

## Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 04/10/2015

Reviewed on 04/10/2015

### 1 Identification

- **Product identifier**
- **Trade name:** Dyna-Clean
- **Article number:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Alkaline cleaner/ detergent
- **Restrictions on use:** See Sections 8 and 10 for further information.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
DYNACCO, INC.  
17461 147th ST SE (Physical)  
PO Box 27 (Mailing)  
Monroe WA 98272 USA  
Tel: 360-794-8974
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924, +1 (813)248-0585

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

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

- **Additional information:**  
There are no other hazards not otherwise classified that have been identified.  
0 percent of the mixture consists of ingredient(s) of unknown toxicity.

- 
- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Potassium hydroxide  
disodium metasilicate

- **Hazard statements**

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

P260 Do not breathe mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection.

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- P264 Wash thoroughly after handling.  
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P363 Wash contaminated clothing before reuse.  
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard description:**
- **WHMIS-symbols:**  
 D2B - Toxic material causing other toxic effects  
 E - Corrosive material



- **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: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

64-02-8	tetrasodium ethylenediaminetetraacetate	5-10%
	Eye Dam. 1, H318 Acute Tox. 4, H302; Acute Tox. 4, H332	

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1310-58-3	Potassium hydroxide  Skin Corr. 1A, H314  Acute Tox. 4, H302	1-5%
6834-92-0	disodium metasilicate  Met. Corr. 1, H290; Skin Corr. 1B, H314  STOT SE 3, H335	1-5%
68610-19-5	poly(oxy-1,2-ethanediyl), a,a'-[[methyl[3-(tridecyloxy)propyl]iminio]di-2, 1-ethanediyl] bis[w-hydroxy-, branched, chlorides  Acute Tox. 3, H301  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	1-5%

· **Additional information:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

## 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.  
Seek immediate medical help for blistering or open wounds.
- **After eye contact:**  
Remove contact lenses if worn, if possible.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
Strong caustic effect on skin and mucous membranes.
- **Danger**  
Danger of gastric perforation.  
Causes serious eye damage.
- **Indication of any immediate medical attention and special treatment needed**  
Medical supervision for at least 48 hours.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

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- **Additional information** No further relevant information available.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Particular danger of slipping on leaked/spilled product.  
Use personal protective equipment as 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 (sand, diatomite, acid binders, universal binders, sawdust).  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Send for recovery or disposal in suitable receptacles.
- **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.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Prevent formation of aerosols.  
Use only in well ventilated areas.  
Avoid splashes or spray in enclosed areas.
- **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:**  
Store only in the original receptacle.  
Unsuitable material for receptacle: aluminium.  
Unsuitable material for receptacle: steel.  
Unsuitable material for receptacle: glass or ceramic.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with acids.
- **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:**

**1310-58-3 Potassium hydroxide**

REL (USA)	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV (USA)	Ceiling limit value: 2 mg/m <sup>3</sup>
EL (Canada)	Ceiling limit value: 2 mg/m <sup>3</sup>
EV (Canada)	Ceiling limit value: 2 mg/m <sup>3</sup>
LMPE (Mexico)	Ceiling limit value: 2 mg/m <sup>3</sup>

**67-63-0 propan-2-ol**

REL (USA)	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL (USA)	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV (USA)	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm BEI
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

- **Ingredients with biological limit values:**

**67-63-0 propan-2-ol**

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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- **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.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

- **Engineering controls:** No further relevant information available.

- **Breathing equipment:**

Not required under normal conditions of use.  
Use suitable respiratory protective device when aerosol or mist is formed.  
For spills, respiratory protection may be advisable.

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- **Protection of hands:**



Protective gloves

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

Contact lenses should not be worn.



Safety glasses

- **Body protection:** Alkaline resistant protective clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

## 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

**Form:**

Liquid

**Color:**

Violet

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

**Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

&gt; 100 °C (&gt; 212 °F)

- **Flash point:**

Not applicable.

- **Flammability (solid, gaseous):**

Not applicable.

- **Auto-ignition temperature:**

Not determined.

- **Decomposition temperature:**

Not determined.

- **Auto igniting:**

Product is not self-igniting.

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- **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 mm Hg)
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Strong exothermic reaction with acids. Corrosive action on metals.
- **Conditions to avoid** Avoid acids.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**1310-58-3 Potassium hydroxide**

Oral	LD50	273 mg/kg (rat)
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- **Primary irritant effect:**
  - **on the skin:** Caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** No further relevant information available.

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- **Additional toxicological information:**

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Probable Routes of Exposure**

Inhalation.

Eye contact.

Skin contact.

Ingestion.

- **Repeated Dose Toxicity:** No further relevant information available.

### 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:**

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

- **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.

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Waste disposal key:** EPA RCRA Code (USA) : D002 Corrosive Waste .

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agent:** Water, if necessary with cleansing agents. (Contd. of page 8)

## 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1814
- **UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

- **DOT** Potassium hydroxide, solution
- **ADR** 1814 POTASSIUM HYDROXIDE SOLUTION
- **IMDG** POTASSIUM HYDROXIDE SOLUTION
- **IATA** Potassium hydroxide solution
- **Transport hazard class(es)**

- **DOT**



- **Class** 8 Corrosive substances
- **Label** 8

- **ADR**



- **Class** 8 (C5) Corrosive substances
- **Label** 8

- **IMDG, IATA**



- **Class** 8 Corrosive substances
- **Label** 8
- **Packing group**
- **DOT, ADR, IMDG, IATA** III
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Warning: Corrosive substances
- **Danger code (Kemler):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups** Alkalis

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- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **DOT**
- **Quantity limitations** On passenger aircraft/rail: 5 L  
On cargo aircraft only: 60 L

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- **ADR**
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

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- **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
- **UN "Model Regulation":** UN1814, Potassium hydroxide, solution, 8, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

139-13-9 | nitrilotriacetic acid

- **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 is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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· **IARC (International Agency for Research on Cancer)**

67-63-0 | propan-2-ol

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· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 | propan-2-ol

A4

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

None of the ingredients is listed.

· **State Right to Know Listings**

None of the ingredients is listed.

· **Canadian substance listings:**· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

1310-58-3 | Potassium hydroxide

6834-92-0 | disodium metasilicate

· **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **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.

· **Date of preparation / last revision** 04/10/2015 / -

· **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)

HMS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

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Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

**Sources**

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: [www.chemtelinc.com](http://www.chemtelinc.com)