



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-730L
K0103A
LGW Contact Re-Nu

Product Use: Contact cleaner

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave.
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

Flammable aerosol: Category 2
Eye Irritation: Category 2A

Label elements:

Signal word

Warning

Pictograms



Hazardous warnings

Flammable aerosol
Causes serious eye irritation

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces – No smoking.
Do not spray on an open flame or other ignition source.
Wash skin thoroughly after handling.

Wear protective gloves/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

Pressurized container: Do not pierce or burn, even after use.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Prolonged skin contact may defat the skin and produce dermatitis.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
Trans-1-Chloro-3,3,3-trifluoropropene	102687-65-0	70 – 75
Isopropyl Alcohol	67-63-0	10 – 15
Trans-1,3,3,3-Tetrafluoroprop-1-ene	29118-24-9	18 – 22

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air and keep at rest comfortable for breathing. If not breathing, give artificial respiration. Give oxygen as necessary, if qualified personnel are available. Get medical attention if necessary.

Eye: Flush with large amounts of water for at least 15 minutes, lifting eyelids until no evidence of the chemical remains. Remove contact lenses, if present and easy to do. Continue to rinse. Get medical attention if irritation develops and persists.

Skin: Wash skin with plenty of water for at least 15 minutes. Wash contaminated clothing before use. Get medical attention if necessary.

Oral: Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms/effects, acute and delayed: Causes serious eye irritation.

5. FIRE FIGHTING MEASURES

Flammability: This product is flammable.

Test Method: Ignition distance test and Enclosed space ignition test

Suitable Extinguishing Media: Alcohol resistant foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing media: No applicable data available.

Special hazards: Hazardous reaction will not occur under normal conditions. Keep containers cool by spraying with water. Vapors may accumulate in confined spaces and are heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

Special Fire Fighting Instruction: Do not enter area without personal protective equipment. Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus, if necessary. Use water spray to keep exposed containers cool. Do not allow run-off from fire-fighting to enter drains or water sources.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel): Use personal protective equipment. Avoid breathing vapors, mist or gas. Evacuate personnel to safe area. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors accumulate in low areas. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental precautions: If containers rupture, prevent material from entering sewers, waterways, or low areas. Should not be released into the environment.

Spill Cleanup: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container for disposal according to local regulations.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, or clothing. Do not inhale vapor or mist. Wash thoroughly after handling. Keep away from heat, sparks, and open flame. Take measures to prevent the buildup of electrostatic charge.

Storage Conditions: Store in a clean, cool and dry area that is well-ventilated. Do not store sources of heat, in direct sunlight or where temperatures exceed 120°F/49°C. Do not pierce or burn, even after use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>TWA (ACGIH)</u>	<u>PEL (OSHA)</u>	<u>TWA (Honeywell)</u>
Trans-1,3,3,3-Tetrafluoroprop-1-ene	Not Established	Not Established	800 ppm
Trans-1-Chloro-3,3,3-trifluoropropene	Not Established	Not Established	300 ppm
Isopropyl Alcohol	400 ppm , TWA	400 ppm, 8 Hr. TWA	

Use only with adequate ventilation.

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 these areas.

Respiratory Protection: Avoid breathing vapors. Local exhaust should be used when large amounts are release. If necessary to keep exposure limits below permissible limits, wear suitable respiratory equipment. Wear a positive-pressure supplied-air respirator. In poorly ventilated areas, or if a large release occurs, use an approved self-contained breathing apparatus (SCBA).

Eye Protection: Avoid eye contact. Use chemical splash goggles.

Skin Protection: Use impervious gloves when necessary.

Hygiene Measures: Avoid breathing vapors, and mist. Avoid contact with skin and eyes. Provide adequate ventilation, especially in confined areas. Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 70°F/21°C

Percent Volatile by Volume: 100%

Density: 1.17 g/cc at 54°F/12.2°C

Vapor Pressure: N.A.

Vapor Density (Air=1): N.A.

Solubility in H₂O: 1.90 g/l at 68°F/20°C

Appearance: Clear Liquid

Odor: Slight

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Material and Conditions to Avoid: Do not store above 122°F/50°C. Keep away from direct sunlight. Protect from heat, flames and sparks. Do not mix with oxygen or air above atmospheric pressure. Avoid alkali metals, strong acids, strong bases, strong oxidizing agents, aldehydes, halogenated compounds, powdered Magnesium, and Aluminum.

Decomposition: Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc) forming products containing Carbon monoxide, Carbon dioxide, Carbonyl halides, Gaseous hydrogen chloride, and Gaseous hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

No component in this product, at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by IARC, NTP or OSHA.

