

## SAFETY DATA SHEET

### SECTION 1: PRODUCT AND COMPANY INFORMATION



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### Emergency Telephone Number <sup>[1E]</sup>

CHEMTEL CHEMICAL  
DOMESTIC NORTH AMERICA: **1-800-255-3924**  
INTERNATIONAL CALLERS OUTSIDE THE US  
TERRITORIES AND CANADA: **+1-813-248-0585**

Revision Date: 1/8/2020

<b>TRADE NAME(s)</b>	Aculon® NanoProof® 5.0	<b>CHEMICAL FAMILY APPLICATION</b>	<b>Chemical Mixture Chemical Encapsulant</b>
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### SECTION 2: HAZARDOUS IDENTIFICATION

**Note: The hazards shown on this SDS are for the bulk chemistry and are provided for application/processing safety information. The final coating once dry is not hazardous per 29 CFR 1910 (OSHA HCS)**

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

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

#### 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.

<sup>[2C]</sup> **HAZARDS NOT OTHERWISE CLASSIFIED:** The hazards of this product are associated mainly with its processing. Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema). Inhalation of aerosol or fine spray mist may cause serious respiratory problems.

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

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENT(S)

INGREDIENT(S)	CAS NUMBER	EINECS NO.	CONC. *
Active Blend	31763-69-6	n/a	10 %
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6-dodecafluoro-2-trifluoromethyl-hexane	297730-93-9		75 - 95 %
UV Dye	55804-66-5		<1%

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

### SECTION 4: FIRST AID MEASURES

<b>GENERAL ADVICE</b>	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>EYE CONTACT</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>SKIN CONTACT</b>	Wash off with soap and plenty of water. Consult a physician.
<b>INHALATION</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician..
<b>INGESTION</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>MOST IMPORTANT SYMPTOMS &amp; EFFECTS</b>	The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	no data available

### SECTION 5: FIREFIGHTING MEASURES

<b>GENERAL INFORMATION</b>	<b>EXTINGUISHING MEDIA</b> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>HAZARDOUS</b>	Burning may form Carbon oxides. Use water spray to cool unopened containers.

<b>COMBUSTION PRODUCTS/FIRE FIGHTING ADVICE</b>	
<b>PRECAUTIONS / SPECIAL PROTECTIVE EQUIPMENT</b>	Exposure to extreme heat can give rise to thermal decomposition. 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.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>PERSON-RELATED SAFETY PRECAUTIONS</b>	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
<b>MEASURES FOR CLEANING/ COLLECTING</b>	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Prevent material from entering storm sewers or waterways.

**SECTION 7: HANDLING AND STORAGE**

<b>HANDLING PRECAUTIONS</b>	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Do not breathe thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Do not use in a confined area with minimal air exchange. 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. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
<b>STORAGE PRECAUTIONS</b>	Store in a well-ventilated place. 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.)
<b>STORAGE CONDITIONS</b>	Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

COMPONENT	VALUE	CONTROL PARAMETERS	BASIS	NOTES
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	TWA	100 ppm	Manufacturer determined	

<b>VENTILATION / ENGINEERING CONTROLS</b>	Provide appropriate local exhaust when product is heated. 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.
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<b>RESPIRATORY PROTECTION</b>	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
<b>SKIN PROTECTION</b>	Wear appropriate protective gloves to prevent skin exposure. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Gloves made from the following material(s) are recommended: Polymer laminate.
<b>EYE PROTECTION</b>	Wear appropriate protective eyeglasses or chemical safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
<b>CLOTHING</b>	Wear appropriate protective clothing to prevent skin exposure.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance (physical state, color, etc.)</b>	Liquid, Clear Greenish color	<b>Solubility (in H<sub>2</sub>O)</b>	no data available
<b>Upper/lower flammability or explosive limits:</b>	LEL: no data available UEL: no data available	<b>Initial boiling point and boiling range</b>	no data available
<b>Odor</b>	faint odor	<b>Flash point</b>	no flash point
<b>Vapor pressure</b>	no data available	<b>Evaporation rate</b>	> 20 (BuOAC = 1)
<b>Odor threshold</b>	no data available	<b>Flammability (solid, gas)</b>	no data available
<b>Vapor density</b>	> 1 [Ref Std: AIR=1]	<b>Partition coefficient: n-octanol/water</b>	> 4 [Details: at 30 °C]
<b>pH</b>	not applicable	<b>Auto-ignition temperature</b>	375 °C
<b>Relative Density</b>	1.6 g/ml	<b>Decomposition temperature</b>	no data available
<b>Melting point/freezing point</b>	-138 °C	<b>Viscosity</b>	no data available

