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1 Identification

- · Product identifier
- Trade name: <u>5.0 mg/L Chromium (VI) Std.</u> Ref2 for EZ1009 Series - Chromium
- Article number: HAC057
- Details of the supplier of the safety data sheet

• Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA 800-256-2586

 Information department: Technical Coordinator
 Sherman Nelson sherman@aquasolutions.org
 Emergency telephone number:

Chemtrec: 800-424-9300 Canutec: 613-996-6666

2 *Hazard*(*s*) *identification*



• *Classification of the substance or mixture The product is not classified, according to the Globally Harmonized System (GHS).*

- · Label elements
- · GHS label elements Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- · Hazard statements Not Applicable
- · Precautionary statements

If swallowed: Call a poison center/doctor if you feel unwell.

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.

Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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



· HMIS-ratings (scale 0 - 4)

HEALTHImage: 0FIREImage: 0FIREImage: 0REACTIVITYImage: 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: Not Applicable

| · Table of Nonhazardous Ingredients | | |
|-------------------------------------|----------------------|----------|
| CAS: 7697-37-2 | Nitric Acid | 0.002% |
| CAS: 7778-50-9 | Potassium Dichromate | 0.00141% |
| CAS: 7732-18-5 | Water | 99.997% |

4 First-aid measures

- · Description of first aid measures
- · General information: No special measures required.
- 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. Then 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.
- 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.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose contaminated material as waste according to item 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.
- · Protective Action Criteria for Chemicals
- PAC-1:
 CAS: 7697-37-2
 Nitric Acid
 0.16 ppm

 CAS: 7778-50-9
 Potassium Dichromate
 0.42 mg/m³

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| 2102 | (Contd. of page 2) |
|-------------------------------------|----------------------|
| · PAC-2: | |
| CAS: 7697-37-2 Nitric Acid | 24 ppm |
| CAS: 7778-50-9 Potassium Dichromate | $7.4 mg/m^3$ |
| · PAC-3: | |
| CAS: 7697-37-2 Nitric Acid | 92 ppm |
| CAS: 7778-50-9 Potassium Dichromate | 44 mg/m ³ |

7 Handling and storage

· Handling:

- · Precautions for safe handling No special measures required.
- · 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.
- · 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:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- · Protection of hands:



Protective gloves

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation \cdot *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.

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• *Eye protection: Goggles recommended during refilling.* • *Body protection: Protective work clothing*

9 Physical and chemical properties

| Information on basic physical and c General Information | nemicui properues | | | | |
|--|---|--|--|--|--|
| · Appearance: | | | | | |
| Form: | Liquid | | | | |
| Color: | Pale yellow-orange | | | | |
| · Odor: | Odorless | | | | |
| • Odor threshold: | Not determined. | | | | |
| pH-value: | Not determined. | | | | |
| Change in condition | | | | | |
| Melting point/Melting range: | 0 °C (32 °F) | | | | |
| Boiling point/Boiling range: | 100 °C (212 °F) | | | | |
| Flash point: | Not applicable. | | | | |
| Flammability (solid, gaseous): | Not applicable. | | | | |
| Decomposition temperature: | Not determined. | | | | |
| Auto igniting: | Product is not selfigniting. | | | | |
| Danger of explosion: | Danger of explosion:Product does not present an explosion hazard. | | | | |
| Explosion limits: | | | | | |
| Lower: | Not determined. | | | | |
| Upper: | Not determined. | | | | |
| • Vapor pressure at 20 •C (68 •F): | 23 hPa (17.3 mm Hg) | | | | |
| • Density at 20 •C (68 •F): | 1.00002 g/cm ³ (8.34517 lbs/gal) | | | | |
| Relative density | Not determined. | | | | |
| · Vapor density | Not determined. | | | | |
| Evaporation rate | Not determined. | | | | |
| Solubility in / Miscibility with | | | | | |
| Water: | Fully miscible. | | | | |
| Partition coefficient (n-octanol/wate | r): Not determined. | | | | |
| · Viscosity: | | | | | |
| Dynamic: | Not determined. | | | | |
| Kinematic: | Not determined. | | | | |
| Solvent content: | | | | | |
| Water: | 100.0 % | | | | |
| VOC content: | 0.00 % | | | | |
| | 0.0 g/l / 0.00 lb/gal | | | | |
| Solids content: | 0.0 % | | | | |
| Dther information No further relevant information available. | | | | | |

