

SAFETY DATA SHEET

I. PRODUCT AND COMPANY INFORMATION



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^[1a,b] TRADE NAME(s)	Glass Repellency Treatment	^[1c] CHEMICAL FAMILY/ APPLICATION/ RESTRICTIONS	Chemical Mixture Chemical Surface Treatment
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II. HAZARDOUS IDENTIFICATION

^[2A] GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Eye irritation (Category 2A), H319
 Causes Skin Irritation (Category 2), H315

^[2B] LABELING ELEMENTS, Hazard, and Precautionary Statements

Signal word: Warning

Pictogram(s):



Hazard statement(s):

H315 Causes Skin Irritation
 H319 Causes serious eye irritation.

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.

^[2C] **HAZARDS NOT OTHERWISE CLASSIFIED:** none known

[2D] **INGREDIENTS OF UNKNOWN ACUTE TOXICITY >= 1%:**

III. COMPOSITION / INFORMATION ON INGREDIENT(S)

[3a,b,d] CHEMICAL NAME/SYNONYMS	[3C] CAS NUMBER	EINECS NO.	CONC.*
Proprietary Fluorinated Alkane*	n/a	n/a	> 95%
Proprietary Active Blend*	n/a	n/a	< 5%

* The specific chemical identity and/or percentage of this material has been withheld as a trade secret.

IV. FIRST AID MEASURES

[4a] INHALATION	Remove person to fresh air. If you feel unwell, get medical attention.
[4a] SKIN CONTACT	Wash with soap and water. If signs/symptoms develop, get medical attention.
[4a] EYE CONTACT	Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.
[4a] INGESTION	Rinse mouth. Do not induce vomiting. Get immediate medical attention.
[4b] MOST IMPORTANT SYMPTOMS & EFFECTS	See Section 11.1. Information on toxicological effects.
[4c] INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	no data available

V. FIREFIGHTING MEASURES

[5a] SUITABLE/ UNSUITABLE EXTINGUISHING MEDIA	Non-combustible. Use a fire fighting agent suitable for surrounding fire.
[5b] SPECIFIC HAZARDS IE HAZARDOUS COMBUSTION PRODUCTS	Exposure to extreme heat can give rise to thermal decomposition.
[5c] PRECAUTIONS / SPECIAL PROTECTIVE EQUIPMENT	When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

VI. ACCIDENTAL RELEASE MEASURES

[6a] PERSON PRECAUTIONS, PPE, EMERGENCY PROCEDURES	Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.
[6a] METHODS & MATERIALS OF CONTAINMENT & CLEANING	Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh

	air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.
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VII. HANDLING AND STORAGE

^[7a] PRECAUTIONS FOR SAFE HANDLING	Do not breathe thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.
^[7b] CONDITIONS FOR SAFE STORAGE	Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

^[8a] COMPONENT	PEL/ TWA/ STEL	CONTROL PARAMETER S	BASIS (ACGIH, OSHA ETC)	NOTES
Proprietary Fluorinated Alkane*	TWA	100 ppm	ACGIH TLV	

^[8b] VENTILATION / ENGINEERING CONTROLS	Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.
^[8c] RESPIRATORY PROTECTION	During heating: Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.
^[8c] SKIN PROTECTION	No chemical protective gloves are required.
^[8c] EYE PROTECTION	Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended: Safety Glasses with side shields
^[8c] CLOTHING	Wear appropriate protective clothing to prevent skin exposure.

IX. PHYSICAL AND CHEMICAL PROPERTIES

^[9a] Appearance (physical state, color, etc.	Liquid, Clear Colorless	^[9j] Upper/lower flammability or explosive limits:	None detected
^[9b] Odor	odor-less	^[9k] Vapor pressure	No Data Available
^[9c] Odor threshold	no data available	^[9l] Vapor density	Approximately 14.3 [Ref Std: AIR=1]
^[9d] pH	Not Applicable	^[9m] Relative Density	1.6 g/ml [@ 20 °C]
^[9e] Melting point/freezing point	-100 °C	^[9n] Solubility (in H₂O)	< 0.004 ppm
^[9f] Initial boiling point and boiling range	129 °C	^[9o] Partition coefficient: n-octanol/water	6

^[9g] Flash point	No flash point	^[9p] Auto-ignition temperature	> 250 °C
^[9h] Evaporation rate	No Data Available	^[9q] Decomposition temperature	no data available
^[9i] Flammability (solid, gas)	Not Applicable	^[9r] Viscosity	0.9 centistoke [@ 25 °C]

