

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/27/2018

Reviewed on 05/27/2018

1 Identification**• Product Identifier****• Trade Name:** Lectroetch Electrolyte D462**• Product Number:** Lectro D462**• Relevant identified uses of the substance or mixture and uses advised against:****• Product Description:**

Electrolytic etching solution for 300 Series Stainless Steel, Black Oxide, Blue Furnace Oxide, Phosphated Steel and other supplemental coatings.

• Application of the substance / the mixture: Etching electrolyte**• Details of the Supplier of the Safety Data Sheet:****• Manufacturer/Supplier:**The Lectroetch Company
5342 Evergreen Parkway
Sheffield Village, OH 44054 USA
Phone: 440-934-1249**• Emergency telephone number:** 440-934-1249**2 Hazard(s) Identification****• Classification of the substance or mixture:**

GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 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:

GHS07 GHS08

• Signal word: Warning**• Hazard-determining components of labeling:**

Sodium Perchlorate

Trade Secret

• Hazard statements:

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

• Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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- P280 Wear eye protection / face protection.
 P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
 P330 Rinse mouth.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P314 Get medical advice/attention if you feel unwell.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.
 13 % of the mixture consists of component(s) of unknown toxicity.

• **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme• **NFPA ratings (scale 0 - 4)**• **HMIS-ratings (scale 0 - 4)**• **Hazard(s) not otherwise classified (HNOC):** None known* **3 Composition/Information on Ingredients**• **Chemical characterization: Mixtures**• **Description:** Mixture of substances listed below with non-hazardous additions.• **Dangerous Components:**

7601-89-0	Sodium Perchlorate	⚠ Ox. Sol. 1, H271; ⚠ Acute Tox. 4, H302	5-10%
	Trade Secret	⚠ Acute Tox. 4, H302; Eye Irrit. 2A, H319	2-12%
	Trade Secret	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	≤2.5%

• **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

* **4 First-Aid Measures**• **Description of first aid measures**• **General information:**

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

• **After inhalation:** This product is not expected to present an inhalation hazard at ambient conditions.• **After skin contact:** Generally the product does not irritate the skin.• **After eye contact:** Rinse opened eye for several minutes under running water.• **After swallowing:** If swallowed and symptoms occur, consult a 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.

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* 5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:**
If incinerated, product may release toxic gases including: Carbon Oxides, Nitrogen Oxides (NOx), Sulfur Oxides, Hydrogen Chloride gas, and Sodium Oxides.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
Mouth respiratory protective device.
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

* 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
- **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:**
7601-89-0 Sodium Perchlorate 6.3 mg/m³
- **PAC-2:**
7601-89-0 Sodium Perchlorate 69 mg/m³
- **PAC-3:**
7601-89-0 Sodium Perchlorate 420 mg/m³

* 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, organic materials, powdered metals and Magnesium.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **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.

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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 occupational exposure limits:**
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 of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- **Material of gloves:** Not applicable.
- **Penetration time of glove material:** Not applicable.
- **Eye protection:**



Goggles recommended during refilling.

* 9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Clear, colorless
Odour:	Slight
Odor threshold:	Not determined.
pH-value @ 20 °C (68 °F):	7.3
- **Change in condition**

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	≥100 °C (≥212 °F)
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.

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- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** 0.0 Vol %
 - Upper:** 0.0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** ≤23 hPa (≤17.3 mm Hg)
- **Density @ 20 °C (68 °F):** 1.1647 g/cm³ (9.7194 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
 - Water:** Fully Soluble
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - Water:** 84.0 %
 - VOC content:** 0.00 %
0.0 g/l / 0.00 lb/gl
- **Solids content:** 14.0 %
- **Other information:** No further relevant information available.

* **10 Stability and Reactivity**

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **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:**
Strong acids, strong bases, strong oxidizing agents, strong reducing agents, organic materials, powdered metals and Magnesium.
- **Hazardous decomposition products:**
Carbon Oxides, Nitrogen Oxides (NOx), Sulfur Oxides, Hydrogen Chloride gas, and Sodium Oxides.

* **11 Toxicological Information**

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Trade Secret
- Oral LD50 1,650 mg/kg (Rat)
- Inhalative LC50/96 hours 3.98 mg/l (Trout)
- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.

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Trade Name: LECTROETCH Electrolyte D462• **Additional toxicological information:**

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

Harmful
Irritant

• **Carcinogenic categories:**• **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

• **NTP (National Toxicology Program):**

None of the ingredients are listed.

• **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

* **12 Ecological Information**• **Toxicity:**• **Aquatic toxicity:**

7601-89-0 Sodium Perchlorate

EC50 >435.7 mg/l (Green algae)

>100 mg/l (Water flea)

• **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:**

Do not allow undiluted product or product that has not been neutralized 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. Observe all federal, state and local environmental regulations when disposing of this material.

• **Uncleaned packaging**• **Recommendation:**

Dispose of packaging according to regulations on the disposal of packagings.
Dispose of as unused product.

14 Transport Information• **UN-Number:**• **DOT, ADR/ADN, ADN, IMDG, IATA**

Non-Regulated Material

• **UN proper shipping name:**• **DOT, ADR/ADN, ADN, IMDG, IATA**

Non-Regulated Material

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- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **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":** Non-Regulated Material

* **15 Regulatory Information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**
- **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.
- **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.
- **TSCA (Toxic Substances Control Act):**
7601-89-0 Sodium Perchlorate
7732-18-5 Water, distilled water, deionized water
- **TSCA new (21st Century Act) (Substances not listed)**
Trade Secret
Trade Secret
- **California Proposition 65:**
- **Chemicals known to cause cancer:**
None of the ingredients are listed.
- **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.
- **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.
- **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.
- **New Jersey Right-to-Know List:**
7601-89-0 Sodium Perchlorate
- **New Jersey Special Hazardous Substance List:**
None of the ingredients are listed.
- **Pennsylvania Right-to-Know List:**
7601-89-0 Sodium Perchlorate
- **Pennsylvania Special Hazardous Substance List:**
None of the ingredients are listed.
- **Carcinogenic categories:**
- **EPA (Environmental Protection Agency):**
7601-89-0 Sodium Perchlorate

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Trade Name: LECTROETCH Electrolyte D462• **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

• **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

• **GHS label elements**

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

• **Hazard pictograms:**

GHS07 GHS08

• **Signal word:** Warning• **Hazard-determining components of labeling:**

Sodium Perchlorate

Trade Secret

• **Hazard statements:**

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

• **Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/attention if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

None of the ingredients are listed.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other Information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision:** 05/27/2018 / 2• **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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

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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 and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Ox. Sol. 1: Oxidizing solids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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

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