


SAFETY DATA SHEET

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

<p>1.3 Details of the supplier of the safety data sheet</p> <div style="text-align: center;">  <p>Aculon ^[1D]</p> <p>10110 Sorrento Valley Road San Diego, CA 92121 phone 858-350-9474 fax 858-350-9422 Email: support@aculon.com www.aculon.com</p> </div>	<p>1.4 Emergency telephone number</p> <p style="text-align: center;">Emergency Telephone Number ^[1E]</p> <p>CHEMTEL CHEMICAL MIS8833919 DOMESTIC NORTH AMERICA: 1-800-255-3924 INTERNATIONAL CALLERS OUTSIDE THE US TERRITORIES AND CANADA: +1-813-248-0585</p> <p style="text-align: right;">Revision Date: 01/27/2020</p>
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[1a,b 1.1] PRODUCT IDENTIFIERS/ TRADE NAME(s)	Aculon® RD-A	[1c 1.2] RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST	IPA Mixture for use as a cleaner and adhesion promoter
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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

Flammable liquids (Category 2), H225

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements Labelling according Regulation (EC) No 1272/2008

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

Signal word: Danger

Pictogram(s):



Hazard statement(s):

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing vapours.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Supplemental Hazard Statements: none

[2C] **2.3 OTHER HAZARDS NOT OTHERWISE CLASSIFIED:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

[2D] **INGREDIENTS OF UNKNOWN ACUTE TOXICITY >= 1%:** none

SECTION 3: Composition/information on ingredients

3.2 Hazardous ingredients according to Regulation (EC) No 1272/2008 and 29 CFR 1910 (OSHA HCS)

Component	Classification	Concentration
2-Propanol; sec-Propyl alcohol; Isopropyl alcohol; Isopropanol formula: $(CH_3)_2CHOH$ Mol wt.: 60.10		
CAS-No. 67-63-0 EC-No.200-661-7 Index-No.603-117-00-0 Reach: 01-2119457558-25-xxxx	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336	99 - 100%

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
[4a] INHALATION	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
[4a] SKIN CONTACT	Wash off with soap and plenty of water. Consult a physician.
[4a] EYE CONTACT	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
[4a] INGESTION	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
[4b] 4.2 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] 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL	no data available

TREATMENT NEEDED	
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SECTION 5: Firefighting measures

^[5a] 5.1 Extinguishing Media/SUITABLE/ UNSUITABLE EXTINGUISHING MEDIA	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
^[5b] 5.2 SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE(IE HAZARDOUS COMBUSTION PRODUCTS)	Burning may form Carbon oxides and Hydrogen Chloride gas.. Use water spray to cool unopened containers.
^[5c] 5.3 ADVICE FOR FIREFIGHTERS/ PRECAUTIONS / SPECIAL PROTECTIVE EQUIPMENT	Wear self contained breathing apparatus for fire fighting if necessary.
5.4 FURTHER INFORMATION	Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

^[6a] 6.1 PERSONAL PRECAUTIONS, PPE, EMERGENCY PROCEDURES	Use personal protective equipment. Avoid breathing vapours. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.
6.2 Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
^[6a] 6.3 METHODS & MATERIALS FOR CONTAINMENT & CLEANING UP	Contain spillage, wipe up any liquid and place in container for disposal according to local regulations (see section 13).
6.4 REFERENCE TO OTHER SECTIONS	For disposal see section 13.

SECTION 7: Handling and storage

^[7a] 7.1 PRECAUTIONS FOR SAFE HANDLING	Avoid contact with skin and eyes. Avoid inhalation of vapour. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.2.
^[7b] 7.2 CONDITIONS FOR SAFE STORAGE,	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be used immediately before they dry out.

INCLUDING ANY INCOMPATIBILITIES	
7.3 SPECIFIC END USES	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 CONTROL PARAMETERS: COMPONENTS WITH WORKPLACE CONTROL PARAMETERS				
[8a] COMPONENT	CAS#	PEL/ TWA/ STEL	CONTROL PARAMETERS	BASIS (ACGIH, OSHA ETC)
2-Propanol	67-63-0	STEL	500 ppm 1,250 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits
		TWA	400 ppm 999 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits

[8b] 8.2 EXPOSURE CONTROLS/ VENTILATION / ENGINEERING CONTROLS	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
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PERSONAL PROTECTIVE EQUIPMENT

[8c] 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).
[8c] SKIN PROTECTION	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M) If used under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
[8c] EYE PROTECTION	Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
[8c] CLOTHING/BODY PROTECTION	Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
CONTROL OF ENVIRONMENTAL	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

EXPOSURE	
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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties			
[9a] Appearance (physical state, color, etc.)	Liquid, Clear Colorless	[9j] Upper/lower flammability or explosive limits:	Lower: 2% UEL: 12.7%
[9b] Odor	alcohol-like	[9k] Vapor pressure	43.2 hPa (32.4 mmHg) at 20.0 °C (68.0 °F) 58.7 hPa (44.0 mmHg) at 25.0 °C (77.0 °F)
[9c] Odor threshold	no data available	[9l] Vapor density	no data available
[9d] pH	no data available	[9m] Relative Density	0.785 g/cm ³ at 25 °C (77 °F)
[9e] Melting point/freezing point	-89.5 °C (-129.1 °F) - lit.	[9n] Solubility (in H₂O)	miscible
[9f] Initial boiling point and boiling range	82 °C (180 °F) - lit.	[9o] Partition coefficient: n-octanol/water	log Pow: 0.05
[9g] Flash point	12.0 °C (53.6 °F) - closed cup	[9p] Auto-ignition temperature	425.0 °C (797.0 °F)
[9h] Evaporation rate	3.0 (BuOAC = 1)	[9q] Decomposition temperature	no data available
[9i] Flammability (solid, gas)	no data available	[9r] Viscosity	no data available
		[9s] Explosive Properties	no data available
		[9t] Oxidizing Properties	no data available
9.2 Other safety information:	No data available		