X. STABILITY AND REACTIVITY

^[10a] REACTIVITY	This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.		
^[10b] CHEMICAL STABILITY	Stable.		
^[10c] POSSIBILITIES OF HAZARDOUS REACTIONS	Hazardous polymerization will not occur.		
^[10d] CONDITIONS TO AVOID	None known.		
^[10e] INCOMPATIBLE MATERIALS	Strong acids, Strong bases, Strong oxidizing agents		
^[10f] HAZARDOUS DECOMPOSITION PRODUCTS	Hydrogen Fluoride	At Elevated Temperatures - extreme conditions of heat	
	Irritant Vapors or Gases	At Elevated Temperatures - extreme conditions of heat	
	Toxic Vapor, Gas, Particulate	At Elevated Temperatures - extreme conditions of heat	
	Refer to section 5.2 for hazardous decomposition products during combustion. If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.		

XI. TOXICOLOGY INFORMATION

^[11a] LIKELY ROUTES OF EXPOSURE	<p>INHALATION: Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.</p> <p>INGESTION: No health effects are expected.</p> <p>SKIN: Contact with the skin during product use is not expected to result in significant irritation.</p> <p>EYE CONTACT: Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.</p>
^[11b] SYMPTOMS RELATED TO PHYSICAL, CHEMICAL & TOXIC CHARACTERISTICS	<p>INHALATION: Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.</p> <p>INGESTION: No health effects are expected.</p> <p>SKIN: Contact with the skin during product use is not expected to result in significant irritation.</p> <p>EYE CONTACT: Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.</p>
^[11d] DELAYED / IMMEDIATE EFFECTS, CHRONIC EFFECTS FROM SHORT/LONG TERM EXPOSURE	<p>Reproductive toxicity: no data available</p> <p>Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.</p> <p>Specific target organ toxicity - repeated exposure: no data available</p> <p>Aspiration hazard: no data available</p>
^[11D] NUMERICAL	Acute Toxicity

MEASURES OF TOXICITY	Proprietary Fluorinated Alkane*	
	Dermal	Rat LD50 > 2,000 mg/kg
	Proprietary Fluorinated Alkane*	
	Inhalation-Vapor (4 hours)	Rat LC50 > 50 mg/l
	Proprietary Fluorinated Alkane*	
	Ingestion	Rat LD50 > 2,000 mg/kg
[11e] CARCINOGENICITY	Carcinogenicity: Data not available or insufficient for classification	

XII. ECOLOGICAL INFORMATION

[12a] ECOTOXICITY	Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components. Toxicity to fish LC50 - No data available Toxicity to daphnia and other aquatic invertebrates: No data available Toxicity to algae EC50 - No data available
[12b] PERSISTENCE AND DEGRADABILITY	No data available
[12c] BIOACCUMULATIVE POTENTIAL	No data available
[12d] MOBILITY IN SOIL	No data available
[12e] OTHER ADVERSE EFFECTS (OZONE LAYER ETC.)	No data available

XIII. DISPOSAL CONSIDERATIONS

[13] Dispose of contents/ container in accordance with the local/regional/national/international regulations. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.
Contaminated Packaging Disposal: Dispose of contents/ container in accordance with the local/regional/national/international regulations.

XIV. TRANSPORTATION INFORMATION

[14a] UN/NA	[14b] UN/NA PROPER SHIPPING NAME	[14ca] TRANSPORT HAZARD CLASS	[14d] PACKING GROUP

US DOT/IATA	Not regulated
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^[14d] ENVIRONMENTAL HAZARDS	Not regulated
^[14f] BULK TRANSPORT (MARPOL 73/78/IBC CODE)	Not regulated
^[14g] SPECIAL PRECAUTIONS	Not regulated

XV. REGULATORY INFORMATION

US

TSCA	The components in this mixture are listed on the US inventory.
OSHA	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard.
SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
The following components are subject to reporting levels established by SARA Title III, Section 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313
Sara 311/312 Hazards	Fire Hazard - No; Pressure Hazard - No; Reactivity Hazard - No; Immediate Hazard - Yes; Delayed Hazard - No
Massachusetts Right To Know Components	not listed
Pennsylvania Right To Know Components	not listed
New Jersey Right To Know Components	not listed
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

XVI. OTHER INFORMATION

Revision Date: see the top of each page of this SDS

HMIS Rating	NFPA Rating
Health hazard: 1	Health hazard: 3
Chronic Health Hazard:	Instability: 0
Flammability: 1	Fire Hazard: 1
Physical Hazard 0	Reactivity Hazard: 0

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