

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date: 16.12.2024

Version No: 1.00

Revision: 16.12.2024

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

- **1.1 Product identifier**
- **Trade name:** Aculon® NanoProof 3 Series Extender
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:**
Coating
Chemical intermediate
- **Uses advised against:** No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aculon Inc.
10110 Sorrento Valley Road
San Diego, CA 92121
USA
Tel.: +1-858-350-9474
Email: coatings@aculon.com
- **1.4 Emergency telephone number:**
CHEMTREC CCN696855
DOMESTIC NORTH AMERICA: +1-800-424-9300
INTERNATIONAL: +1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy)ethane
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves / eye protection / face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep 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/doctor if you feel unwell.

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P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** This product does not contain any substances $\geq 0.1\%$ that have been assessed as PBT.

· **vPvB:** This product does not contain any substances $\geq 0.1\%$ that have been assessed as vPvB.

· Determination of endocrine-disrupting properties

This product does not contain substances with endocrine disrupting properties in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Dangerous components:

CAS: 406-78-0	1,1,2,2-tetrafluoro-1-(2,2,2-trifluoroethoxy)ethane	55 - 65%
EC number: 608-858-6	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Take affected persons out of danger area and lay down.

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical treatment.

· After swallowing:

Get medical advice/attention.

Rinse out mouth and then drink plenty of water.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

· For safety reasons unsuitable extinguishing agents:

Water with full jet

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· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide

Carbon dioxide

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective clothing.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire and explosion protection:** No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· 8.2 Exposure controls

· **Appropriate engineering controls** Ensure good ventilation/exhaustion at the workplace.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Store protective clothing separately.

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Avoid contact with the eyes and skin.

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Protective work clothing

· **Environmental exposure controls** No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Form:**

Liquid

· **Colour:**

Colourless

· **Odour:**

Alcohol-like

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

91 °C

· **Boiling point or initial boiling point and boiling range**

56 °C

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

Not applicable.

· **Upper:**

Not applicable.

· **Flash point:**

Not determined.

· **Auto-ignition temperature:**

Not determined.

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**

· **Kinematic viscosity**

Not determined.

· **Dynamic:**

Not determined.

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- **Solubility**
- **water:** Not miscible or difficult to mix.
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Vapour pressure:** Not determined.
- **Density and/or relative density**
- **Density at 20 °C:** 1.5 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Relative gas density** Not determined.
- **Particle characteristics** Not applicable.
- **9.2 Other information**
- **Explosive properties:** Product does not present an explosion hazard.
- **Oxidising properties** No
- **Evaporation rate** Not determined.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat
- **10.5 Incompatible materials:** Reacts with acids, alkalis and oxidising agents.
- **10.6 Hazardous decomposition products:**
Hydrogen fluoride
Formation of toxic gases is possible during heating or in case of fire.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· Endocrine disrupting properties

This product does not contain substances with endocrine disrupting properties in a concentration of $\geq 0.1\%$.

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SECTION 12: Ecological information

- **12.1 Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
 - **12.2 Persistence and degradability** No further relevant information available.
 - **12.3 Bioaccumulative potential** No further relevant information available.
 - **12.4 Mobility in soil** No further relevant information available.
 - **12.5 Results of PBT and vPvB assessment**
- | |
|---|
| · PBT: |
| This product does not contain any substances $\geq 0.1\%$ that have been assessed as PBT. |
- | |
|--|
| · vPvB: |
| This product does not contain any substances $\geq 0.1\%$ that have been assessed as vPvB. |
- **12.6 Endocrine disrupting properties**
This product does not contain substances with endocrine disrupting properties in a concentration of $\geq 0.1\%$.
 - **12.7 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1 UN number or ID number · ADR/RID/ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR/RID/ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR/RID/ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR/RID/ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · 14.6 Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| <ul style="list-style-type: none"> · Transport/Additional information: | Not dangerous according to the above specifications. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | Void |

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

- **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Date of previous version:** 09.12.2024

- **Abbreviations and acronyms:**

REACH: Registration, Evaluation and Restriction of Chemicals

MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships

IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

UN: United Nations (also UNO: United Nations Organization)

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

ASTM: American Society for Testing and Materials

WAF: Water Accommodated Fraction

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3