

SAFETY DATA SHEET

I. PRODUCT AND COMPANY INFORMATION



11839 Sorrento Valley Road Suite 901
 San Diego, CA 92121
 phone 858-350-9474
 fax 858-350-9422
 Email: support@aculon.com
www.aculon.com

Emergency Telephone Number ^[1E]

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

Revision Date: 06/12/2018

^[1a,b] TRADE NAME(s)	Aculon® NanoProof® 4.0	^[1c] CHEMICAL FAMILY/ APPLICATION/ RESTRICTIONS	Chemical Mixture Specialty Coating
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II. HAZARDOUS IDENTIFICATION

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

Aspiration hazard, Category 1
 Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system
 Acute aquatic toxicity, Category 2
 Chronic aquatic toxicity, Category 2
 Flammable liquids, Category 2
 Skin irritation, Category 2

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



Signal word: Danger Pictogram(s):

Hazard statement(s):

H225: Highly flammable liquid and vapor.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H336: May cause drowsiness or dizziness.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention:

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P243: Take precautionary measures against static discharge.
 P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.
 P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P331: Do NOT induce vomiting.
 P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P391: Collect spillage.
Storage:
 P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
Disposal:
 P501: Dispose of contents/ container to an approved waste disposal plant.

[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 Active Blend*	n/a	n/a	15 - 25%
Isoalkanes 7-8	70024-92-9		75 - 85 %

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

IV. FIRST AID MEASURES

[4a] INHALATION	Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.
[4a] SKIN CONTACT	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
[4a] EYE CONTACT	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
[4a] INGESTION	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
[4b] MOST IMPORTANT SYMPTOMS & EFFECTS	The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11
[4c] INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	no data available

V. FIREFIGHTING MEASURES

[5a] SUITABLE/ UNSUITABLE	Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
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EXTINGUISHING MEDIA	UNSUITABLE: High volume water jet.
^[5b] SPECIFIC HAZARDS IE HAZARDOUS COMBUSTION PRODUCTS	Do not allow run-off from fire fighting to enter drains or water courses.
^[5c] PRECAUTIONS / SPECIAL PROTECTIVE EQUIPMENT	Wear self contained breathing apparatus for fire fighting if necessary.

VI. ACCIDENTAL RELEASE MEASURES

^[6a] PERSON PRECAUTIONS, PPE, EMERGENCY PROCEDURES	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
^[6a] METHODS & MATERIALS OF CONTAINMENT & CLEANING	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

VII. HANDLING AND STORAGE

^[7a] PRECAUTIONS FOR SAFE HANDLING	Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
^[7b] CONDITIONS FOR SAFE STORAGE	No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

^[8a] COMPONENT	PEL/ TWA/ STEL	CONTROL PARAMETERS	BASIS (ACGIH, OSHA ETC)	NOTES
Isoalkanes 7-8	TWA	300 ppm	ACGIH TLV	

^[8b] VENTILATION / ENGINEERING CONTROLS	Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and
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	selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.
[8c] RESPIRATORY PROTECTION	Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
[8c] SKIN PROTECTION	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.
[8c] EYE PROTECTION	Eye wash bottle with pure water. Tightly fitting safety goggles.
[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:	Lower: 1 %(V) UEL: no data available
[9b] Odor	mild	[9k] Vapor pressure	114.64 MMHG at 37.8 °C (100.0 °F)
[9c] Odor threshold	no data available	[9l] Vapor density	2(Air = 1.0)
[9d] pH	not applicable	[9m] Relative Density	0.697, 15.6 °C(60.1 °F)
[9e] Melting point/freezing point	-89.5 °C (-129.1 °F) - lit.	[9n] Solubility (in H₂O)	Negligible
[9f] Initial boiling point and boiling range	93.3 - 104.4 °C (199.9 - 219.9 °F)	[9o] Partition coefficient: n-octanol/water	No data available
[9g] Flash point	-11 °C (12 °F) Method: Tag closed cup	[9p] Auto-ignition temperature	420 °C (788 °F)
[9h] Evaporation rate	1	[9q] Decomposition temperature	no data available
[9i] Flammability (solid, gas)	no data available	[9r] Viscosity	no data available

X. STABILITY AND REACTIVITY

[10a] REACTIVITY	no data available
[10b] CHEMICAL STABILITY	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
[10c] POSSIBILITIES OF HAZARDOUS REACTIONS	none known
[10d] CONDITIONS TO AVOID	Ignition sources, excess heat, incompatible materials

<p>^[10e] INCOMPATIBLE MATERIALS</p>	<p>May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.</p>
<p>^[10f] HAZARDOUS DECOMPOSITION PRODUCTS</p>	<p>Other decomposition products - no data available In the event of fire: see section 5</p>

