

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 07/22/2024

Reviewed on 07/22/2024

1 Identification

- **Product identifier**
- **Trade name: Polyacrylate Buffer A1**
- **Catalogue number:**
56Z025598, 56L025565, 56U025565, 56L025597, 56U025597, 56L0255, 56L025598, 56L025591, 56L025530, 56U025530, SDT082
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Corrosive to Metals 1
Skin Corrosion 1B
Eye Damage 1

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.



GHS07

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS05



GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
2-aminoethanol
2-hydroxyethylammonium chloride
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

- **Precautionary statements**
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

P310 Immediately call a poison center/doctor.

Other hazards

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.
CAS 141-43-5: Danger through skin absorption.
Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** aqueous solution
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 141-43-5 EINECS: 205-483-3 Index number: 603-030-00-8 RTECS: KJ 5775000	2-aminoethanol ⚠ Skin Corrosion 1B, H314; ⚠ Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332; Specific Target Organ Toxicity - Single Exposure 3, H335; Flammable Liquids 4, H227	10–20%
CAS: 2002-24-6 EINECS: 217-900-6 RTECS: KJ6370000	2-hydroxyethylammonium chloride ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335	5–<10%

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

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
Wash with plenty of water.
If present, better wash with 5% acetic acid solution, then rinse with water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
Rinse opened eye for several minutes (at least 15 min) under running water.
Call a doctor immediately.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed**
burns
after inhalation:
breathing difficulty
coughing
damage to the affected mucous membranes possible
after swallowing:
strong caustic effect
sickness
vomiting
pain
- **Danger:** Danger of gastric perforation.
- **Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs.
Later observation for pneumonia and pulmonary edema.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water, Carbon dioxide (CO₂), Foam, Fire-extinguishing powder

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- **For safety reasons unsuitable extinguishing agents:**
For this substance / mixture no limitations of extinguishing agents are given.
- **Special hazards arising from the substance or mixture**
Can burn in fire.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
Use respiratory protective device against the effects of fume/dust/aerosol.
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose contaminated material as waste according to section 13.
- **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.

7 Handling and storage

- **Precautions for safe handling**
Keep receptacles tightly sealed.
Prevent formation of aerosols.
Ensure good ventilation/exhaustion at the workplace.
- **Advice on safe handling:** Prevent formation of aerosols.
- **Hygiene measures:**
Do not inhale gases / fumes / aerosols.
Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing.
Wash hands before breaks and at the end of work.
Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Keep only in original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.
Protect from exposure to the light.
Protect from humidity and water.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)

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

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

CAS: 141-43-5 2-aminoethanol

PEL (USA)	Long-term value: 6 mg/m ³ , 3 ppm
REL (USA)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 8 mg/m ³ , 3 ppm
TLV (USA)	Short-term value: 6 ppm Long-term value: 3 ppm
EL (Canada)	Short-term value: 6 ppm Long-term value: 3 ppm
EV (Canada)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 7.5 mg/m ³ , 3 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Engineering measures:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

- **Personal protective equipment:**

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

- **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.

- **Recommended filter device for short term use:** Combination filter A-P2

- **Protection of hands:**

Protective gloves

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

Value for the permeation: Level ≤ 1 (10 min)

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

- **Eye protection:**

Tightly sealed goggles

Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment:** Avoid release to the environment.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance:**

- **Form / Physical state:**

Solution

- **Color:**

Light brown

- **Odor:**

Ammonia-like

- **Odor threshold:**

CAS 141-43-5: 2-4 ppm

- **pH-value at 20°C (68°F):**

10.5

- **Melting point/freezing point:**

Not determined.

- **Initial boiling point and boiling range:**

Not determined.

- **Flash point:**

>93°C (>199.4°F) (CAS: 141-43-5 2-aminoethanol)

- **Flammability (solid, gas):**

Can burn in fire.

- **Auto igniting:**

Not determined.

- **Decomposition temperature:**

Not determined.

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· Auto-ignition temperature:	Product is not self-igniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Flammability or explosive limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	none
· Vapor Pressure:	Not determined.
· Density at 20°C (68°F):	1.1 g/cm ³ (9.18 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility(ies)	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not applicable (mixture).
· Viscosity:	Not determined.
· Kinematic:	Not determined.
· Other information	
· Solids content:	10 - 25 %
· Solvent content:	
· Organic solvents:	10 - 20 %
· Water:	50 - 60 %
· Information with regard to physical hazard classes .	
· Corrosive to metals	May be corrosive to metals. Information on incompatible materials can be found in Sections 7 and 10.

10 Stability and reactivity

- **Reactivity** Fumes can combine with air to form an explosive mixture.
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
aluminum, copper, zinc, metal ions
copper
rubber
- **Hazardous decomposition products:** see section 5

* 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:		
CAS: 141-43-5 2-aminoethanol		
Oral	LD50	1720 mg/kg (rat) (GESTIS)
Dermal	LD50	1010 mg/kg (rabbit) (GESTIS)
Inhalative	LC50/4h	11 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** Causes severe skin burns.
- **on the eye:**
Causes serious eye damage.
Risk of blindness!