Trans-1,3,3,3-Tetrafluoroprop-1-ene

Inhalation:

Acute Inhalation toxicity: 4 hour, LC50 rat: >207000 ppm

Skin irritation: No skin irritation in rabbits. Method: OECD Test Guideline 404

Method: OECD Test Guideline 40

Sensitization: Cardiac sensitization

Species: Dogs

Result: Did not cause sensitization on laboratory animals.

Repeated dose toxicity:

13 Weeks, Inhalation, rat: Causes mild effects on the heart. NOEL 5,000 ppms

Genotoxicity: In vitro and in vivo tests did not show mutagenic effects.

Reproductive toxicity: Species: rat, inhalation, NOEL: >20,000 ppm, Method: OECD Test Guideline 416

Teratogenicity: Did not show teratogenic effects in animal experiments.

Other Health Effects: This substance has no evidence of carcinogenic properties.

Trans-1-Chloro-3,3,3-trifluoropropene

Inhalation:

Acute Inhalation Toxicity: 4 hour, LC50:120000 ppm in rats.

Skin irritation: Rabbit testing indicates this material is not a skin irritant.

Sensitization: Does not cause skin sensitization.

Repeated dose toxicity:

4 Weeks, Inhalation, rat: NOEL 4500 ppm Note: Subacute toxicity

Genotoxicity; In vitro and in vivo tests didn't show mutagenic effects.

Reproductive toxicity: Species: rabbit, No-observed-effect level approx. 15,000 ppm

Species: rat, No-observed-effect level approx. 10,000ppm

Teratogenicity: Species: rabbit, No-observed-effect level approx. 15,000 ppm

Species: rat, No-observed-effect level approx. 10,000pp

Isopropyl Alcohol

Acute Toxicity

Ingestion: LD50, Rat 4,700 - 5,800 mg/kg.

Skin Absorption: LD50, Rabbit 13,000 mg/kg

Inhalation: LC50, Rat, 16,000 ppm

Skin Corrosion/Irritation: Mild skin irritation in rabbits.

Serious Eye Irritation/ Eye Irritation: Eye irritation, 24 h, in rabbits.

Skin Sensitization: No data available

Respiratory Sensitization: No data available

Germ Cell Mutagenicity: No data available

Carcinogenicity: Not classified based on available information.

Reproductive toxicity: No data available

STOT-single exposure: Inhalation, Oral – May cause drowsiness and dizziness.

STOT-repeated exposure: No data available

Aspiration toxicity: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity effects:

Trans-1,3,3,3-Tetrafluoroprop-1-ene

96 hour NOEC – Cyprinus carpio (Carp): > 117 mg/L

48 hour EC50 – Daphnia magna (Water flea): > 160 mg/L

Toxicity to algae: Growth inhibition: NOEC: > 170 mg/l, Exposure time: 72 h

Biodegradability: Aerobic: Not readily biodegradable

Trans-1-Chloro-3,3,3-trifluoropropene

96 hour LC50 – Oncorhynchus mykiss (rainbow trout): 38 mg/l (Method: OECD Test Guideline 203)

48 hour EC50 – Immobilization of Daphnia magna (Water flea): 82 mg/l (Method: OECD Test Guideline 202)

72 hour EC50 – Growth inhibition of Pseudokirchneriella subcapitata (green algae): > 215 mg/l (Method: OECD Test Guideline 201)

72 hour NOEC – Growth rate of Pseudokirchneriella subcapitata (green algae): 115mg/l (Method: OECD Test Guidelines 201)

Isopropyl Alcohol

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Aquatic: Fish: 96 hour LC50 in Bluegill (Lepomis macrochirus): > 1400 mg/l

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: Partition coefficient n-octanol/ water (log Kow): 0.05

Mobility in soil: No data available.

13. DISPOSAL CONSIDERATIONS

Comply with federal, state and local regulations. Do not puncture or incinerate cans.

14. TRANSPORT INFORMATION

U.S. DOT

Proper Shipping Name: Consumer Commodity

Hazard Class: ORM-D

Identification No. None

Packing Group: None

IATA

Proper Shipping Name: Aerosols, Flammable

Hazard Class: 2.1

Identification No. UN1950

Packing Group: None

IMDG

Proper Shipping Name: Aerosols, Flammable

Hazard Class: 2.1

Identification No. UN1950

Packing Group: None

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS:

TSCA: All ingredients are listed in TSCA inventory.

SARA 302: No ingredients in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Emission Reporting: None of the ingredients exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312 HAZARDS: Acute Health Hazard & Sudden Release of Pressure Hazard

US STATE REGULATIONS:

California Proposition 65 Carcinogens and Reproductive Toxins: None of the ingredients are listed.

16. OTHER INFORMATION

HMIS Ratings:

Health - 2

Flammability - 2

Reactivity - 0

Personal Protective rating to be supplied by user depending on the conditions.

FOR INDUSTRIAL USE ONLY

REVISION DATE: JANUARY 2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.