



## 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

**Name:** MS-487G  
G0831B  
EMI/RFI Conductive Coating

**Product Use:** EMI/RFI Conductive Coating

### **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**

Serious eye damage/eye irritation: Category 2A.  
Skin corrosion/irritation: Category 2  
Skin sensitization: Category 1  
Reproductive toxicity: Category 2  
Carcinogenicity: Category 2  
Aspiration hazard: Category 1  
Specific Target Organ Toxicity (single exposure): Category 3  
Specific Target Organ Toxicity (repeated exposure): Category 2  
Hazardous to the aquatic environment, acute hazard: Category 2  
Hazardous to the aquatic environment, long term hazard: Category 3

### **Label elements:**

**Signal word**  
Danger

### **Pictograms**



### **Hazard Statements**

May be fatal if swallowed and enters airways.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Suspected of damaging fertility or the unborn child.  
Suspected of causing cancer.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.  
Harmful to aquatic life with long lasting effects.

### **Precautionary Statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe mist/vapors/spray.  
Wash skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.  
Wear eye protection, protective clothing and protective gloves.  
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 ON SKIN: Wash with plenty of soap and water.  
Take off contaminated clothing and wash before reuse.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Do NOT induce vomiting.  
IF exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/ container in accordance with local, regional, national regulations.

### **Other Hazards**

Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.

## **3. INGREDIENTS**

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	138495-42-8	50 – 53
Toluene	108-88-3	18 – 22
Acetone	67-64-1	3 – 7
Nickel	7740-02-0	16 – 18

## **4. FIRST AID MEASURES**

**Inhalation:** Remove patient to fresh air. If not breathing, give artificial respiration. Give oxygen as necessary, if qualified personnel is 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 necessary.

**Skin:** Wash skin with plenty of soap and water. Wash contaminated clothing before use. Get medical attention if necessary.

**Oral:** Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER/doctor/physician if you feel unwell.

## 5. FIRE FIGHTING MEASURES

**Flash Point:** None

**Method:** Pensky Martin Closed Cup

**Suitable Extinguishing Media:** Alcohol resistant foam, Dry chemical powder, Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special hazards:** The product is not flammable but may burn at high temperatures. Gas/vapor are heavier than air. May accumulate in confined spaces, particularly at or below ground level. Product is not explosive. Containers may rupture when exposed to excessive heat. Hazardous reactions will not occur under normal conditions.

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

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Evacuate personnel to safe area. Ventilate area, especially low or enclosed places where heavy vapors might collect. In case of insufficient ventilation, wear suitable respiratory equipment. Use appropriate personal protection equipment. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure area and call for assistance of trained personnel as soon as conditions permit.

**Environmental precautions:** Prevent material from entering sewers, waterways, or low areas. Should not be released into the environment.

**Methods and materials for containment and clean up:** Contain spillage, and then collect with inert 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 breathing vapors or mist. Use only with adequate ventilation. Avoid contact with eyes, skin, or clothing. Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Do not handle until all safety operating conditions are established and maintained. Do not spray.

**Storage Conditions:** Store tightly sealed in a clean, dry place, and well ventilated place. Do not store in temperatures that exceed 120°F/49°C.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>TLV (ACGIH)</u>	<u>PEL (OSHA)</u>
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	Not Established	Not Established
Toluene	20 ppm, TWA	200 ppm, TWA
Acetone	750 ppm	1000 ppm
Nickel	1 mg/m3 (inhalation)	

Use only with adequate ventilation. Vapors are heavier than air posing a hazard of asphyxia if they are trapped in enclosed or low places.

**Eye Protection:** Wear safety glasses or coverall chemical splash goggles. An eyewash and safety shower should be nearby.

**Respiratory Protection:** Where there is potential for airborne exposures to exceed established exposure limits, wear NIOSH approved respiratory protection.

**Skin Protection:** Where there is potential for skin contact have available and wear as appropriate impervious gloves. Protective gloves and chemical splash goggles should be used when handling liquid.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** 126°F/52°C

**Percent Volatile by Volume:** 78%

**Density:** 1.10 g/cc @ 77°F/25°C

**Vapor Pressure:** 455 mmHg at 68°F/20°C

**Vapor Density (Air=1):** 2.0 at 68°F/20°C

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

**pH Information:** N.A.

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

**Form:** Liquid

**Appearance:** Black Coating

**Color:** Black

**Odor:** Aromatic odor

## 10. STABILITY AND REACTIVITY

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Chemical stability:** Stable under normal conditions of storage and use.

**Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**Material and Conditions to Avoid:** Direct sunlight. Extremely high and low temperatures. Acids, Strong bases and Strong oxidizers.

