

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

AB CUTRINE-PLUS

Version 1.0

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SECTION 1. IDENTIFICATION

Product name : AB CUTRINE-PLUS

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address : sds@lonza.com
Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300,
CHEMTREC WORLD-WIDE: +1-703-527-3887.

Recommended use of the chemical and restrictions on use

Recommended use : Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.

Precautionary statements : **Prevention:**
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
2,2',2''-Nitrilotriethanol	102-71-6	10 - 15
2-Aminoethanol	141-43-5	10 - 15

SECTION 4. FIRST AID MEASURES

General advice : Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If inhaled : IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Move to fresh air.
 Consult a physician after significant exposure.
 If unconscious, place in recovery position and seek medical advice.
 If breathing is irregular or stopped, administer artificial respiration.
 Keep respiratory tract clear.

In case of skin contact : IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

After contact with skin, wash immediately with plenty of soap and water.
 If on clothes, remove clothes.
 In the case of skin irritation or allergic reactions see a physician.

In case of eye contact : IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.

If swallowed : IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to

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do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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 : Carbon dioxide (CO₂)
Dry chemical
Foam

Water spray
Alcohol-resistant foam
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Will not burn

Heating or fire can release toxic gas.
Do not allow run-off from fire fighting to enter drains or water courses.

Further information : Use water spray to cool unopened containers.
In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
Use personal protective equipment.
Use respirator when performing operations involving potential exposure to vapour of the product.
Prevent further leakage or spillage if safe to do so.
Evacuate personnel to safe areas.
Use personal protective equipment as required.

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- Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : 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).
Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Take precautionary measures against static discharges.
- Advice on safe handling : Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.
- Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Store in a cool, dry and well ventilated place. Isolate from incompatible materials.
- Keep container tightly closed.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
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 : Refer to Section 10, "Incompatible Materials."
Do not store near acids.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2,2',2''-Nitrilotriethanol	102-71-6	TWA	5 mg/m3	ACGIH

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2-Aminoethanol	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		STEL	6 ppm 15 mg/m ³	NIOSH/GUIDE
		REL	3 ppm 8 mg/m ³	NIOSH/GUIDE
		PEL	3 ppm 6 mg/m ³	OSHA_TRANS
		TWA	3 ppm 8 mg/m ³	Z1A
		STEL	6 ppm 15 mg/m ³	Z1A

Engineering measures : Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

Respiratory protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.
A NIOSH approved air purifying respirator with organic vapor cartridge and N95 particulate filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

In the case of vapour formation use a respirator with an approved filter.

Respirator with ABEK filter.

Respirator with a vapour filter (EN 141)

Hand protection

Material : Nitrile rubber

Remarks : Avoid contact with skin. Impervious gloves
Wear protective gloves. Break through time : > 480 min

Eye protection : Safety glasses with side-shields
Safety glasses with side-shields conforming to EN166
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Emergency eyewash should be provided in the immediate work area.

Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: dark blue
Odour	: Amine
Odour Threshold	: no data available
pH	: 10.3 - 10.5
Melting point/freezing point	: no data available
Boiling point/boiling range	: no data available
Flash point	: boils without flashing
Evaporation rate	: no data available
Flammability (solid, gas)	: Product is not known to be flammable, combustible or pyrophoric.
Flammability (liquids)	: no data available
Self-ignition	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: > 1 (Air = 1.0)
Relative density	: 1.220 - 1.230 (75 °F / 24 °C)
Density	: Not applicable
Bulk density	: no data available
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: no data available
Decomposition temperature	: None known.
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available

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Minimum ignition energy : no data available

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 : Stable under normal conditions.
Stable under recommended storage conditions.
No hazards to be specially mentioned.

Conditions to avoid : High temperatures
Heat

Incompatible materials : Strong acids
Nitrates

Strong acids and strong bases
Oxidizing agents

Hazardous decomposition products : Carbon oxides
Nitrogen oxides (NOx)

No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :

Eyes
Skin
Ingestion

Acute toxicity

Acute oral toxicity : LD50 (Rat): Believed to be approximately 1,000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

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Acute toxicity (other routes of administration) :

Remarks: May cause mild eye irritation. Ingestion may cause mild gastrointestinal discomfort.

Inhalation of mist or vapor may cause irritation to the mucous membranes of the respiratory tract.

Skin corrosion/irritation

Remarks: Not expected to cause irritation.

Serious eye damage/eye irritation

Result: No eye irritation

Respiratory or skin sensitisation

Remarks: This material is not known or reported to be a skin or respiratory sensitizer.

Germ cell mutagenicity

Genotoxicity in vitro : Remarks: no data available

Carcinogenicity

Remarks: no data available

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

STOT - single exposure

Remarks: no data available

STOT - repeated exposure

Remarks: no data available

Repeated dose toxicity

Remarks: Not known or reported to cause subchronic or chronic toxicity.

Aspiration toxicity

No aspiration toxicity classification

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Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish : Remarks: no data available

Persistence and degradability

no data available

Bioaccumulative potential

Bioaccumulation : Remarks: no data available

Components:

2,2',2''-Nitrilotriethanol:

Partition coefficient: n-octanol/water : log Pow: -2.3

2-Aminoethanol:

Partition coefficient: n-octanol/water : log Pow: -1.91 (25 °C)
Method: OECD Test Guideline 107

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 : Toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If this product becomes a waste, it will be a nonhazardous waste.
As a nonhazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

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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

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These require-

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Massachusetts Right To Know

Components	CAS-No.
2,2',2''-Nitrilotriethanol	102-71-6
2-Aminoethanol	141-43-5

Pennsylvania Right To Know

Components	CAS-No.
2,2',2''-Nitrilotriethanol	102-71-6
Copper triethanolamine complex	82027-59-6
Copper, bis[2-(amino-.kappa.N)ethanolato-.kappa.O]-	14215-52-2
2-Aminoethanol	141-43-5

New Jersey Right To Know

Components	CAS-No.
2,2',2''-Nitrilotriethanol	102-71-6
Copper triethanolamine complex	82027-59-6
Copper, bis[2-(amino-.kappa.N)ethanolato-.kappa.O]-	14215-52-2
2-Aminoethanol	141-43-5

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

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

The components of this product are reported in the following inventories:

TSCA : This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : US. ACGIH Threshold Limit Values
 NIOSH/GUIDE : US. NIOSH: Pocket Guide to Chemical Hazards
 OSHA_TRANS : US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
 Z1A : US. OSHA Table Z-1-A (29 CFR 1910.1000)

AICS - Australian Inventory of Chemical Substances; 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

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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; 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

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

Date format : yyyy/mm/dd

US / EN