

# SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

## AA\_EMA

Version 1.0

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### SECTION 1. IDENTIFICATION

Product name : AA\_EMA

#### Manufacturer or supplier's details

Company : Arxada, LLC  
412 Mount Kemble Avenue, Suite 200S  
Morristown, NJ 07960  
USA

Telephone : 1-201-316-9200  
E-mail address : sds-info@arxada.com

Emergency telephone number : For incidents only (spill, leak, fire, exposure, or accident), call  
CHEMTREC at  
1-800-424-9300 (inside North America) [CCN 864796]  
1-703-741-5970 (outside North America) [CCN 864796]  
+41 61 313 94 94 (24h )

#### Recommended use of the chemical and restrictions on use

Recommended use : Intermediate

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

#### GHS label elements

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

Based on available data, the classification criteria are not met. Handle in accordance with good industrial hygiene and safety practice. Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

Precautionary statements : **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P314 Get medical advice/ attention if you feel unwell.  
**Storage:**  
P402 + P404 Store in a dry place. Store in a closed container.  
P410 + P403 Protect from sunlight. Store in a well-ventilated place.  
**Disposal:**  
P501 Dispose of contents/container in accordance with local regu-

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lation.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

Substance name : Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester

CAS-No. : 21282-97-3

**Hazardous components**

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
2-Hydroxyethyl methacrylate	868-77-9	$\geq 1 - < 3$

**SECTION 4. FIRST AID MEASURES**

If inhaled : Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash with water and soap as a precaution.  
If on clothes, remove clothes.  
In the case of skin irritation or allergic reactions see a physician.

In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Heating or fire can release toxic gas.

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Hazardous combustion products	: Carbon oxides (Cox)
Further information	: Use water spray to cool unopened containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment.
Environmental precautions	: Try to prevent the material from entering drains or water courses.
Methods and materials for containment and cleaning up	: Neutralize with chalk, alkali solution or ammonia. 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).

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## SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
Advice on safe handling	: No special precautions required.
Conditions for safe storage	: Keep container tightly closed. Keep in a well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. To maintain product quality, do not store in heat or direct sunlight.
Materials to avoid	: No special restrictions on storage with other products.
Further information on storage stability	: No decomposition if stored and applied as directed.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

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Remarks	: Wear protective gloves. Break through time : > 480 min
Eye protection	: Safety glasses
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: clear, Liquid
Colour	: light yellow
Odour	: odourless
Odour Threshold	: no data available
pH	: 3.8 (68 °F / 20 °C) Concentration: 10 g/l
Freezing point	: < -13 °F / < -25 °C Method: OECD Test Guideline 102 GLP: yes
Boiling point/boiling range	: 522 °F / 272 °C (1,036 hPa) Method: OECD Test Guideline 103 GLP: yes
Flash point	: 232 °F / 111 °C (1,040 hPa) Method: DIN 51758, Pensky-Martens closed cup GLP: yes
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Flammability (liquids)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: 0.0024 hPa (77 °F / 25 °C) Method: Tested according to Directive 92/69/EEC. GLP: yes
Relative vapour density	:  7.4
Relative density	: no data available

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Density	: 1.12 g/cm <sup>3</sup> (68 °F / 20 °C) Method: OECD Test Guideline 109 GLP: yes
Water solubility	: 18.5 g/l Method: OECD Test Guideline 105 GLP: yes
Solubility in other solvents	: completely miscible Solvent: organic solvent
Partition coefficient: n-octanol/water	: log Pow: 0.9(77 °F / 25 °C) Method: OECD Test Guideline 107 GLP: yes
Auto-ignition temperature	: 604 °F / 318 °C (1,024 mbar) Method: Council Regulation (EC) No. 440/2008, A.15 GLP: yes
Decomposition temperature	: no data available
Viscosity, dynamic	: 8.19 mPa.s (68 °F / 20 °C) GLP: yes  4.49 mPa.s (104 °F / 40 °C) GLP: yes
Viscosity, kinematic	: 7.31 mm <sup>2</sup> /s (68 °F / 20 °C) GLP: yes  4.01 mm <sup>2</sup> /s (104 °F / 40 °C) GLP: yes
Explosive properties	: Not explosive Classification Code: Not explosive Method: EEC A.14 GLP: yes
Oxidizing properties	: The substance or mixture is not classified as oxidizing. Method: Oxidizing properties (liquids) GLP: yes
Surface tension	: 0.9 mN/m, 77 °F / 25 °C, OECD Test Guideline 115, GLP: yes
Molecular weight	: 214.22 g/mol

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Stabilizer: BHT Non-stabilized product may undergo spontaneous exothermic polymerization. Stable under recommended storage conditions. No hazards to be specially mentioned.