SECTION 10: Stability and reactivity

[10a] 10.1 REACTIVITY	no data available
[10b] 10.2 CHEMICAL STABILITY	Stable under recommended storage conditions..
[10c] 10.3 POSSIBILITIES OF HAZARDOUS REACTIONS	none known
[10d] 10.4 CONDITIONS TO AVOID	Ignition sources, excess heat, sparks, incompatible materials
[10e] 10.5 INCOMPATIBLE MATERIALS	Strong oxidizing agents, strong acids. May damage some forms of plastics with prolonged exposure.
[10f] 10.6 HAZARDOUS DECOMPOSITION PRODUCTS	Other decomposition products - no data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information On toxicological effects	
[11a] LIKELY ROUTES OF EXPOSURE	INHALATION: is not expected if proper ventilation or personal protective equipment is used while working with this product

	<p>INGESTION: Ingestion is not expected if proper industrial hygiene practices are followed, including no eating, drinking, or smoking while working with chemicals</p> <p>SKIN: is not expected if proper personal protective equipment (gloves and protective clothing) is used while working with this product</p> <p>EYE CONTACT: is not expected if proper personal protective equipment (safety glasses or goggles) is used while working with this product</p>
^[11b] SYMPTOMS RELATED TO PHYSICAL, CHEMICAL & TOXIC CHARACTERISTICS	<p>INHALATION: May cause drowsiness or dizziness. May be harmful if inhaled.</p> <p>INGESTION: Skin corrosion/irritation: Skin - rabbit; Result: May be harmful if swallowed. Causes burns</p> <p>SKIN: Serious eye damage/eye irritation: Eyes - rabbit; Result: Eye irritation - 24 h; May be harmful if absorbed through skin. May cause burns.</p> <p>EYE CONTACT: Respiratory or skin sensitisation: may cause eye burns.</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: May be harmful if inhaled.</p>
^[11D] NUMERICAL MEASURES OF TOXICITY	<p>ACUTE TOXICITY ESTIMATES: none known</p> <p>Acute toxicity</p> <p>LD50 Oral - rat - 5,045 mg/kg</p> <p>Remarks: Behavioral: Altered sleep time (including change in righting reflex).</p> <p>Behavioral: Somnolence (general depressed activity).</p> <p>LC50 Inhalation - rat - 8 h - 16000 ppm</p> <p>LD50 Dermal - rabbit - 12,800 mg/kg</p> <p>SKIN CORROSION/IRRITATION</p> <p>Skin - Rabbit</p> <p>Result: Mild skin irritation</p> <p>Serious eye damage/eye irritation</p> <p>Eyes - Rabbit</p> <p>Result: Eye irritation - 24 h</p> <p>Respiratory or skin sensitization</p> <p>No data available</p> <p>Germ cell mutagenicity</p> <p>No data available</p>
^[11e] CARCINOGENICITY	<p>This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.</p> <p>IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)</p>
ADDITIONAL INFORMATION	<p>2-PROPANOL:</p> <p>RTECS: NT8050000</p> <p>Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to:, Lung oedema, Pneumonia</p> <p>Kidney - Irregularities - Based on Human Evidence</p>

SECTION 12: Ecological information

^[12a] 12.1 ECOTOXICITY	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h EC50 - Algae - > 1,000.00 mg/l - 24 h
^[12b] 12.2 PERSISTENCE AND DEGRADABILITY	No data available
^[12c] 12.3 BIOACCUMULATIVE POTENTIAL	No bioaccumulation is to be expected (log Pow <= 4).
^[12d] 12.4 MOBILITY IN SOIL	No data available
12.5 RESULTS OF PBT AND vPvB ASSESSMENT	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
^[12e] 12.6 OTHER ADVERSE EFFECTS (OZONE LAYER ETC.)	No data available

SECTION 13: Disposal considerations

^[13] 13.1 Contact a licensed professional waste disposal service.
Contaminated Packaging Disposal: Contact a licensed professional waste disposal service.

SECTION 14: Transport information

	14.1[a] UN number	14.2[b] UN proper shipping name	14.3[c] Transport hazard class(es)	14.4[d] Packaging group	14.5[e] Environmental hazards
ADR/RID:	UN 1993	Flammable Liquid, nos (2-propanol)	3	II	no
IMDG:	UN 1993	Flammable Liquid, nos (2-propanol)	3	II	no
IATA:	UN 1993	Flammable Liquid, nos (2-propanol)	3	II	no

US DOT	UN 1993	Flammable Liquid, nos (2-propanol)	3	II	not applicable
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^[14d] ENVIRONMENTAL HAZARDS	Marine Pollutant: no
^[14f] 14.7 BULK TRANSPORT (MARPOL 73/78/IBC CODE)	IMDG: UN 1993, Flammable Liquid, nos (2-propanol), 3, II
^[14g] 14.6 SPECIAL PRECAUTIONS	none known

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	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	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
Sara 311/312 Hazards	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
Pennsylvania Right To Know Components	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
New Jersey Right To Know Components	2- Propanol, CAS# 67-63-0 Revision Date 1987-01-01
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: 04/22/15
 version 1.0 original issue 02/05/15
 version 2.0 revision 04/22/15
 version 3.0 removed old R phrases, symbols, and references
 Version 4.0 updated emergency contact and trademarks 1/27/2020

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit. Eye irritation

Flam. Liq. Flammable liquids

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

STOT SE Specific target organ toxicity - single exposure

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.

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