Material Safety Data Sheet

ECOLINK 3005 (A)
High Purity Contact & Precision Parts Cleaner

Rev. 06/06/2007

2177A Flintstone Drive
TUCKER, GA 30084
www.ecolink.com
email: info@ecolink.com
800/886-8240 or
770/621-8240 (9–5 EST)

FOR CHEMICAL EMERGENCY
Call INFOTRAC
800/535-5053 (24 HOURS)

Section I: Product Identification

Product name:	ECOLINK 3005
Synonym:	Aerosol High Purity Contact & Precision Parts Cleaner
Molecular Formula:	Proprietary Blend

The "Plain English" Section

Material Safety Data Sheets can be confusing. Federal law requires us to print a great deal of technical information, which probably won't help the non-scientist. ECOLINK includes this "PLAIN ENGLISH" section, written to address the questions and concerns of the average person. If you have additional health, safety or product questions, don't hesitate to call us at 800-886-8240.

Compared to traditional HCFC contact cleaners ECOLINK 3005 is remarkably safe for the user. It offers greater safety to the user than flammable hydrocarbon contact cleaners.

Health Hazards: ECOLINK 3005 is an industrial chemical. We call it "environmentally preferred" because it is intended to replace products that are more damaging to the environment (CFC-113, HCFC-141b) or have greater toxicity potential (trichloroethylene, MEK, etc.). This does not mean that ECOLINK 3005 is completely harmless. It is strong enough to remove industrial soils, so it can irritate your skin. We suggest you wear gloves and avoid extended exposure to unprotected skin. Don't get it in your eyes or breathe large amounts of the vapor. ECOLINK 3005 evaporates quickly. Don't spray or use ECOLINK 3005 without adequate ventilation. For more exposure and first aid information, refer to MSDS sections II, VI.

Disposal: Do not expose to heat or store at temperatures above 120° F. Dispose of according to local, state and federal regulations.

Section II: Hazardous Components

Chemical Name	3,3-Dichloro-1,1,1,2,2-Pentafluoropropane
CAS No.	422-56-0
Weight %	40-50
Exposure	*AEL – 50 ppm TWA

Chemical Name	1,3-Dichloro-1,1,2,2,3-Pentafluoropropane
CAS No.	507-55-1
Weight %	50-60
Exposure	*AEL – 400ppm TWA

* AEL is **A**cceptable **E**xposure **L**imit established by Asahi Glass Co., Ltd. The AEL for the mixture is 100 ppm TWA.

Chemical Name	Acetone
CAS No.	67-64-1
Weight %	1-5
Exposure	ACGIH-TLV – 500 ppm TWA OSHA-PEL – 1000 ppm TWA

Chemical Name	Carbon dioxide
CAS No.	124-38-9
Weight %	1-5
Exposure	OSHA PEL – 5000 ppm TWA ACGIH TLV – 5000 ppm TWA

RCRA REGULATED:	No
SARA Title III, Section 313	Yes (CAS# 422-56-0, 507-55-1)
CERCLA RQ:	Acetone 5000 lbs.
ALL MATERIALS IN PRODUCT ARE TSCA LISTED.	
DOT regulated:	YES
DOT hazard class:	ORM-D
DOT Shipping Name:	Consumer Commodity
DOT number:	None Listed

Section III: Physical Data

Appearance & Odor:	Clear liquid, ethereal odor.
Boiling Point:	54° C
Specific Gravity:	Approx. 1.527
Vapor Pressure:	100 P.S.I.G. @ 70°F
Vapor Density (Air = 1):	Approx. 7.0
Solubility in Water:	Slight
Percent Volatile:	100%

Section IV: Fire & Explosion Hazard Data

Flash Point: (Closed Cup) None

Flammable Limits LEL None
UEL None

For warehouse storage purposes, store in a clean. dry area. Do not allow stored product to exceed 120° F to prevent leakage or potential rupture of container from pressure and expansion.

Extinguishing Media:
Use media appropriate for surrounding material.

Fire Fighting Procedures:
Self-contained breathing apparatus. Keep containers cool with water fog to prevent bursting.

Section V: Reactivity Data

Stability: Stable at normal temperatures and storage conditions.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Incompatibility: Incompatible with alkali or alkaline earth metals – powdered Al, Zn, Be, Na, Mg, etc.

Hazardous Decomposition: May decompose with extreme heat (>300^{o} C). Decomposition by open flames, glowing metal surfaces, etc. may form hydrofluoric acid, hydrochloric acid, and possibly carbonyl halides.

Hazardous Polymerization: Will not occur.

