

Safety Data Sheet

Combined Acid Buffer

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Combined Acid Buffer

Synonyms/Generic Names: None

Product Number: 8321

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

Pictograms:



GHS Classification:

Skin corrosion	Category 1A
Serious eye damage	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H314	Causes severe skin burns and eye damage.
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Precautionary Statements:

P260	Do not breathe dusts or mists.
P264	Wash hands thoroughly after handling.
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/shower.
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.
P310	Immediately call a POISON CENTER/doctor/physician.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Causes skin burns.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	2
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Acetic Acid	9.5	64-19-7	200-580-7	C ₂ H ₄ O ₂	60.05 g/mol
Nitric Acid	<1	7697-37-2	231-714-2	HNO ₃	63.01 g/mol
Polyvinyl Alcohol	<1	9002-89-5	N/A	C ₂ H ₄ O	44.00 g/mol
Gelatin, Type B	<1	9000-70-8	N/A	N/A	N/A
Water	Balance	7732-18-5	N/A	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Specific hazards arising from the chemical

Emits toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Acetic Acid	10 ppm 25 mg/m ³	PEL	OSHA
	10 ppm 25 mg/m ³	TLV	ACGIH
	15 ppm 37 mg/m ³	STEL	ACGIH
	10 ppm 25 mg/m ³	REL	NIOSH
	15 ppm 37 mg/m ³	STEL	NIOSH
Nitric Acid	2 ppm 5.2 mg/m ³	TLV	ACGIH
	4 ppm 10 mg/m ³	STEL	ACGIH
	2 ppm 5 mg/m ³	PEL	OSHA
	2 ppm 5 mg/m ³	REL	NIOSH
	4 ppm 10 mg/m ³	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses with a face shield for splash protection.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves and a full body suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	Pungent vinegar odor
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	1.0074 (water = 1)
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Strong bases, reducing agents, metals, alkali metals.
Hazardous Decomposition Products	Carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Acetic Acid

Skin	LD50 Dermal – rabbit – 1112 mg/kg
Eyes	Not Available

Respiratory	LC50 Inhalation – mouse – 1 hour – 5620 ppm
Ingestion	LD50 Oral – rat – 3310 mg/kg

Nitric Acid

Skin	Not Available
Eyes	Not Available
Respiratory	LC50-rat- 1 hour: 7 mg/kg
Ingestion	LD50-human- 430 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	May cause irritation. Symptoms include burning, itching, redness, inflammation and/or swelling of exposed tissues.
Eyes	Contact may cause irritation. Symptoms include eye burns, watering eyes.
Respiratory	Inhalation of mists can cause irritating action on mucous membranes. Symptoms include burning, choking, coughing, wheezing, laryngitis, shortness of breath headache or nausea.
Ingestion	May cause irritation of the mouth, gullet and gastrointestinal tract. Symptoms include burning, choking, nausea, vomiting, and severe pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Teeth, Kidneys.
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity*Acetic Acid*

Aquatic Vertebrate	LC50: 423 mg/l 24 hours [Fish (Goldfish)] 88 ppm 96 hours [Fish (fathead minnow)] 75 ppm 96 hours [Fish (bluegill sunfish)]
Aquatic Invertebrate	LC50: 100 ppm [Daphnia]
Terrestrial	Not Available

Nitric Acid

Aquatic Vertebrate	Aquatic fish; LC50 (96 hours): 72 mg/l (<i>Gambusia affinis</i>)
Aquatic Invertebrate	Not Available
Terrestrial	Not Available
Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available

Other Adverse Effects	Not Available
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13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Listed: Acetic Acid, Nitric Acid
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Acetic Acid, Nitric Acid
Pennsylvania: Hazardous Substance List	Listed: Acetic Acid, Nitric Acid
New Jersey: Right to Know Hazardous Substance List	Listed: Acetic Acid, Nitric Acid
SARA 302	Listed: Nitric Acid
SARA 304	Listed: Nitric Acid
SARA 311	Acute Health Hazard.
SARA 312	Acute Health Hazard.
SARA 313	Listed: Nitric Acid
WHMIS Canada	Class C: Oxidizing material. Class D2B: Poisonous and infectious material – Other effects – Toxic. Class E: Corrosive material.

16. OTHER INFORMATION

Revision	Date
Original	07/11/2011
Revision 1	07/24/2014
Revision 2	06/13/2016
Revision 3	09/01/2021

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