accordance with all local, state, provincial, and national requirements.

Section 7 – Handling and Storage

Conditions for safe handling
Ensure adequate ventilation. Avoid causing and inhaling vapour. Avoid exposure of product to very hot surfaces.

Conditions for safe storage
Store in a cool, well-ventilated place. Keep containers dry. Store product away from reactive and corrosive materials. The minimum recommended storage temperature for this material is -29°C/-20° F. The maximum storage temperature is 49°C/120°F.

Section 8 – Exposure Controls/Personal Protection

Control Parameters

Component	CAS No.	Value	Control Parameter	Basis
1,1,1,2-Tetrafluoroethane	811-97-2	TWA	1000 ppm	OSHA
Xylene	1330-20-7	TWA	100 ppm	ACGIH, OSHA
		STEL	150 ppm	ACGIH
Ethylbenzene	100-41-4	TWA	20 ppm	ACGIH TLV
		STEL	125 ppm	ACGIH TLV
		TWA	100 ppm 435 mg/m3	NIOSH recommended exposure limit. OSHA occupational exposure limit.
		ST	125 ppm 545 mg/m3	NIOSH recommended exposure limit. OSHA occupational exposure limit.
Cyclohexanone	108-94-1	TWA	20 ppm	ACGIH TLV
		STEL	50 ppm	ACGIH TLV
Methylene chloride	75-09-2	TWA	50 ppm	ACGIH
		STEL	125 ppm	OSHA specifically regulated chemicals/carcinogen
		PEL	25 ppm	OSHA specifically regulated chemicals/carcinogen

Component	CAS No.	Value	Control Parameter	Basis
1,1,1,2-Tetrafluoroethane	811-97-2	TWA	1000 ppm	AIHA WEEL TWA (8 hr.)
Xylene	1330-20-7	TWA	50 ppm 221 mg/m3	UK EH40 WEL EC Directive 2000/39/EC
		STEL	100 ppm 442 mg/m3	UK EH40 WEL EC Directive 2000/39/EC
Ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m3	UK EH40 WEL EC Directive 2000/39/EC
		STEL	200 ppm 484 mg/m3	EC Directive 2000/39/EC
		STEL	125 ppm 352 mg/m3	UK EH40 WEL
Cyclohexanone	108-94-1	TWA	10 ppm 40.8 mg/m3	UK EH40 WEL EC Directive 2000/39/EC
		STEL	20 ppm 81.6 mg/m3	UK EH40 WEL EC Directive 2000/39/EC
Methylene chloride	75-09-2	TWA	100 ppm 350 mg/m3	UK EH40 WEL
		STEL	300 ppm 1060 mg/m3	UK EH40 WEL

Engineering Controls
Provide adequate ventilation.

Protective Equipment
Wear chemical-resistant clothing and safety glasses with side shields or splash goggles. Wear insulated gloves suitable for low temperatures.

Hygiene
Handle in accordance with good industrial hygiene and safety practices.

Section 9 – Physical and Chemical Properties

Appearance	Reddish liquid (under pressure)
Odour	Ethereal
Odour threshold	No data available
pH (water extract)	<7
Melting point/freezing point	No data available
Initial boiling point	-26.5°C (-15.7°F)
Flash point	Non-flammable product; 37°C (98°F) for liquid fraction
Evaporation rate	>120
Flammability or explosive limits	No data available
Vapour pressure	570 kPa (83 psia) @ 20°C (68°F)
Vapour density	3.3
Density (liquid fraction)	1.10
Solubility	Not soluble in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	>350°C (660°F)
Decomposition temperature	No data available
Viscosity	20cP @ 20°C (68°F)
Percent volatility (% wt)	47

Section 10 – Stability and Reactivity

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Unlikely

Conditions to avoid
This is a pressurized container; protect from sunlight and do not expose to temperature exceeding 49°C (120°F).

Incompatible materials
Avoid contact with strong oxidizing and reducing agents and alloys containing more than 2 percent magnesium.

Hazardous decomposition products
Thermal decomposition may yield toxic decomposition products which include alkyl low molecular weight components, organic chlorides, carbon monoxide and dioxide, hydrochloric acid, hydrofluoric acid, organic pyrolytic components, and phosgene.

Section 11 - Toxicological Information

The toxicological properties of this product have not been investigated. Information for some components is provided below.

Acute toxicity

Oral LD50 rat: Ethylbenzene – 3500 mg/kg
Cyclohexanone - 1534 mg/kg
Methylene chloride - >2000 mg/kg

Skin LD50 rabbit: Ethylbenzene – 15433 mg/kg
Cyclohexanone – 794-3160 mg/kg
Methylene chloride - >2000 mg/kg

Inhalation LC50 rat: 1,1,1,2-Tetrafluoroethane – 500000 ppm
Low Observed Adverse Effect Concentration (LOAEC) / dog: 75000 ppm
Cardiac sensitization
Cyclohexanone – >6.2 mg/l
Methylene chloride – 52000 mg/m3

Skin corrosion/irritation

Rabbit: 1,1,1,2-Tetrafluoroethane – slight irritation
Ethylbenzene - moderate skin irritation
Cyclohexanone - irritation
Methylene chloride – irritation – 24 h

Serious eye damage/irritation

Rabbit: 1,1,1,2-Tetrafluoroethane – slight irritation
Ethylbenzene – mild eye irritation
Cyclohexanone – risk of serious damage to eyes – 24 h
Methylene chloride – irritation – 24 h