Section VI: Health Hazard Data

Primary Routes of Exposure:
Oral, Inhalation, & Skin

Ingestion:
Material poses an aspiration hazard which may cause "chemical pneumonia". Symptoms include coughing, gasping, choking, shortness of breath, bluish discoloration of skin, rapid breathing and heart rate, and fever.

Inhalation:
Excessive inhalation of vapors can cause hepatitus, hear irregularities, unconsciousness, or death. Intentional misuse can be fatal. Vapor reduces oxygen available for breathing and is heavier than air.

Eyes:
Irritation with tearing, pain or blurred vision.

Skin or Contact:
Slight irritation with itching, redness or swelling. Prolonged exposure may result in defatting of the skin.

See Section IX for additional toxicity data.

First Aid:

Inhalation: Remove to fresh air. If breathing is difficult give oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet. Seek medical attention.

Eyes: Irrigate immediately with water for at least 15 minutes. Get medical attention.

Skin: Wash with soap and water. Thoroughly clean contaminated clothes and shoes before re-use. If symptoms persist, seek medical attention.

Ingestion: Seek medical attention immediately. **Do not induce vomiting.** Drink two large glasses of water. Never give anyting by mouth to an unconscious person.

Section VII: Precautions for Safe Handling

HMIS Information:
Health – 2 / Reactivity – 0
Flammability – 0 Personal Protection – A

HMIS Definition:
0 – Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Extreme
"/" in the Health Category denotes material does not target any major organs.
"*" in the Health Category denotes material may target certain organs.

Eye/Face Protection: Wear safety glasses or coverall chemical splash goggles.

Respiratory Protection:
Where there is potential for airborne exposures in excess of applicable limits, use NIOSH approved respirator protection.

Ventilation: Use only with adequate ventilation. Keep container tightly closed. Vapors are heavier than air posing a hazard of asphyxia if they are trapped in enclosed or low places. Mechanical ventilation should be used in low or enclosed places.

Protective Clothing: Where there is potential for skin contact, have available and wear as appropriate impervious gloves, apron.

Work Practices: Treat this chemical with respect and follow all MSDS instructions. Always use in area with adequate ventilation.

Section VIII: Control Measures

Waste Disposal Method: Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

Precautions To Be Taken In Handling & Storing: Do not puncture or incinerate containers. Do not store at temperatures above 120° F

Other Precautions: Keep this and all chemicals out of the reach of children. Avoid food comtaminiation.

Section IX: Toxicity Data

HCFC-225ca

Inhalation:	4-h LC50: 37,300 ppm in rats
Oral:	LD50: > 5 g/kg in rats
Dermal:	LD50: > 2 g/kg in rabbit
Eye:	Not irritant up to 0.1 ml (rabbit)

HCFC-225cb

Inhalation:	4-h LC50: 36,800 ppm in rats
Oral:	LD50: > 5 g/kg in rats
Dermal:	LD50: > 2 g/kg in rabbit
Eye:	Not irritant up to 0.1 ml (rabbit)

Data from acute toxicity studies indicate that HCFC-225 has very low acute toxicity. Neither isomer causes eye irritation nor dermal toxicity in standardized tests; skin application of both isomers at high doses (2,000 mg/kg) produces no adverse effects. Therefore, the dermal LD50's are greater than 2 g/kg body weight. Oral administration of either isomer at high doses (5000 mg/kg body weight) does not cause any mortality and the oral LD50's are greater than 5 g/kg body weight. Both isomers also have very low acute inhalation toxicity as measured by the LC50 listed above. Cardiac sensitization response in dogs is observed at approximately 15,000 ppm for the mixture of HCFC-225ca/cb (45/55%) and 20,000 ppm for HCFC-225cb.

In 28 day inhalation studies with rats, the activity and responsiveness of the animals was reduced at 5,000 ppm or greater. Toxicity was otherwise confined to the liver; liver enlargement and induction of peroxisomes was seen following treatment with either of the isomers. HCFC-225ca was more potent than the cb isomer. In a 90-day study of HCFC-225 with rats, toxic effects were observed in liver, liver enlargement, and induction of peroxisomes. In 28 day studies with marmoset, exposure to HCFC-225 at 1,000 ppm caused effects on the liver such as slight fat deposition associated with changes in serum biochemical parameters. In the same study, exposure to HCFC-225cb at 5,000 ppm caused somnolence during exposure and an increase of cytochrome P-450, indicative of an adaptive response to HCFC-225cb. No liver enlargement was seen and virtually no peroxisome induction was observed.

Animal testing with HCFC-225ca/cb (45/55) mixture indicates that the compounds are not teratogenic.

Section X: Part Number & Packaging

Product Name	Part No.	Packaging	National Stock No.
ECOLINK 3005	1289-12	12X12 oz. Aerosols	6850-01-533-3299

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END OF MSDS