

## 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**

Aerosols: Category 2  
Serious eye damage/eye irritation: Category 2A  
Specific target organ toxic, single exposure: Category 3

### **Label elements:**

#### **Signal word**

Warning

#### **Pictograms**



### **Hazardous warnings**

Pressurized container: may burst if heated.  
Causes serious eye irritation.  
May cause drowsiness and dizziness.

### **Precautionary Statements**

Keep away from heat/sparks/open flames/hot surfaces and other ignition sources – No smoking.  
Do not spray on an open flame or other ignition source.  
Do not pierce or burn, even after use.

Wash skin thoroughly after handling.  
Wear protective gloves/eye protection/face protection.  
Avoid breathing fumes/mist/vapor/spray.  
Use only outdoors or in a well-ventilated area.  
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.  
IF INHALED: Remove victim to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/ physician if you feel unwell.  
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
Dispose of contents/container to an approved waste disposal plant.

### 3. INGREDIENTS

| <u>Material (s)</u>                   | <u>CAS No.</u> | <u>Approximate %</u> |
|---------------------------------------|----------------|----------------------|
| Trans-1-Chloro-3,3,3-trifluoropropene | 102687-65-0    | 65 – 70              |
| 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. If not breathing, give artificial respiration. Give oxygen as necessary if qualified personnel are available. Get medical attention.

**Eye:** Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue to rinse. Get medical attention.

**Skin:** Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before use. Thoroughly clean shoes before reuse. Get medical attention.

**Oral:** DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed:** May cause drowsiness and dizziness. 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:** Water fog, Alcohol resistant foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media:** No applicable data available.

**Specific hazards during firefighting:** Exposure to combustion products may be a hazard to health. Aerosols will rupture under fire conditions due to the heat and high pressure.

**Hazardous combustion products:** Carbon oxides, Hydrogen fluoride, Carbonyl halides, Halogenated compounds.

**Special Fire Fighting Instruction:** Evacuate area. 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. Fight fire from a distance, heat may rupture containers. Use water spray to cool aerosols. Do not allow run-off from firefighting to enter drains or water sources.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Evacuate area. Ventilate the area with fresh air. Use personal protective equipment. If a large amount of aerosols rupture and spill in confined areas, provide mechanical ventilation to disperse the vapors.

**Environmental precautions:** Avoid release to the environment. Prevent material from entering sewers, waterways, or low areas. Do not allow contact with soil, surface, or ground water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up:** Contain spillage, and then collect with inert absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national 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>STEL (ACGIH)</u> | <u>PEL (OSHA)</u> |
|---------------------------------------|---------------------|-------------------|
| Trans-1,3,3,3-Tetrafluoroprop-1-ene   | Not Established     | Not Established   |
| Trans-1-Chloro-3,3,3-trifluoropropene | Not Established     | Not Established   |
| Isopropyl Alcohol                     | 400 ppm             | 400 ppm           |

Use only with adequate ventilation.

Mechanical ventilation should be used in enclosed areas.

**Respiratory Protection:** Avoid breathing vapors. Local exhaust should be used when large amounts are release. If necessary, 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 safety 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:** N.A.

**Percent Volatile by Volume:** 100%

**Density:** 1.20 g/cc

**Vapor Pressure:** N.A.

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

**Solubility in H<sub>2</sub>O:** Slight

**pH Information:** N.A.

**Evaporation Rate (CC14=1):** N.A.

**Form:** Aerosol

**Appearance:** Clear

**Color:** Clear-Colorless

**Odor:** Slight alcohol odor

## 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:** Heat, sparks, and flames. Exposure to elevated temperatures, direct sunlight. Acids, Strong oxidizers, Alkali metals.

**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, Hydrogen fluoride.

## 11. TOXICOLOGICAL INFORMATION

### **Trans-1,3,3,3-Tetrafluoroprop-1-ene**

**Acute Oral:** Not applicable study technically not feasible.

**Acute Dermal:** No data available study technically not feasible

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

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

**Serious eye damage/eye irritation:** No data available. Study technically not feasible.

**Respiratory or skin 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 ppm

**Genotoxicity in vitro:** Test Method: Chromosome aberration test in vitro. Cell type: Human lymphocytes

Result: negative. Method: OECD Test Guideline 473

**Genotoxicity in vivo:** Test Method: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Species: Mouse. Cell type: Micronucleus. Application Route: Inhalation. Method: OECD Test Guideline 474. Result: negative.