Respiratory or skin sensitization

Guinea pig: 1,1,1,2-Tetrafluoroethane – not a skin sensitizer

Repeated Dose Toxicity

Inhalation rat: 1,1,1,2-Tetrafluoroethane - NOEL: 40000 ppm

Germ cell mutagenicity

1,1,1,2-Tetrafluoroethane: No mutagenic effects in animals or in tests on bacterial or mammalian cell cultures.
Ethylbenzene: Hamster ovary - Result: negative
Mouse - male and female - Result: negative
Cyclohexanone: Ames test (S. typhimurium) – negative
Human fibroblast – Laboratory experiments have shown mutagenic effects.
Methylene chloride: Rat – DNA damage

Carcinogenicity
Methylene chloride: Rat – inhalation
Tumorogenic: Carcinogenic by RTECS criteria. Endocrine: Tumors

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Xylene, Cyclohexanone).
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylbenzene, Methylene chloride).
NTP: Not identified as a known or anticipated carcinogen (Xylene, Ethylbenzene).
NTP: Reasonably anticipated to be a human carcinogen (Methylene chloride).
OSHA: Not identified as a carcinogen or potential carcinogen by OSHA (Xylene, Ethylbenzene).
OSHA: Specifically regulated carcinogen (Methylene chloride).

Reproductive toxicity
1,1,1,2-Tetrafluoroethane: No toxicity to reproduction.
Cyclohexanone: Overexposure may cause reproductive disorders based on tests with laboratory animals.

Specific target organ toxicity – single exposure
Cyclohexanone: Acute inhalation toxicity – breathing difficulties
Methylene chloride: May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity – single exposure
Methylene chloride:
Inhalation – May cause damage to organs through prolonged or repeated exposure (central nervous system).
Oral – May cause damage to organs through prolonged or repeated exposure (liver, blood).

Aspiration hazard
Ethylbenzene: May be fatal if swallowed and enters airways.

Potential Health Effects:

Inhalation: May be harmful if inhaled. May cause damage to the respiratory system on repeated or prolonged exposure.
Eye Contact: Liquid splashes cause serious eye irritation. Vapour spray may cause irritation or freeze burns.
Skin Contact: Vapour spray may cause freeze burns. Product can cause skin irritation.
Ingestion: Extremely unlikely to occur in use. May be fatal if ingested and enters airways.
Other Adverse Effects: Contains OSHA specifically regulated chemical/carcinogen and other components identified as possible human carcinogens.

Section 12 – Ecological Information

No data are available for the ecological effects of this product; some information on components is provided below.

Toxicity to fish: Ethylbenzene
LC50 – 96 h
Species: Menidia menidia
Value: 5.1 mg/l

Methylene chloride
LC50 – 96 h
Species: Pimephales promelas
Value: 193 mg/l

Toxicity to fish:	Methylene chloride Mortality NOEC – 144 h Species: Cryprinodon variegatus Value: 130 mg/l
Toxicity to other organisms:	Ethylbenzene EC50 – 48 h Species: Daphnia magna Value: 1.8-2.4 mg/l
	Cyclohexanone EC50 – 24 h Species: Daphnia magna Value: 820.0 mg/l
	Methylene chloride EC50 – 48 h Species: Daphnia magna Value: 1682 mg/l
Toxicity to algae	Ethylbenzene EC50 – 72 h Species: Skeletonema costatum Value: 4.9 mg/l

Persistence and degradability

Ethylbenzene
Aerobic -28 d
Result: 70-80% - Readily biodegradable

Cyclohexanone
Biodegradability
Result: 80-90% - Readily biodegradable

Methylene chloride
Biodegradability
Result: <26% - Not readily biodegradable

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Xylenes: Toxic to aquatic life
Ethylbenzene: Harmful to aquatic life with long lasting effects

Section 13 – Product Disposal

Product
Dispose of in compliance with local, state/provincial or federal regulations. Do not vent to the atmosphere.
The provisions of the U.S. Clean Air Act require any residual gases to be recovered.

Contaminated packaging
Dispose of as for product.

Section 14 – Transport Information

DOT Hazard Description:

SHIPPING NAME	HAZARD CLASS	ID NO.	PACKING GROUP
Consumer Commodity	ORM-D	UN 1950	N/A

DOT/IMDG/IACO/IATA/TDG
Shipping Name: AEROSOLS, non-flammable
UN #: 1950
Class: 2.2

Section 15 – Regulatory Information

All components of this product are listed in the U.S. Toxic Substances Control Act (TSCA) Inventory.

All components of this product are on the Canadian Domestic Substances List (DSL).

All components of this product are on or in compliance with the Australian Inventory of Chemical Substances (AICS).

A chemical safety assessment has not been carried out for this product.

Section 16 – Other Information

HMIS CLASSIFICATION

Health Hazard:	2
Flammability:	0
Physical Hazards:	0

Notes to this Revision

This version 2.1 (June 8, 2015) has been updated from the previous version of May 4, 2012 to conform to the requirements of the GHS, OSHA Hazard Communications Standard 2012, WHMIS 2015 and (EU) No 453/2010.

Significant changes have been made to the classification of the product. In addition, information has been expanded in many sections related to the safe use, handling and storage of the product.