### SECTION 10: STABILITY AND REACTIVITY

<b>REACTIVITY</b>	no data available
<b>CHEMICAL STABILITY</b>	Stable under recommended storage conditions.
<b>CONDITIONS TO AVOID</b>	None known, Excess Moisture in the solution should be avoided
<b>INCOMPATIBLE MATERIALS</b>	Strong oxidizing agents, strong acids, strong bases.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	At extreme conditions of heat the hazardous decomposition products include Hydrogen Fluoride and/or Perfluoroisobutylene Refer to section 5.2 for hazardous decomposition products during combustion.
<b>HAZARDOUS POLYMERIZATION</b>	Has not been reported

### SECTION 11: TOXICOLOGY INFORMATION

<b>GENERAL INFORMATION</b>	The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on
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<p><b>POTENTIAL HEALTH EFFECTS: SIGNS AND SYMPTOMS OF EXPOSURE</b></p>	<p>ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.</p> <p><b>Inhalation:</b> May be harmful if inhaled. Material may be destructive to the tissue of the mucous membranes and upper respiratory tract. Signs/symptoms may include cough, shortness of breath, nausea, vomiting, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.</p> <p><b>Skin Contact:</b> May be harmful if absorbed through skin. May cause irritation or skin burns.</p> <p><b>Eye Contact:</b> Causes serious eye irritation or burns. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.</p> <p><b>Ingestion:</b> May be harmful if swallowed.</p> <p><b>Toxicological Data</b> If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.</p>																		
<p><b>Acute Toxicity</b></p>	<table border="1"> <tr> <td data-bbox="300 766 711 892">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 766 1076 892">Dermal</td> <td data-bbox="1076 766 1221 892">Rat</td> <td data-bbox="1221 766 1537 892">LD50 &gt; 2,000 mg/kg</td> </tr> <tr> <td data-bbox="300 892 711 1018">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 892 1076 1018">Inhalation-Vapor (4 hours)</td> <td data-bbox="1076 892 1221 1018">Rat</td> <td data-bbox="1221 892 1537 1018">LC50 &gt; 50 mg/l</td> </tr> <tr> <td data-bbox="300 1018 711 1144">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 1018 1076 1144">Ingestion</td> <td data-bbox="1076 1018 1221 1144">Rat</td> <td data-bbox="1221 1018 1537 1144">LD50 &gt; 2,000 mg/kg</td> </tr> <tr> <td data-bbox="300 1144 711 1207">Proprietary Active Blend</td> <td data-bbox="711 1144 1076 1207"></td> <td data-bbox="1076 1144 1221 1207"></td> <td data-bbox="1221 1144 1537 1207">No data available</td> </tr> </table>			3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Dermal	Rat	LD50 > 2,000 mg/kg	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 50 mg/l	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Ingestion	Rat	LD50 > 2,000 mg/kg	Proprietary Active Blend			No data available
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Dermal	Rat	LD50 > 2,000 mg/kg																
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Proprietary Active Blend			No data available																
<p><b>Skin Corrosion /Irritation</b></p>	<table border="1"> <tr> <td data-bbox="300 1270 711 1396">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 1270 976 1396">Rabbit</td> <td colspan="2" data-bbox="976 1270 1537 1396">No significant irritation</td> </tr> <tr> <td data-bbox="300 1396 711 1459">Proprietary Active Blend</td> <td data-bbox="711 1396 976 1459"></td> <td colspan="2" data-bbox="976 1396 1537 1459">No data available</td> </tr> </table>			3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Rabbit	No significant irritation		Proprietary Active Blend		No data available									
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Rabbit	No significant irritation																	
Proprietary Active Blend		No data available																	
<p><b>Serious Eye Damage/ Irritation</b></p>	<table border="1"> <tr> <td data-bbox="300 1522 711 1648">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 1522 976 1648">Rabbit</td> <td colspan="2" data-bbox="976 1522 1537 1648">No significant irritation</td> </tr> <tr> <td data-bbox="300 1648 711 1711">Proprietary Active Blend</td> <td data-bbox="711 1648 976 1711"></td> <td colspan="2" data-bbox="976 1648 1537 1711">No data available</td> </tr> </table>			3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Rabbit	No significant irritation		Proprietary Active Blend		No data available									
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Rabbit	No significant irritation																	
Proprietary Active Blend		No data available																	
<p><b>Skin Sensitization</b></p>	<table border="1"> <tr> <td data-bbox="300 1774 711 1858">3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane</td> <td data-bbox="711 1774 967 1858">Guinea pig</td> <td colspan="2" data-bbox="967 1774 1537 1858">Not sensitizing</td> </tr> </table>			3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Guinea pig	Not sensitizing													
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Guinea pig	Not sensitizing																	

