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SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking



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CHEMTEL CHEMICAL

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TRADE NAME(s)

NanoProof® 7.0 series including:7.2; 7.3; 7.4; 7.0-25; 7.0-50; 7.0-62.5; 7.0-75; 7.0-90 CHEMICAL FAMILY APPLICATION

Chemical Mixture
Chemical Encapsulant

SECTION 2: Hazards identification

^{2A]} GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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.

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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.

Pollhazards 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.

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

SECTION 3: Composition/information on ingredients

INGREDIENT(S)	CAS NUMBER	EINECS NO.	CONC. *
Proprietary Active Blend*	n/a	n/a	05 - 25 %
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-triflu	297730-93-9		75 - 95 %
oromethyl-hexane			
Proprietary UV Dye*	n/a		< 1%

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

SECTION 4: First aid measures

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

SECTION 5: Firefighting measures

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

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COMBUSTION	
PRODUCTS/FIRE	
FIGHTING ADVICE	
PRECAUTIONS /	Exposure to extreme heat can give rise to thermal decomposition.
SPECIAL	When fire fighting conditions are severe and total thermal decomposition of the product is
PROTECTIVE	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

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

SECTION 7: Handling and storage

HANDLING PRECAUTIONS	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.
STORAGE PRECAUTIONS	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.)
STORAGE CONDITIONS	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-dodecafluor o-2-trifluoromethyl-he xane	TWA	100 ppm	Manufacturer determined	

VENTILATION /
ENGINEERING
CONTROLS

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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RESPIRATORY PROTECTION	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).
SKIN PROTECTION	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.
EYE PROTECTION	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).
CLOTHING	Wear appropriate protective clothing to prevent skin exposure.

SECTION 9: Physical and chemical properties

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

SECTION 10: Stability and reactivity

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

SECTION	11:	Toxicological	information
		IOXICOIOGICA	HIIIOHIIIAUOH

GENERAL	The information below may	not be consistent with the materia	I classification in Section 2 if specific

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	ingredient classifications are mand					
	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 da	ata may not be relevar	nt to the m	naterial as a	whole.	
	Inhalation:					
	May be harmful if inhaled. Material					
	upper respiratory tract. Signs/sym				ath, nausea, vomiting,	
	sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.					
	Skin Contact:					
	May be harmful if absorbed through	h skin. May cause irrit	ation or s	kin burns.		
	Eye Contact:					
	Causes serious eye irritation or bur	rns. Signs/symptoms n	nay includ	de redness, :	swelling, pain, tearing,	
	and blurred or hazy vision.					
	Ingestion:					
	May be harmful if swallowed.					
	Toxicological Data					
	If a component is disclosed in secti				eitner no data are	
	available for that endpoint or the da	ata are not sufficient fo	r classific	ation.		
Acute Toxicity				T	I	
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-	Dermal		Rat	LD50 > 2,000 mg/kg	
	dodecafluoro-2-trifluoromethyl-h					
	exane					
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-			LC50 > 50 mg/l		
	dodecafluoro-2-trifluoromethyl-h					
	exane					
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-	·		LD50 > 2,000 mg/kg		
	dodecafluoro-2-trifluoromethyl-h					
	exane					
	Proprietary Active Blend				No data available	
	Proprietary Active Bieria				No data avallable	
Skin Corrosion		T	1			
/Irritation	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-	Rabbit	No siar	nificant irritati	ion	
	dodecafluoro-2-trifluoromethyl-h					
	exane					
	Proprietary Active Blend		No data	a available		
Serious Eye						
Damage/			Ī			
Irritation	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-	Rabbit	No sign	ificant irritati	on	
	dodecafluoro-2-trifluoromethyl-h					
	exane					
	Proprietary Active Blend		No data	available		
	1 Tophetary Active Dietiu		INO Uata	avallable		
Skin		T				
Sensitization	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-	Guinea pig	Not sens	sitizina		
	5 5 1.15 Kg 1, 1, 1, 2, 5, 1, 1, 5, 5, 5, 6, 6	2302 p.g	. 101 0011			