**Decomposition:** This product can be decomposed by high temperatures (flame, glowing metal surfaces, etc.) forming Carbon oxides (CO, CO<sub>2</sub>), Formaldehyde, Methanol

## 11. TOXICOLOGICAL INFORMATION

### 1,1,1,2,2,3,4,5,5,5-Decafluoropentane

**Information on likely routes of exposure:** Inhalation, Skin contact, Ingestion, Eye contact

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

**Skin Corrosion/Irritation:** Not classified based on available information.

**Serious Eye Irritation/ Eye Irritation:** Not classified based on available information.

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

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

**Germ Cell Mutagenicity:** Not classified based on available information.

**Carcinogenicity:** Not classified based on available information.

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

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

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

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

### Toluene

**Acute Oral:** LD50: > 5,580 mg/kg in male rats

**Acute Dermal:** LD50: > 5,000 mg/kg in rabbits (ECHA)

**Acute Inhalation:** 4 hour LC50: 25.7 mg/l (OECD Test Guideline 403)

**Skin corrosion/irritation:** Skin irritation – 4 hours in rabbits (ECHA)

**Serious eye damage/eye irritation:** Slight irritation in rabbits (OECD Test Guideline 405)

**Respiratory or skin sensitization:** Maximization Test: Negative in Guinea pigs

**Germ cell mutagenicity:** Genotoxicity in vitro: Negative

**Carcinogenicity:** Not classified based on available information.

**Reproductive Toxicity:** Suspected of damaging the unborn child.

**STOT-single exposure:** May cause drowsiness and dizziness – Central nervous system.

**STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure. – Central nervous system.

**Aspiration hazard:** Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

### Acetone

**Oral:** LD50: 5,800 mg/kg in rats (OECD Test Guideline 401)

**Inhalation:** 4 hour LC50: 76mg/l in rats

**Dermal:** LD50: >15800 mg/kg in rats

**Skin corrosion/irritation:** No skin irritation (Guinea pig) Repeated exposure may cause skin dryness or cracking.

**Serious eye damage/eye irritation:** Irritating to eyes. (Rabbit) (OECD - Guideline 405) May cause corneal damage.

**Respiratory or skin sensitization:** Not sensitizing (Guinea pig) (OECD - Guideline 406)

**Germ cell mutagenicity:** negative (In vivo micronucleus test; Mouse, male and female)

**Carcinogenicity:** Animal testing did not show any carcinogenic effects.

**Reproductive Toxicity:** Animal testing did not show any effects on fertility.

**STOT-single exposure:** May cause drowsiness and dizziness – Central nervous system.

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

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

## 12. ECOLOGICAL INFORMATION

### 1,1,1,2,2,3,4,5,5,5-Decafluoropentane (HFC-43-10mee):

**Ecotoxicity:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Results of PBT and vPvB assessment:** This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### Toluene

96 hour LC50 in Bluegill: 74 – 340 mg/l

96 hour LC50 in rainbow trout: 7.63 mg/l

7 day NOEC in fathead minnow: 5.44 mg/l

24 hour EC50 in Daphnia magna: 8 mg/l

24 hour EC50 in Fresh water algae: 245 mg/l

### Acetone

96 hour LC50 in rainbow trout: 5,540 mg/l

48 hour LC50 in water flea: 8,800 mg/l

96 hour NOEC in algae: 430 mg/l

**Persistence:** Decomposition by hydrolysis.

**Degradability:** 91 % (Exposure Time: 28 d) (OECD Test Guideline 301B) Readily biodegradable.

**Bioaccumulative potential:** log Kow -0.24 : BCF: 3 (BCFWIN-software) Bioaccumulation is not expected.

**Mobility in soil:** Mobile in soils.

**Results of PBT and vPvB assessment:** This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## 13. DISPOSAL CONSIDERATIONS

Comply with Federal, State/Provincial and Local regulations. Remove to a permitted waste disposal facility.

## 14. TRANSPORT INFORMATION

### U.S. DOT

Not Regulated

### IATA

Not Regulated

### IMDG

Not Regulated

## **15. REGULATORY INFORMATION**

### **U.S. Federal Regulations**

**TSCA:** All ingredients are listed in TSCA inventory.

1,1,1,2,2,3,4,5,5,5-Decafluoropentane (CAS# 138495-42-8) - The United States Environmental Protection Agency has established a Significant New Use Rule (SNUR; 40 CFR 721.5645) for this product. This product contains one or more substances which requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D.

### **State Regulations (U.S.)**

**California Proposition 65:** This product contains a chemical known to the State of California to cause cancer and/or birth defects or other reproductive harm.

## **16. OTHER INFORMATION**

### **FOR INDUSTRIAL USE ONLY**

### **REVISION DATE: JANUARY 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.