· Information on components:		
CAS: 141-43-5 2-aminoethanol		
Irritation of skin	OECD 404	(rabbit: burns) (IUCLID)

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Irritation of eyes | OECD 492 | (rabbit: burns) (IUCLID)

- **Sensitization:** Based on available data, the classification criteria are not met.
- **Information on components:** CAS 141-43-5: Sensitizing effect by skin contact is possible with prolonged exposure.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:

- **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 (specific target organ toxicity) -single exposure** May cause respiratory irritation.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **Information on components:**

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 141-43-5 2-aminoethanol
OECD 471 | (negative) (Bacterial Reverse Mutation Test - Ames test)
(Salmonella typhimurium)

OECD 474 | (negative)

- **Additional toxicological information:**

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

CAS: 141-43-5 2-aminoethanol

. (source: GESTIS)

Depending on the concentration and duration of exposure, MEA causes severe irritation or even burns on all contacted mucous membranes and also on the skin, which can occur with a certain delay.

Symptoms of acute poisoning:

Eyes: Conjunctivitis up to damage to the cornea.

Skin: irritation, swelling; chemical burns possible with prolonged exposure to the undiluted substance; sensitization

Inhalation: irritation of the airways up to toxic pulmonary edema; even at lower concentrations, pulmonary dysfunction cannot be ruled out; Resorptive effects can occur relatively quickly

Ingestion: (only experience from animal experiments): irritation to damage to mucous membranes that have been contacted; systemic effects

Absorption (only in animal experiments): loss of muscle tone; sedation, dyspnoea, convulsions, damage to blood vessels;

Functional changes up to damage to various organs (especially liver, kidneys, lungs).

- **Other information** No further relevant information available.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

CAS: 141-43-5 2-aminoethanol
EC50 | 65 mg/l/48h (Daphnia magna)
(IUCLID)

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IC50	22 mg/l/72h (Desmodemus subspicatus) (IUCLID)
LC50	150 mg/l/96h (rainbow trout) (IUCLID)

· **Persistence and degradability**

CAS: 141-43-5 2-aminoethanol

OECD 301 F 90–100 % / 28 d (readily biodegradable) (Manometric Respirometry)

· **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 141-43-5 2-aminoethanol

log Pow -1.91 (.) (OECD 107 / 25°C)

CAS: 2002-24-6 2-hydroxyethylammonium chloride

log Pow -4.8 (calculation)
(Merck)

· **Mobility in soil** No further relevant information available.

· **Other adverse effects** Avoid transfer into the environment.

13 Disposal considerations

· **Waste treatment methods**



· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN2491
· UN proper shipping name	
· DOT	Ethanolamine solutions
· IMDG, IATA	ETHANOLAMINE SOLUTION
· Transport hazard class(es)	
· DOT	
	
· Class	8 Corrosive substances
· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No

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· Special precautions for user	Warning: Corrosive substances
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG18) Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.
· Hazardous Air Pollutants
None of the ingredients is listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· New Jersey Right-to-Know List:
CAS: 141-43-5 2-aminoethanol
· New Jersey Special Hazardous Substance List:
CAS: 141-43-5 2-aminoethanol CO, F2
· Pennsylvania Right-to-Know List:
CAS: 141-43-5 2-aminoethanol
· Pennsylvania Special Hazardous Substance List:
None of the ingredients is listed.
· EPA (Environmental Protection Agency)
None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.
· US-VOC content: 195.1 g/l / 1.63 lb/gal

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- **Information about limitation of use:**

Observe national regulations where applicable:
Employment restrictions concerning young persons must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

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

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**

H227 Combustible liquid.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

- **Version number / date of revision:** 7 / 07/22/2024

- **Abbreviations and acronyms:**

EC50: effective concentration, 50 percent (in vivo)
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ACGIH[®] - American Conference of Governmental Industrial Hygienists
•A1 - Confirmed human carcinogen
•A2 - Suspected human carcinogen
•A3 - Confirmed animal carcinogen with unknown relevance to humans
•A4 - Not classifiable as a human carcinogen
•A5 - Not suspected as a human carcinogen
IARC - International Agency for Research on Cancer
•Group 1 - Carcinogenic to humans
•Group 2A - Probably carcinogenic to humans
•Group 2B - Possibly carcinogenic to humans
•Group 3 - Not classifiable as to carcinogenicity to humans
•Group 4 - Probably not carcinogenic to humans
NTP - National Toxicology Program, U.S. Department of Health and Human Services
•Group K - Known to be Human Carcinogens
•Group R - Reasonably Anticipated to be Human Carcinogens
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 4: Flammable liquids – Category 4
Corrosive to Metals 1: Corrosive to metals – Category 1
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European CHemicals Agency <http://echa.europa.eu>
IUCLID (International Uniform Chemical Information Database)
GESTIS- Stoffdatenbank (Substance Database, Germany)

- *** Data compared to the previous version altered.**