Safety Data Sheet
acc. to OSHA HCS

Printing date 05/18/2023 Reviewed on 05/18/2023

1 Identification

· **Product identifier**

· **Trade name:** BA1-SAK-C

· **Article number:** 2766
· **Application of the substance / the mixture** Water treatment
· **Uses advised against**
Processes involving extreme heat use advised against.
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).
Any use involving aerosol formation or vapour release in excess of the assigned WEL where workers are exposed without suitable RPE.
Processes involving the use of incompatible substances - refer to section 10.
The product is intended exclusively for industrial and professional use.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

AP Tech
5130 Rialto Road
West Chester, Ohio 45069, USA
1-866-489-9831
info@aptechsolids.com

· **Information department:** Product safety department.
· **Emergency telephone number:**
CHEMTREC: 800-424-9300 (Domestic North America) OR 703-527-3887 (International, collect calls accepted).

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS05 Corrosion

Skin Corrosion 1A H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms** GHS05
· **Signal word** Danger

· **Hazard-determining components of labeling:**
Tetrasodium ethylenediaminetetraacetate
Sodium hydroxide
morpholine
· **Hazard statements**
Causes severe skin burns and eye damage.
· **Precautionary statements**
Do not breathe dust.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *3
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
71050-62-9	2-Propenoic acid, polymer with sodium phosphinate	5–10%
64-02-8	Tetrasodium ethylenediaminetetraacetate	3–10%
1310-73-2	Sodium hydroxide	5–10%
110-91-8	morpholine	2.5–<5%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
· **Information for doctor:** Treat symptomatically and supportively.
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet

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· **Special hazards arising from the substance or mixture**
Corrosive.
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
7757-83-7	Sodium sulphite	11 mg/m³
64-02-8	Tetrasodium ethylenediaminetetraacetate	75 mg/m³
1310-73-2	Sodium hydroxide	0.5 mg/m³
110-91-8	morpholine	30 ppm
111-76-2	2-Butoxyethanol	60 ppm
1310-58-3	Potassium hydroxide	0.18 mg/m³
7320-34-5	Tetrapotassium pyrophosphate	61 mg/m³

· **PAC-2:**		
7757-83-7	Sodium sulphite	120 mg/m³
64-02-8	Tetrasodium ethylenediaminetetraacetate	830 mg/m³
1310-73-2	Sodium hydroxide	5 mg/m³
110-91-8	morpholine	1,300 ppm
111-76-2	2-Butoxyethanol	120 ppm
1310-58-3	Potassium hydroxide	2 mg/m³
7320-34-5	Tetrapotassium pyrophosphate	680 mg/m³

· **PAC-3:**		
7757-83-7	Sodium sulphite	710 mg/m³
64-02-8	Tetrasodium ethylenediaminetetraacetate	5,000 mg/m³
1310-73-2	Sodium hydroxide	50 mg/m³
110-91-8	morpholine	8000** ppm
111-76-2	2-Butoxyethanol	700 ppm
1310-58-3	Potassium hydroxide	54 mg/m³

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7320-34-5	Tetrapotassium pyrophosphate	1,200 mg/m³

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Do not mix with acids.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Prevent any seepage into the ground.
Do not store in aluminium, copper, zinc containers.
· **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store away from foodstuffs.
Do not store together with acids.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **Storage class:** 8 A
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

1310-73-2 Sodium hydroxide	
PEL	Long-term value: 2 mg/m³
REL	Ceiling limit value: 2 mg/m³
TLV	Ceiling limit value: 2 mg/m³
110-91-8 morpholine	
PEL	Long-term value: 70 mg/m³, 20 ppm Skin
REL	Short-term value: 105 mg/m³, 30 ppm Long-term value: 70 mg/m³, 20 ppm Skin
TLV	Long-term value: 20 ppm Skin, A4

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**

1310-73-2 Sodium hydroxide	
PEL	Long-term value: 2 mg/m³
REL	Ceiling limit value: 2 mg/m³
TLV	Ceiling limit value: 2 mg/m³

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

· **Exposure controls**
· **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.

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· **General protective and hygienic measures:**
Do not eat, drink, smoke or sniff while working.
Take note of assigned Workplace Exposure Limits.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.

· **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· **Protection of hands:**

Protective gloves conforming to EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
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 conforming to EN166.

· **Body protection:**

Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid
Color:	White
· **Odor:**	Mild
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	11.5 (1%)
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

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· **Flash point:**	>93 °C (>199.4 °F)
· **Flammability (solid, gaseous):**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not applicable.
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	NOTE: The physical data presented above are typical values and should not be construed as a specification.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
· **Possibility of hazardous reactions**
The product is a strong base, it reacts violently with acid and is corrosive. Reacts violently with strong oxidants causing fire hazard.
Reaction with nitrosating agents (e.g. nitrites, nitrous acid, nitrous gases) can release carcinogenic nitrosamines.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** Strong acids and oxidising agents
· **Hazardous decomposition products:**
Nitrogen oxides (NOx)
Carbon monoxide and carbon dioxide
Sulfur oxides (SOx)

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	>2,077 mg/kg

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Dermal	LD50	>4,579 mg/kg
Inhalative	LC50/4 h	>12.1 mg/l

· **Primary irritant effect:**
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.
ROUTES OF EXPOSURE: The component substances can variously be absorbed into the body by inhalation, through the skin and by ingestion.
Contains sulfites. Repeated or prolonged inhalation exposure to sulfites may cause asthma.
The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has shown symptoms of asthma due to sulfites or sulfur dioxide should avoid all further contact with this product.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
110-91-8	morpholine	3
111-76-2	2-Butoxyethanol	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** The organic portion of the product is biodegradable.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** Product is not expected to bioaccumulate.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Recommended Hierarchy of Controls:
- Minimize waste;

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- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· **Uncleaned packagings:**
· **Recommendation:**
Container remains hazardous when empty. Continue to observe all precautions.
Containers, even those that are “empty,” may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN3262
· **UN proper shipping name**	
· **DOT**	Corrosive solid, basic, inorganic, n.o.s. (Sodium hydroxide, Morpholine)
· **ADR**	UN3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, MORPHOLINE)
· **IMDG, IATA**	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, MORPHOLINE)
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8 Corrosive substances
· **Label**	8
· **ADR, IMDG, IATA**	

· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **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**	B
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **IMDG**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **UN "Model Regulation":**	UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, MORPHOLINE), 8, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2	2-Butoxyethanol

· **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.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

111-76-2	2-Butoxyethanol	NL

· **TLV (Threshold Limit Value)**

110-91-8	morpholine	A4
111-76-2	2-Butoxyethanol	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms** GHS05

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· **Signal word** Danger

· **Hazard-determining components of labeling:**
Tetrasodium ethylenediaminetetraacetate
Sodium hydroxide
morpholine
· **Hazard statements**
Causes severe skin burns and eye damage.
· **Precautionary statements**
Do not breathe dust.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **National regulations:**

· **Information about limitation of use:**

Class	Share in %
Wasser	21.2
NK	5.3

· **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.

· **Contact:**
· **Date of preparation / last revision** 05/18/2023
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
Eye Damage 1: Serious eye damage/eye irritation – Category 1