	exane					
	Proprietary Active Blend			No data available		
<b>Respiratory Sensitization</b>	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane			No data available or insufficient for classification		
	Proprietary Active Blend			No data available		
<b>Germ Cell Mutagenicity</b>	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	In Vitro	Not mutagenic			
	Proprietary Active Blend		No data available			
<b>Carcinogenicity</b>	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane		No data available or insufficient for classification			
	Proprietary Active Blend		No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA			
<b>Reproductive Toxicity</b>	Name	Route	Value	Species	Test Result	Exposure Duration
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 69	5 days

	decafluoro-2-trifluoromethyl-hexane					mg/l	
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-do decafluoro-2-trifluoromethyl-hexane	Ingestion	Not toxic to development		Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
	Proprietary Active Blend						No Data Available
<b>Specific Target Organ Toxicity - single exposure</b>	<b>Name</b>	<b>Route</b>	<b>Target Organ(s)</b>	<b>Value</b>	<b>Species</b>	<b>Test Result</b>	<b>Exposure Duration</b>
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-do decafluoro-2-trifluoromethyl-hexane	Inhalation	respiratory irritation	All data are negative	Rat	NOAEL 207 mg/l	5 days
	Proprietary Active Blend					No data available	
<b>Specific Target Organ Toxicity - repeated exposure</b>	<b>Name</b>	<b>Route</b>	<b>Target Organ(s)</b>	<b>Value</b>	<b>Species</b>	<b>Test Result</b>	<b>Exposure Duration</b>
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-do decafluoro-2-trifluoromethyl-hexane	Inhalation	liver/kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 169 mg/l	5 days
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-do decafluoro-2-trifluoromethyl-hexane	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-do decafluoro-2-trifluoromethyl-hexane	Inhalation	heart  endocrine system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

	oromethyl-hexane		hematopoietic system nervous system  Kidney and/or bladder				
	Proprietary Active Blend					No data available	
<b>Aspiration Hazard</b>							
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6-dodecafluoro-2-trifluoromethyl-hexane			Not an aspiration hazard			
	Proprietary Active Blend			No data available			

**SECTION 12: ECOLOGICAL INFORMATION**

<b>ECOTOXICITY</b>	No data available
<b>ENVIRONMENTAL</b>	No data available
<b>PHYSICAL</b>	No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

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.

**SECTION 14: TRANSPORTATION INFORMATION**

**US DOT/IATA/EU/ EC Label for Conveyance: None**

<b>US DOT/IATA</b>	Not regulated for transport
<b>IMDG</b>	



**SECTION 15: REGULATORY INFORMATION****US**

<b>TSCA</b>	The components in this mixture are listed on the US inventory. The components are REACH registered or pre-registered as appropriate
<b>OSHA</b>	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard.
<b>SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES</b>	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>The following components are subject to reporting levels established by SARA Title III, Section 313</b>	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
<b>Sara 311/312 Hazards</b>	Immediate Hazard
<b>Massachusetts Right To Know Components</b>	not listed
<b>Pennsylvania Right To Know Components</b>	not listed
<b>New Jersey Right To Know Components</b>	not listed
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**SECTION 16: OTHER INFORMATION**

Revision Date: Revision 8: 1/8/2020

INFORMATION CONTAINED IN THIS SAFETY DATA SHEET IS FOR USE BY TECHNICALLY QUALIFIED PERSONNEL AT THEIR DISCRETION AND RISK. ALL STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON TESTS AND DATA WHICH WE BELIEVE TO BE RELIABLE, BUT THE ACCURACY OR COMPLETENESS THEREOF IS NOT GUARANTEED AND NO WARRANTY OF ANY KIND IS MADE WITH RESPECT THERETO. SINCE THE COMPANY SHALL HAVE NO CONTROL OF THE USE OF THE PRODUCT DESCRIBED HEREIN, THE COMPANY ASSUMES NO LIABILITY OF LOSS OR DAMAGE INCURRED FROM THE PROPER OR IMPROPER USE OF SUCH PRODUCT.

**DISCLAIMER**

This material must be handled by/under direct supervision of technically qualified persons. Not for drug, household or other uses.