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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 according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · 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: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

CAS: 7778-50-9 Potassium Dichromate

• NTP (National Toxicology Program)

CAS: 7778-50-9 Potassium Dichromate

· 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 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: Not hazardous for water.
- · 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: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

| Transport information | | |
|--|-----------------|--|
| · UN-Number · DOT, IMDG, IATA | Not regulated | |
| , , | Noi regulated | |
| · UN proper shipping name | | |
| · DOT, IATA | Not regulated | |
| ·IMDG | Not Regulated | |
| | Not regulated | |
| · Transport hazard class(es) | | |
| DOT, ADN, IMDG, IATA | | |
| · Class | Not regulated | |
| Packing group | | |
| DOT, IMDG, IATA | Not regulated | |
| 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'': | Not regulated | |

15 Regulatory information

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

| · Section 355 (extr | remely hazardous substances): | |
|---------------------|----------------------------------|--------------------|
| CAS: 7697-37-2 | Nitric Acid | |
| · Section 313 (Spe | ecific toxic chemical listings): | |
| CAS: 7697-37-2 | Nitric Acid | |
| CAS: 7778-50-9 | Potassium Dichromate | |
| · TSCA (Toxic Su | bstances Control Act): | |
| Nitric Acid | | ACTIVE |
| Potassium Dichro | omate | ACTIVE |
| Water | | ACTIVE |
| · Hazardous Air P | Pollutants | |
| CAS: 7778-50-9 | Potassium Dichromate | |
| | • | (Contd. on page 7) |
| | | |

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|-------------|-----------------------------------|
| | Ref2 for EZ1009 Series - Chromium |

| Proposition 65 | | | | | (Contd. of page |
|-------------------|---------------------------|-----------------|-------------------|--------------|--|
| Chemicals know | n to cause cancer | • | | | |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | |
| Chemicals know | n to cause reprod | uctive toxicity | for females: | | |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | |
| Chemicals know | n to cause reprod | uctive toxicity | for males: | | |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | |
| Chemicals know | n to cause develo | pmental toxic | ity: | | |
| CAS: 7778-50-9 | Potassium Dichr | omate | - | | |
| Carcinogenic ca | tegories | | | | |
| 0 | ental Protection A | gency) | | | |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | A(inh), D(oral), K/L(inh), CBD(oral |
| TLV (Threshold | Limit Value esta | blished by AC | GIH) | | 1 |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | A |
| NIOSH-Ca (Nat | ional Institute for | • Occupationa | l Safety and Hea | alth) | |
| CAS: 7778-50-9 | Potassium Dichr | omate | | | |
| GHS label elem | ents Not Applicab | le | | | |
| Hazard pictogra | ms Not Applicabl | е | | | |
| Signal word Not | Applicable | | | | |
| Hazard statemen | ıts Not Applicable | | | | |
| Precautionary s | | | | | |
| | ell a poison center | | feel unwell. | | |
| If on skin: Wash | with plenty of wat | er. | | | |
| If in eyes: Rinse | cautiously with | water for seve | eral minutes. Re | emove con | ntact lenses, if present and easy to a |
| Continue rinsing | | | | | |
| Store in a closed | container. | | | | |
| Dispose of conte | nts/container in a | ccordance with | h local/regional/ | 'national/ir | nternational regulations. |
| Chemical safety | | | A | and have a | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |

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: Environment protection department.
- · Contact:
- Date of preparation / last revision Revsion 0.0, 06-21-2019, Creation date for SDS. STN 06/21/2019 / -
- Abbreviations and acronyms:
 IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists 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

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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