**Reproductive toxicity:** Test Method: Two-generation study. Species: Rat. Application Route: Inhalation. NOEL: >20,000 ppm.

Method: OECD Test Guideline 416

**Teratogenicity:** Species: Rabbit & Rat. Method: OECD 416. Did not show teratogenic effects in animal experiments.

Species: Rat. Application Route: Inhalation. NOAEC: 15,000 ppm. Method: OECD Test Guideline 414

### **Trans-1-Chloro-3,3,3-trifluoropropene**

**Acute Inhalation:** 4 hour, LC50 rat:120000 ppm

**Skin irritation:** 4 hour, rabbit: Not classified as a skin irritant in animal testing. Method: OECD Test Guideline 404

**Sensitization:** Does not cause skin sensitization. Classification: Patch test on human volunteers did not demonstrate sensitization properties.

**Repeated dose toxicity:** 4 Weeks, Inhalation, rat: NOEL 4500 ppm. Note: Subacute toxicity

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

**Reproductive toxicity:** Species: Rabbit: No-observed-effect level - 15,000 ppm

Species: Rat: No-observed-effect level - 10,000ppm

**Teratogenicity:** Species: Rabbit: No-observed-effect level - 15,000 ppm

Species: Rat: No-observed-effect level - 10,000ppm

### **Isopropyl Alcohol**

#### **Acute Toxicity**

**Oral:** LD50, Rat, >5,000 mg/kg

**Skin Absorption:** LD50, Rat, >5,000 mg/kg

**Inhalation:** LC50, 4 h, Vapor, Rat, 72.6 mg/l

**Skin Corrosion/Irritation:** No skin irritation in rabbits.

**Serious Eye Damage/Irritation:** Irritation to eyes in Rabbits, reversing within 21 days.

**Skin Sensitization:** Not classified based on available information.

**Respiratory Sensitization:** Not classified based on available information.

**Germ Cell Mutagenicity:** In vitro and In vivo - Not Mutagenic

**Carcinogenicity:** Negative based in inhalation testing in rats.

**Reproductive Toxicity:** Not classified based on available information.

**STOT- single exposure:** May cause drowsiness or dizziness.

**STOT- repeated exposure:** Not classified based on available information.

**Aspiration toxicity:** Not classified based on available information.

## **12. ECOLOGICAL INFORMATION**

### **Ecotoxicity effects:**

#### **Trans-1,3,3,3-Tetrafluoroprop-1-ene**

96 hour LC0 – Static Test of *Cyprinus carpio* (Carp): > 117 mg/l. Method: OECD Test Guideline 203

48 hour EC50 – Static Test *Daphnia magna* (Water flea): > 160 mg/L. Method: OECD Test Guideline 202

Toxicity to algae: Growth rate and Biomass: NOEC: > 170 mg/l. Exposure time: 72 h. Method: OECD Test Guideline 201

**Bioaccumulation:** No bioaccumulation is to be expected (log Pow <=4).

**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

**Bioaccumulation:** No bioaccumulation is to be expected, due to the distribution coefficient n-octanol/water.

**Biodegradability:** Not readily biodegradable. Value: 0%. Method: OECD 301D

## Isopropyl Alcohol

**Toxicity to fish:** LC50, fathead minnow (*Pimephales promelas*), 96 h: 9,640 mg/l

**Toxicity to daphnia and other aquatic invertebrates:** EC50, water flea (*Daphnia magna*), 24 h: >10,000 mg/l

**Toxicity to microorganisms:** EC50, (*Pseudomonas putida*), 16 h: >1,050 mg/l

**Persistence and degradability:** Rapidly degradable.

**Bioaccumulative potential:** Partition coefficient: n-octanol/water: log Pow: 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

Limited Quantity

#### 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 (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 HAZARDS:** Acute Health Hazard. Sudden Release of Pressure Hazard. Fire Hazard

#### US STATE REGULATIONS:

**California Proposition 65 Carcinogens and Reproductive Toxins:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## **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: MAY 2021**

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.