



Safety Data Sheet
acc. to OSHA HCS

Printing date 05/24/2023

Reviewed on 05/24/2023

1 Identification

- Product identifier
- Trade name: **4 QUAT**
- Article number: LS121A
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- Information department: Technical Services: 423-698-1401
- Emergency telephone number: CHEMTREC: 800-424-9300

2 Hazard(s) identification

- Classification of the substance or mixture



Skin Irritation 2 H315 Causes skin irritation.
Eye Irritation 2A H319 Causes serious eye irritation.

- Label elements

• GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms



- Signal word Warning
- Hazard-determining components of labeling:
ethanol
- Hazard statements
Causes skin irritation.
Causes serious eye irritation.
- Precautionary statements
Wash thoroughly after handling.
Wear protective gloves / eye protection / face protection.
If on skin: Wash with plenty of water.
Specific treatment (see on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If eye irritation persists: Get medical advice/attention.

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



- Health = 2
- Fire = 0
- Reactivity = 0

- HMIS-ratings (scale 0 - 4)



- Health = *2
- Fire = 0
- 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:	
68424-85-1 Alkyl dimethyl benzyl ammonium chloride (C12-16)	2.5-10%
32426-11-2 Octyl decyl dimethyl ammonium chloride	52.5%
64-17-5 ethanol	52.5%
5538-94-3 Dicyl dimethyl ammonium chloride	52.5%
7173-51-5 Didecyl dimethyl ammonium chloride	52.5%

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.
- After eye contact:
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
 - 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: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

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- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- 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:	68424-85-1 Alkyl dimethyl benzyl ammonium chloride (C12-16)	1.3 mg/m ³
	64-17-5 ethanol	1,800 ppm
	7173-51-5 Didecyl dimethyl ammonium chloride	0.82 mg/m ³
· PAC-2:	68424-85-1 Alkyl dimethyl benzyl ammonium chloride (C12-16)	14 mg/m ³
	64-17-5 ethanol	3300* ppm
	7173-51-5 Didecyl dimethyl ammonium chloride	9 mg/m ³
· PAC-3:	68424-85-1 Alkyl dimethyl benzyl ammonium chloride (C12-16)	84 mg/m ³
	64-17-5 ethanol	15000* ppm
	7173-51-5 Didecyl dimethyl ammonium chloride	17 mg/m ³

7 Handling and storage

- Handling:
· Precautions for safe handling No special precautions are necessary if used correctly.
· Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
· Requirements to be met by storerooms and receptacles: No special requirements.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep receptacle tightly sealed.
· 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 item 7.

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- 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.
At this time, the other constituents have no known exposure limits.

64-17-5 ethanol	
PEL Long-term value:	1900 mg/m ³ , 1000 ppm
REL Long-term value:	1900 mg/m ³ , 1000 ppm
TLV Short-term value:	1000 ppm
	A3

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

- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- Breathing equipment:
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation/ the preparation/ the chemical mixture.

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

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9 Physical and chemical properties

<ul style="list-style-type: none"> Information on basic physical and chemical properties 	
<ul style="list-style-type: none"> General information 	<ul style="list-style-type: none"> Form: Liquid Color: Clear Odor: No information available Odor threshold: Not determined.
<ul style="list-style-type: none"> pH-value: 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Change in condition 	<ul style="list-style-type: none"> Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined.
<ul style="list-style-type: none"> Flash point: 	<ul style="list-style-type: none"> Not applicable.
<ul style="list-style-type: none"> Flammability (solid, gaseous): 	<ul style="list-style-type: none"> Not applicable.
<ul style="list-style-type: none"> Decomposition temperature: 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Auto igniting: 	<ul style="list-style-type: none"> Product is not selfigniting.
<ul style="list-style-type: none"> Danger of explosion: 	<ul style="list-style-type: none"> Product does not present an explosion hazard.
<ul style="list-style-type: none"> Explosion limits: 	<ul style="list-style-type: none"> Lower: Not determined. Upper: Not determined.
<ul style="list-style-type: none"> Vapor pressure: 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Density at 20 °C (68 °F): 	<ul style="list-style-type: none"> 1 g/cm³ (8.345 lbs/gal)
<ul style="list-style-type: none"> Relative density 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Vapor density 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Evaporation rate 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Solubility in / Miscibility with Water: 	<ul style="list-style-type: none"> Fully miscible.
<ul style="list-style-type: none"> Partition coefficient (n-octanol/water): 	<ul style="list-style-type: none"> Not determined.
<ul style="list-style-type: none"> Viscosity: 	<ul style="list-style-type: none"> Dynamic: Not determined. Kinematic: Not determined.
<ul style="list-style-type: none"> Solvent content: 	<ul style="list-style-type: none"> Organic solvents: <2.0 % VOC content: <2.00 % <20.0 g/l / <0.17 lb/gal
<ul style="list-style-type: none"> Solids content: 	<ul style="list-style-type: none"> 0.0 %
<ul style="list-style-type: none"> Other information 	<ul style="list-style-type: none"> No further relevant information available.

10 Stability and reactivity

<ul style="list-style-type: none"> Reactivity 	<ul style="list-style-type: none"> No further relevant information available.
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- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
No dangerous reactions known.
- **Do not mix with bleach or other chlorinated products – will cause chlorine gas.**
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - on the skin: No irritant effect.
 - on the eye: Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
64-17-5 ethanol	1
· 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:**
 - a. **Aquatic Toxicity** Freshwater fish, 96 hr LC50 = > 100 mg/l (estimated)
Daphnia magna, 48 hr EC50 = > 100 mg/l (estimated)
Acute aquatic toxicity will result from oxygen depletion caused by sulfite ingredient. Prevent spills from entering natural waterways and sewer systems.
 - **Persistence and degradability** No further relevant information available.
 - **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
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.

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· vPvB: Not applicable.
· Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Dispose of in accordance with federal, state, and local regulations.
- Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	-
· DOT, IMDG, IATA	-
· UN proper shipping name	-
· DOT, IMDG, IATA	-
· Transport hazard class(es)	-
· DOT, ADR, ADN, IMDG, IATA	-
· Class	-
· Packing group	-
· DOT, IMDG, IATA	-
· 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.
· UN "Model Regulation":	-

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.

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· 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: 64-17-5 ethanol
· Carcinogenic categories
· EPA (Environmental Protection Agency) None of the ingredients is listed.
· TLV (Threshold Limit Value) 64-17-5 ethanol 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



· Signal word Warning

· Hazard-determining components of labeling:
ethanol

· Hazard statements
Causes skin irritation.
Causes serious eye irritation.

· Precautionary statements
Keep out of reach of children.
Wash thoroughly after handling.
Wear protective gloves / eye protection / face protection.
If on skin: Wash with plenty of water.
Specific treatment (see on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If eye irritation persists: Get medical advice/attention.

· 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: Jim Failer/Ben Pesigan
· Date of preparation / last revision 05/24/2023 / 1

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Abbreviations and acronyms:
 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)
 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 Irritation 2A: Serious eye damage/eye irritation – Category 2A

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