1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: ReleaSys™ 8220, ReleaSys™ 8220T, ReleaSys™ 8230T
Semi-Permanent Release Agent

Product Use: Water-based Release Agent

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

Label elements:
Signal word
Warning

Pictograms

Hazard Statements
Causes serious eye irritation.

Precautionary Statements
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.

Other Hazards
The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

3. INGREDIENTS

Hazardous Material(s)	CAS No.	Approximate %
Alcohols, C9-11, ethoxylated	68439-46-3	1.0 – 5.0

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Get medical attention if necessary.

Eye: Flush with large amounts of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention.

Skin: Wash with soap and water. Get medical attention if necessary.

Oral: If swallowed, DO NOT induce vomiting unless directed to do so by a physician. Rinse mouth thoroughly with water. Never give anything to an unconscious person. Get medical attention.

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

Notes to physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Point: Does not flash. **Thermal decomposition:** No data available

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

Unsuitable extinguishing media: None known

Special hazards: Exposure to combustion products may be hazardous to health.

Hazardous combustion products: Hydrogen fluoride, Carbonyl fluoride, Carbon oxides, potentially toxic fluorinated compounds, aerosolized particulates.

Special Fire Fighting Instruction: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Evacuate personnel to safe areas. Cool cans with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Evacuate personnel. Ventilate area with fresh air. If a large amount is accidental released, use self-contained breathing apparatus.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Spill Cleanup: Dike spill by containment or oil barriers. Prevent material from entering sewers, waterways or low areas. Soak up with inert absorbent materials (e.g. sand, silica gel, acid binder, universal binder, sawdust). Local and national regulations may apply to releases and disposal of this material, as well as the materials and items employed in the cleanup of releases. You need to determine which regulations are applicable.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes or clothing. Avoid breathing vapors or spray mist. Wash thoroughly after handling. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Take care to prevent spills, waste and minimize release to the environment.

Storage Conditions: Do Not Freeze. Recommended storage temperature is 10 – 27°C (50 - 80°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Eye Protection: Avoid eye contact. Use chemical goggles or safety glasses with side shields.

Skin Protection: Avoid contact with skin. Use gloves impervious to this material (eg. PVC) when prolonged or frequently repeated contact occurs. For special applications, we recommend clarifying the resistance to chemicals of the protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 212°F/100°C

Density: 1.01 g/cc

Vapor Density (Air=1): >1

pH Information: 9 - 10

Form: Liquid

Color: White

Percent Volatile by Volume: approx. 65 - 85%

Vapor Pressure: 24 mm Hg at 77^{O}F/25^{O}C

Solubility in H_2O: Dispersible

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

Appearance: Milky

Odor: Faint Sweet Odor

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible materials: Acids

Hazardous decomposition products: Hydrofluoric acid, Carbonyl difluoride, Carbon dioxide and Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Alcohols, C9-11, ethoxylated

Acute Dermal toxicity: LD50: > 2,000 mg/kg, rat. Method: OECD Test Guideline 402. Based on data from similar materials.
Acute Oral toxicity: LD50: > 300 - 2000 mg/kg, rat. Based on data from similar materials.
Skin corrosion/irritation: No skin irritation, rabbit. Based on data from similar materials.
Serious eye damage/eye irritation: Causes serious eye irritation. Irreversible effects on the eye, rabbit. Based on data from similar materials.
Skin and Respiratory sensitization: Skin contact: Test Type: Buehler Test in Guinea pig. Results is negative based on data from similar materials. Based on data from similar materials.
Germ cell mutagenicity: Vitro: Test Type: Bacterial reverse mutation assay (AMES). Results is negative based on date from similar materials.
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: Effects on fertility and fetal development: Test Type: Two-generation reproduction toxicity study in rat. Application Route: Skin contact. Result is negative.
STOT-single exposure: Not classified based on available information.
STOT-repeated exposure: NOAEL; >= 500 mg/kg, rat, by ingestion for 90 days.
Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

Alcohols, C9-11, ethoxylated

96 hour LC50 Fish: > 1 - 10 mg/l
48 hour EC50 Daphnia magna (Water flea): > 1 - 10 mg/l

Biodegradability: Readily biodegradable.
Bioaccumulation: No data available
Mobility in soil: No data available
Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal: In accordance with local and national regulations.

Environmental Hazards: If recycling is not practicable, dispose of in compliance with local regulations.

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.

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS RQ.

SARA 311/312 Hazards: Serious eye damage or eye irritation.

SARA 313 Regulated Chemicals: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372). They may not be intentionally present in the product; however, it is possible that it may be present as an impurity and the exact concentration may vary between lots:
Perfluorohexanoic acid, CAS No.: 307-24-4, < 632 ppb
Perfluorobutanoic acid, CAS No.: 375-22-4, < 44 ppb
3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctanesulphonic acid, CAS No.: 27619-97-2, < 10 ppb
Hexafluoropropylene oxide dimer acid, CAS No., 13252-13-6, < 8 ppb

U.S. State Regulations

California Prop. 65
WARNING: This product can expose you to chemicals including Pentadecafluorooctanoic acid (PFOA), which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Note to User: This product is not made with PFOA nor is PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health	- 1
Flammability	- 0
Reactivity	- 0

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

FOR INDUSTRIAL USE ONLY

REVISION DATE: February 14, 2025

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.