Safety Data Sheet
acc. to OSHA HCS

Printing date 05/14/2024 Reviewed on 05/14/2024

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1 Identification

· **Product identifier**

· **Trade name:** C20-C-T

· **Article number:** 5561
· **Application of the substance / the mixture** Water treatment
· **Uses advised against**
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).
Processes involving extreme heat use advised against.
Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.
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).

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2 Hazard(s) identification

· **Classification of the substance or mixture**

Skin Irritation 2	H315 Causes skin irritation.
Eye Damage 1	H318 Causes serious eye damage.
Toxic to Reproduction 2	H361 Suspected of damaging fertility or the unborn child.

· **Label elements**
· **Hazard pictograms**

GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Sodium 4(or 5)-methyl-1H-benzotriazolide
· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.
· **Precautionary statements**

P263	Avoid contact during pregnancy/while nursing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	If on skin: Wash with plenty of water.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.

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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.

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3 Composition/information on ingredients

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

· **Dangerous components:**		
3794-83-0	Tetrasodium (1-hydroxyethylidene)bisphosphonate	10 – 25%
78620-07-2	Hydroxyphosphonoacetic acid, trisodium salt	2.5 – < 10%
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	2.5 – < 5%

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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.

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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
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)

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Sulphur Oxides (SOx)
Toxic metal oxide smoke
Phosphorous oxides

· **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.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Avoid formation of dust.
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:**		
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	1.9 mg/m³

· **PAC-2:**		
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	21 mg/m³

· **PAC-3:**		
64665-57-2	Sodium 4(or 5)-methyl-1H-benzotriazolide	130 mg/m³

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Safety showers and eye wash facilities should be available at the work area.

· **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.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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· **Storage class:** 11
· **Specific end use(s)** No further relevant information available.

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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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **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.
· **General protective and hygienic measures:**
Do not eat, drink, smoke or sniff while working.
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.
Pregnant women should strictly avoid inhalation or skin contact.
· **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
· **Protection of hands:**

Protective gloves.
Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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:**

Safety glasses with side-shields conforming to EN166.
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

· **Body protection:**

Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.
· **Limitation and supervision of exposure into the environment**
Do not allow to enter drains, sewers or watercourses.

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Solid
Color:	Various colors
· **Odor:**	Mild
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	7–7.5 (1%)
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	>93 °C (>199.4 °F)
· **Flammability (solid, gaseous):**	Not determined.
· **Auto igniting:**	>250 °C (>482 °F)
· **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.
· **Solvent content:**	
VOC content:	0.00 %
· **Other information**	NOTE: The physical data presented above are typical values and should not be construed as a specification.

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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** No dangerous reactions known.
· **Conditions to avoid** Heat and static discharge.
· **Incompatible materials:** Strong acids and oxidising agents
· **Hazardous decomposition products:**
Nitrogen oxides (NOx)
Carbon monoxide and carbon dioxide

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Sulfur oxides (SOx)
Phosphorus compounds
Toxic metal oxide smoke

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11 Toxicological information

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

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	9,058.3 mg/kg (rat)

3794-83-0 Tetrasodium (1-hydroxyethylidene)bisphosphonate		
Oral	LD50	2,850 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rabbit)
78620-07-2 Hydroxyphosphonoacetic acid, trisodium salt		
Oral	LD50	1,383 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:**
No sensitizing effects known.
Based on available data, the classification criteria are not met.
· **Subacute to chronic toxicity:** Prolonged or repeated skin contact may irritate and cause dermatitis.
· **Additional toxicological information:**
ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.

· **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.

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Specific target organ toxicity - single exposure**
Based on available data, the classification criteria are not met.
· **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.

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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** Contains components with the potential to bioaccumulate.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Harmful to fish
· **Additional ecological information:**
· **General notes:**
Harmful to aquatic organisms
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

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

· **Uncleaned packagings:**
· **Recommendation:**
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Disposal must be made according to official regulations.
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/RID/ADN, ADN, IMDG, IATA**	Void
· **UN proper shipping name**	
· **DOT, ADR/RID/ADN, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)**	
· **DOT, ADR/RID/ADN, ADN, IMDG, IATA**	
· **Class**	Void
· **Packing group**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Void
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Void

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

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

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· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed as 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)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

· **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 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Sodium 4(or 5)-methyl-1H-benzotriazolide

· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

P263	Avoid contact during pregnancy/while nursing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	If on skin: Wash with plenty of water.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.

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

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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.

· **Department issuing SDS:** Product safety department.

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· **Contact:**
· **Date of preparation / last revision** 05/14/2024 / 6
· **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)
VOC: Volatile Organic Compounds (USA, EU)
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 Irritation 2: Skin corrosion/irritation – Category 2
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Toxic to Reproduction 2: Reproductive toxicity – Category 2
· *** Data compared to the previous version altered.**