XI. TOXICOLOGY INFORMATION

<p>^[11a] LIKELY ROUTES OF EXPOSURE</p>	<p>INHALATION: is not expected if proper ventilation or personal protective equipment is used while working with this product INGESTION: Ingestion is not expected if proper industrial hygiene practices are followed, including no eating, drinking, or smoking while working with chemicals SKIN: is not expected if proper personal protective equipment (gloves and protective clothing) is used while working with this product EYE CONTACT: is not expected if proper personal protective equipment (safety glasses or goggles) is used while working with this product</p> <p>When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.</p>
<p>^[11b] SYMPTOMS RELATED TO PHYSICAL, CHEMICAL & TOXIC CHARACTERISTICS</p>	<p>INHALATION: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.</p> <p>INGESTION: May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.</p> <p>SKIN: irritating, Solvents may degrease the skin. EYE CONTACT: Vapors may cause irritation to the eyes, respiratory system and the skin.</p>
<p>^[11d] DELAYED / IMMEDIATE EFFECTS, CHRONIC EFFECTS FROM SHORT/LONG TERM EXPOSURE</p>	<p>Reproductive toxicity: no data available Specific target organ toxicity - single exposure: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin. Specific target organ toxicity - repeated exposure: Species: rat, Application Route: Inhalation Dose: 0, 385, 1180 ppm, Exposure time: 12 wk, Number of exposures: 6 hr/d, 5 d/wk NOEL: > 1180 ppm, Target Organs: Kidney</p> <p>Aspiration hazard: May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.</p> <p>Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.</p> <p>Repeated dose toxicity:</p>
<p>^[11D] NUMERICAL MEASURES OF TOXICITY</p>	<p>ACUTE TOXICITY ESTIMATES: none known</p> <p>Acute toxicity LD50: > 5.000 mg/kg, Species: rat Method: OECD Test Guideline 401 Information given is based on data obtained from similar substances.</p>

	<p>LC50 Inhalation - rat - 4 h - LC50: > 33.520 mg/l Test atmosphere: dust/mist Method: OECD Test Guideline 403 An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. Information given is based on data obtained from similar substances.</p> <p>LD50 Dermal - rat - LD50: > 2.000 mg/kg Species: rat Method: OECD Test Guideline 402 Information given is based on data obtained from similar substances.</p>
^[11e] CARCINOGENICITY	<p>IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.</p> <p>NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.</p> <p>ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.</p>

XII. ECOLOGICAL INFORMATION

^[12a] ECOTOXICITY	<p>The ecological information and warnings are driven by the solvent. See below for the relevant data for the Isoalkanes 7-8. The other components either have no ecotoxicological effects or no data exists.</p> <p>Toxicity to fish LC50 - LC50: 5.4 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) Information given is based on data obtained from similar substances.</p> <p>Toxicity to daphnia and other aquatic invertebrates: EL50: 143 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202</p> <p>Toxicity to algae EC50 - EL50: 29.0 mg/l Exposure time: 72 h Species: Raphidocellus subcapitata (algae) Growth inhibition Method: OECD Test Guideline 201</p> <p>An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.</p>
^[12b] PERSISTENCE AND DEGRADABILITY	<p>Result: Not readily biodegradable. 22 %This material is not expected to be readily biodegradable.</p>
^[12c] BIOACCUMULATIVE POTENTIAL	<p>No data available</p>
^[12d] MOBILITY IN SOIL	<p>No data available</p>

[12e] OTHER ADVERSE EFFECTS (OZONE LAYER ETC.)	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
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XIII. DISPOSAL CONSIDERATIONS

[13] Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated Packaging Disposal: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

CapXIV. TRANSPORTATION INFORMATION

[14a] UN/NA	[14b] UN/NA PROPER SHIPPING NAME	[14ca] TRANSPORT HAZARD CLASS	[14d] PACKING GROUP
UN 1993	Flammable Liquid, n.o.s. (hydrocarbon)	3	II

US DOT/IATA	UN1993, Flammable Liquid, n.o.s. (hydrocarbons) , 3, II
[14d] ENVIRONMENTAL HAZARDS	Marine Pollutant: UN1993, Flammable Liquid, n.o.s. (hydrocarbons) , 3, II, MARINE POLLUTANT, (ISOPENTANE)
[14f] BULK TRANSPORT (MARPOL 73/78/IBC CODE)	IMDG: UN1993, Flammable Liquid, n.o.s. (hydrocarbons) , 3, II EMS-No: F-E, S-D
[14g] SPECIAL PRECAUTIONS	none known

XV. REGULATORY INFORMATION

US

TSCA	On the inventory, or in compliance with the 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	SARA 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, Acute Health Hazard,
Massachusetts Right To Know Components	No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right To Know Components	No components are subject to the Pennsylvania Right to Know Act.
New Jersey Right To Know Components	No components are subject to the New Jersey Right to Know Act.
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.
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XVI. OTHER INFORMATION

Revision Date: 06/12/2018 Updated Emergency Contact
06/06/2018 Updated Emergency Contact and Trademarks
07/15/2015 version 1

HMIS Rating	NFPA Rating
Health hazard: 2	Health hazard: 2
Chronic Health Hazard: *	
Flammability: 3	Fire Hazard: 3
Physical Hazard 0	Reactivity Hazard: 0

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