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Conditions to avoid	: Heat
Incompatible materials	: Strong acids and strong bases Oxidizing agents
Hazardous decomposition products	: No decomposition if used as directed.

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	: Remarks: no data available
Acute dermal toxicity	: LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Species	: Rabbit
Exposure time	: 4 h
Method	: OECD Test Guideline 404
Result	: No skin irritation
GLP	: yes

**Serious eye damage/eye irritation**

Species	: Rabbit
Result	: Mild eye irritation
Method	: OECD Test Guideline 405
GLP	: yes

**Respiratory or skin sensitisation**

Test Type	: Local Lymph Node Assay
Species	: Mouse
Assessment	: Does not cause skin sensitisation.
Method	: OECD Test Guideline 429
Result	: not sensitizing
GLP	: yes

**Germ cell mutagenicity**

Genotoxicity in vitro	: Test Type: Ames test Species: Salmonella typhimurium Method: OECD Test Guideline 471 Result: negative GLP: yes
	: Test Type: Chromosome aberration test in vitro Species: Human lymphocytes Metabolic activation: no Method: OECD Test Guideline 473 Result: positive GLP: yes

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	: Test Type: gene mutation test Species: mouse lymphoma cells Metabolic activation: no Method: OECD Test Guideline 476 Result: positive GLP: yes
Genotoxicity in vivo	: Test Type: In vivo micronucleus test Species: Mouse (male) Strain: NMRI and DBA Cell type: Bone marrow Application Route: Oral Dose: 500, 1000, 2000 mg/kg bw. Method: OECD Test Guideline 474 Result: not mutagenic GLP: yes

Germ cell mutagenicity - Assessment : Not believed to be mutagenic

**Carcinogenicity**

Result : no data available

Carcinogenicity - Assessment : Not believed to be carcinogenic

**IARC**

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.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**Reproductive toxicity**

Effects on fertility : Remarks: no data available

Effects on foetal development : Test Type: Pre-natal  
Species: Rat  
Application Route: Oral  
Method: OECD Test Guideline 414  
GLP: yes

Reproductive toxicity - Assessment : Not believed to be reprotoxic

**STOT - single exposure**

Remarks : no data available

**STOT - repeated exposure**

Remarks : no data available

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**Repeated dose toxicity**

Species : Rat, male and female  
Application Route : Oral  
Number of exposures : daily  
Dose : 50, 150, 500 mg/kg/day  
Control Group : yes  
Method : OECD Test Guideline 408  
GLP : yes

**Aspiration toxicity**

No aspiration toxicity classification

**Further information**

Remarks : no data available

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 89.1 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 96.6 mg/l  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 69.2 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 11.1 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to microorganisms : NOEC (activated sludge): 320 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Analytical monitoring: no  
Method: OECD Test Guideline 209  
GLP: yes



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**Ecotoxicology Assessment**

Acute aquatic toxicity : Not classified due to inconclusive data.

Chronic aquatic toxicity : Not classified due to inconclusive data.

**Persistence and degradability**

Biodegradability : Test Type: Closed Bottle test  
Result: Not readily biodegradable.  
Biodegradation: 67 % (Theoretical oxygen demand)  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

Stability in water : Test Type: Abiotic degradation  
Degradation half life (t<sub>1/2</sub>): 156 h (25 °C) pH: 7  
Method: OECD Test Guideline 111  
GLP: yes

**Bioaccumulative potential**

Bioaccumulation : Remarks: no data available

**Components:****2-Hydroxyethyl methacrylate:**

Partition coefficient: n-octanol/water : log Pow: -0.55

**Mobility in soil**

Distribution among environmental compartments : Remarks: no data available

**Other adverse effects**

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of contents/container in accordance with local regulation.  
Contact waste disposal services.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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SECTION 14. TRANSPORT INFORMATION

DOT	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
TDG	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
IATA	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
IMDG	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
ADR	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
RID	:	Not dangerous goods
UN number	:	Not applicable
Proper shipping name	:	Not applicable
Transport hazard class	:	Not applicable
Packing group	:	Not applicable
Special precautions for user	:	none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable

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SECTION 15. REGULATORY INFORMATION

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**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**

See above: SECTION 2. Hazard Identification-GHS Classification

**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.

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

**Clean Water Act**

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Components	CAS-No.
2-[(2-Methyl-1-oxoallyl)oxy]ethyl acetoacetate	21282-97-3

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**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Canadian lists****NPRI**

Components	CAS-No.
2,6-di-tert-Butyl-p-cresol	128-37-0

The product components have the following inventory status:

**SECTION 16. OTHER INFORMATION****Full text of other abbreviations**

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 2022.02.24

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid

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for such material used in combination with any other materials or in any process, unless specified in the text.

Date format : yyyy/mm/dd

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