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	dodecafluoro-2-trifluoromethyl-h exane								
	Proprietary Active Blend				No data	available			
Respiratory Sensitization	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-h exane Proprietary Active Blend		h classificat		No data av				
Germ Cell Mutagenicity	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					
Carcinogenicity				1	T				
	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-h exane								
	Proprietary Active Blend		No component of this product present at than or equal to 0.1% is identified as prot or confirmed human carcinogen by IARC or OSHA			ed as probable	able, possible		
Reproductive									
Toxicity	Name	Route	е	Value			Species	Test Result	Exposure Duration
	3,4,4,5,5,6,6,6-do decafluoro-2-triflu oromethyl-hexan e			Not toxic to female reproduction			Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
			Not toxic to male reproduction		oduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation	
	3-ethoxy-1,1,1,2,	Inhal	ation	Not toxic to	male repr	oduction	Rat	NOAEL	5 days

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	3,4,4,5,5,6,6,6-do decafluoro-2-triflu oromethyl-hexan e					69 mg/l	
	3-ethoxy-1,1,1,2, 3,4,4,5,5,6,6,6-do decafluoro-2-triflu oromethyl-hexan e	Ingestion	Not toxic to development		Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
	Proprietary Active Blend						No Data Available
Specific Target							
Organ Toxicity - single exposure	Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
	3-ethoxy-1,1,1,2, 3,4,4,5,5,6,6,6-do decafluoro-2-triflu oromethyl-hexan e	Inhalation	respiratory irritation	All data are negative	Rat	NOAEL 207 mg/l	5 days
	Proprietary Active Blend					No data available	
Specific Target							
Organ Toxicity - repeated exposure	Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
	3-ethoxy-1,1,1,2, 3,4,4,5,5,6,6,6-do decafluoro-2-triflu oromethyl-hexan e	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-triflu oromethyl-hexan e	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	Inhalation	heart endocrine	All data are negative	Rat	NOAEL 1,000	28 days

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	decafluoro-2-triflu oromethyl-hexan e		system hematopoietic system nervous system Kidney and/or bladder			mg/kg/day	
	Proprietary Active Blend					No data available	
Aspiration							
Hazard	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-tri fluoromethyl-hexane						
	Proprietary Active B	lend		No data ava	ilable		

SECTION 12: Ecological information

ECOTOXICITY	No data available
ENVIRONMENTAL	No data available
PHYSICAL	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 (HCI/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: Transport information

US DOT/IATA/EU/ADR/RID EC Label for Conveyance: None

US DOT/IATA	Not regulated for transport
IMDG	

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SECTION 15: Regulatory information

EU This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.			
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	No data available		
15.2 Chemical Safety Assessment	For this product a chemical safety assessment was not carried out		

US					
TSCA	Polymer is TSCA exempt under EPA polymer exemption. Other materials are				
	TSCA listed. The components are REACH registered or pre-registered as				
	appropriate				
OSHA	This document has been prepared in accordance with the SDS requirements				
	of the OSHA Hazard Communication Standard.				
SARA SECTION 302 EXTREMELY	No chemicals in this material are subject to the reporting requirements of				
HAZARDOUS SUBSTANCES	SARA Title III, Section 302.				
The following components are subject to	This material does not contain any chemical components with known CAS				
reporting levels established by SARA	numbers that exceed the threshold (De Minimis) reporting levels established				
Title III, Section 313	by SARA Title III, Section 313				
Sara 311/312 Hazards	Immediate Hazard				
Massachusetts Right To Know	This product contains a listed component: Silica (CAS# 7631-86-9)				
Components					
Pennsylvania Right To Know	This product contains a listed component: Silica (CAS# 7631-86-9)				
Components					
New Jersey Right To Know Components	This product contains a listed component: Silica (CAS# 7631-86-9)				
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.				

SECTION 16: Other information

Revision Date: 06/12/2018 Updated Emergency Contact

06/06/2018 Updated Emergency Contact

08/01/16 Original Issue

01/12/2017 updated to add EU Section headings and Section 15 update

09/01/17 updated to include all current family names

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