

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

1 Identification

- **Product identifier**
- **Trade name:** Sodium Dichromate Dihydrate, Laboratory Grade Granular
- **Article number:** S2838
- **CAS Number:**
7789-12-0
- **EC number:**
234-190-3
- **Index number:**
024-004-01-4
- **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**



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 1B H360 May damage fertility or the unborn child.

STOT SE 1 H370 Causes damage to organs.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 1)



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

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

· **Label elements**

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS03

GHS05

GHS06

GHS08

· **Signal word** *Danger*

· **Hazard statements**

May intensify fire; oxidizer.

Toxic if swallowed.

Harmful in contact with skin.

Fatal if inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

May damage fertility or the unborn child.

Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep away from heat.

Keep/Store away from clothing/combustible materials.

Take any precaution to avoid mixing with combustibles.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

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

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Immediately call a poison center/doctor.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Specific treatment is urgent (see on this label).

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

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 2)

If experiencing respiratory symptoms: Call a poison center/doctor.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7789-12-0 Sodium Dichromate Dihydrate

· **Identification number(s)**

· **EC number:** 234-190-3

· **Index number:** 024-004-01-4

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for 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. Then consult a doctor.*

· **After swallowing:**

Do not induce vomiting; immediately call for medical help.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 3)

- **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**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
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:** 0.43 mg/m³
- **PAC-2:** 7.5 mg/m³
- **PAC-3:** 45 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 4)

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

CAS: 7789-12-0 Sodium Dichromate Dihydrate

PEL	Long-term value: 0.005* mg/m ³ Ceiling limit value: 0.1** mg/m ³ *as Cr(VI) **as CrO ₃ ; see 29 CFR 1910.1026
REL	Long-term value: 0.0002 mg/m ³ as Cr; See Pocket Guide Apps. A and C
TLV	Short-term value: NIC-0.0005* mg/m ³ Long-term value: (0.05) NIC-0.0002* mg/m ³ as Cr; *inhalable, BEI, NIC-Skin, DSEN, RSEN

· **Ingredients with biological limit values:**

CAS: 7789-12-0 Sodium Dichromate Dihydrate

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.
- 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.
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.

· **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.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 5)

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Solid
Color:	Orange
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value:** 4

· **Change in condition**

Melting point/Melting range:	91 °C (195.8 °F)
Boiling point/Boiling range:	400 °C (752 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 2.348 g/cm³ (19.59406 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Not determined.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Other information** No further relevant information available.

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 6)

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:**

Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	1,100 mg/kg (ATE)
Inhalative	LC50/4 h	0.5 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**
- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer) 1**
- **NTP (National Toxicology Program) K**
- **OSHA-Ca (Occupational Safety & Health Administration) Substance is not 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:** Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018



Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 7)

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.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UN3288
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	Toxic solid, inorganic, n.o.s. (Sodium Dichromate Dihydrate) TOXIC SOLID, INORGANIC, N.O.S. (Sodium Dichromate Dihydrate)
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	6.1 Toxic substances 6.1
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	6.1 Toxic substances 6.1
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	III
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	Environmentally hazardous substance, solid No
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category 	Warning: Toxic substances 516 F-A,S-A B
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 8)

<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>500 g Code: E4 Maximum net quantity per inner packaging: 1 g Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3288 TOXIC SOLID, INORGANIC, N.O.S. (SODIUM DICHROMATE DIHYDRATE), 6.1, III</p>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):**
- **TSCA new (21st Century Act) (Substances not listed)**
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is listed.
- **Chemicals known to cause developmental toxicity:** Substance is listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency) A(inh), D(oral), K/L(inh), CBD(oral)**
- **TLV (Threshold Limit Value established by ACGIH) A1**
- **NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is listed.**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard statements**
 - May intensify fire; oxidizer.*
 - Toxic if swallowed.*
 - Harmful in contact with skin.*
 - Fatal if inhaled.*
 - Causes severe skin burns and eye damage.*
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
 - May cause an allergic skin reaction.*
 - May cause genetic defects.*
 - May cause cancer.*
 - May damage fertility or the unborn child.*
 - Causes damage to organs.*
 - Causes damage to organs through prolonged or repeated exposure.*
- **Precautionary statements**
 - Obtain special instructions before use.*
 - Do not handle until all safety precautions have been read and understood.*
 - Keep away from heat.*

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 9)

- Keep/Store away from clothing/combustible materials.
 Take any precaution to avoid mixing with combustibles.
 Do not breathe dusts or mists.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If swallowed: Immediately call a poison center/doctor.
 If swallowed: Rinse mouth. Do NOT induce vomiting.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/attention.
 Call a poison center/doctor if you feel unwell.
 Get medical advice/attention if you feel unwell.
 Specific treatment is urgent (see on this label).
 If skin irritation or rash occurs: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Take off contaminated clothing and wash it before reuse.
 Wash contaminated clothing before reuse.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **National regulations:**
 - **Additional classification according to Decree on Hazardous Materials:**
 Carcinogenic hazardous material group I (extremely dangerous).
 Carcinogenic hazardous material group II (very dangerous).
 Carcinogenic hazardous material group III (dangerous).
 - **Information about limitation of use:**
 Workers are not allowed to be exposed to this hazardous material. 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**
 02-07-2018: review SDS for accuracy. STN
 Creation date for SDS 02-19-2015. STN
 02/07/2018 / -
 - **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

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/07/2018

Reviewed on 02/07/2018

Trade name: Sodium Dichromate Dihydrate, Laboratory Grade Granular

(Contd. of page 10)

EINECS: European Inventory of Existing Commercial 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
BEI: Biological Exposure Limit
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

US