Printing date 01/09/2018 Reviewed on 01/09/2018

1 Identification

· Product identifier

· Trade name: Potassium Chromate

5% w/v Indicator Solution

· Article number: TEN068

· 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



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

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





GHS07

S07 GHS08

- · Hazard-determining components of labeling:
- Potassium Chromate

· Signal word Danger

· Hazard statements

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of water.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Store locked up.

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

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



Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 2Fire = 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:
-------------------------------	-------------

CAS: 7789-00-6 Potassium Chromate

4.846%

· Table of Nonhazardous Ingredients

CAS: 7732-18-5 Water

95.154%

4 First-aid measures

- · Description of first aid measures
- · After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

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(Contd. of page 2)

· 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.

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).

Dispose contaminated material as waste according to item 13.

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:	
CAS: 7789-00-6 Potassium Chromate	0.56 mg/m^3
· PAC-2:	
CAS: 7789-00-6 Potassium Chromate	9.7 mg/m^3
· PAC-3:	
CAS: 7789-00-6 Potassium Chromate	58 mg/m³

7 Handling and storage

- · Handling:
- · Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · 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: None.
- \cdot *Specific end use(s) No further relevant information available.*

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(Contd. of page 3)

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:

CAS: 7789-00-6 Potassium Chromate

PEL Long-term value: 0.005* mg/m³

Ceiling limit value: 0.1** mg/m³

*as Cr(VI) **as CrO3; see 29 CFR 1910.1026

REL Long-term value: 0.0002 mg/m³

as Cr; See Pocket Guide Apps. A and C

TLV Short-term value: NIC-0.0005* mg/m³ Long-term value: (0.05) NIC-0.0002* mg/m³

as Cr; *inhalable, BEI, NIC-Skin, DSEN, RSEN

· Ingredients with biological limit values:

CAS: 7789-00-6 Potassium Chromate

BEI 25 µg/L

LD50 Intraperitoneal: urine

Time: end of shift at end of workweek

LD50: Total chromium (fume)

10 μg/L

LD50 Intraperitoneal: urine

Time: increase during shift

LD50: Total chromium (fume)

- · 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.

· 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. 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

· 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.

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· 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

· Body protection: Protective work clothing

Physical and chemical proper	rties
Information on basic physical and	chemical properties
General Information	
Appearance:	
Form:	Liquid
Color: Odor:	Light yellow Odorless
Ouor: Odor threshold:	Not determined.
pH-value:	Not determined.
<u> </u>	
Change in condition Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	approace.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
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):	1.03168 g/cm³ (8.60937 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/wat	t er): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

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5% w/v Indicator Solution

		(Contd. of page
· Solvent content:		
Water:	95.2 %	
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gl	
Solids content:	4.8 %	
· Other information	No further relevant information available.	

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:

· LD/LC50 values that are relevant for classification:	
ATE (Acute Toxicity Estimate)	
Oral LD50 3,714 mg/kg (mouse)	
CAS: 7789-00-6 Potassium Chromate	
Oral LD50 100 mg/kg (ATE)	

- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

The product can cause inheritable damage.

· Carcinogenic categories

· Carcinogenic categories	
· IARC (International Agency for Research on Cancer)	
CAS: 7789-00-6 Potassium Chromate	1
· NTP (National Toxicology Program)	
CAS: 7789-00-6 Potassium Chromate	K
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

US

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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:

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.

- · 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:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · 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	UN3082
· UN proper shipping name · DOT	Environmentally hazardous substances, liquid, n.o.s. (Potassium
- 1001	Chromate)
· IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Potassium Chromate)

- · Transport hazard class(es)
- · DOT, IMDG



· Class 9 Miscellaneous dangerous substances and articles

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Trade name: Potassium Chromate 5% w/v Indicator Solution

	(Contd. of pag
Label	9
IATA	
1 1 1 2 2 2 2 3 3 3 3 4 3 3 3 3 3 3 3 3 3 3	
Class	9 Miscellaneous dangerous substances and articles
Label	9
Packing group	
DOT, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special marking (IATA):	Symbol (fish and tree)
Special precautions for user	Warning: Miscellaneous dangerous substances and articles
Danger code (Kemler):	90
EMS Number:	F- A , S - F
Stowage Category	A
Transport in bulk according to Annex II MARPOL73/78 and the IBC Code	I of Not applicable.
Transport/Additional information:	
DOT Remarks:	Not regulated
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Remarks:	Not regulated
· IATA	
Remarks:	Not regulated
UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (POTASSIUM CHROMATE), 9, III

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):

CAS: 7789-00-6 Potassium Chromate

· TSCA (Toxic Substances Control Act):

Potassium Chromate

Water

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· TSCA new (21st Century Act) (Substances not listed)

CAS: 7789-00-6 Potassium Chromate

· Proposition 65

· Chemicals known to cause cancer:

CAS: 7789-00-6 Potassium Chromate

· Chemicals known to cause reproductive toxicity for females:

CAS: 7789-00-6 Potassium Chromate

· Chemicals known to cause reproductive toxicity for males:

CAS: 7789-00-6 Potassium Chromate

· Chemicals known to cause developmental toxicity:

CAS: 7789-00-6 Potassium Chromate

· Carcinogenic categories

· EPA (Environmental Protection Agency)

CAS: 7789-00-6 Potassium Chromate

A(inh), D(oral), K/L(inh), CBD(oral)

· TLV (Threshold Limit Value established by ACGIH)

CAS: 7789-00-6 Potassium Chromate

A1

· NIOSH-Ca (National Institute for Occupational Safety and Health)

CAS: 7789-00-6 Potassium Chromate

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





GHS07

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

Potassium Chromate

· Hazard statements

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of water.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Store locked up.

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

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- · National regulations:
- · Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· 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.

- · Department issuing SDS: Environment protection department.
- · Contact:
- · Date of preparation / last revision

Creation date for SDS 06-05-2014. STN

01-09-2018: review SDS for accuracy. STN

01/09/2018 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport 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

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)

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

BEI: Biological Exposure Limit

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 1B: Germ cell mutagenicity - Category 1B

Carc. 1A: Carcinogenicity - Category 1A