

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 10/28/2016

Version: 1.0

### SECTION 1: Identification

#### 1.1. Product identifier

Product form : Mixture  
Product name : H/D Dryflow Cleaner  
Product code : 99-0638  
Product group : Trade product

#### 1.2. Recommended use and restrictions on use

Recommended use : Industrial use

#### 1.3. Supplier

K&N Engineering, Inc.  
P.O. Box 1329  
92502-1329 Riverside, CA - USA  
T (800) 858-3333 - F (951) 826-4001

#### 1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300 / +1 (703) 527-3887 (CCN 632715)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-CA)

Skin corrosion/irritation, H314  
Category 1A  
Serious eye damage/eye irritation, H318  
Category 1

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-CA labelling

Hazard pictograms (GHS-CA)



GHS05

Signal word (GHS-CA)

: Danger

Hazard statements (GHS-CA)

: H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage

Precautionary statements (GHS-CA)

: P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P264 - Wash hands, forearms and face thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
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 or doctor  
P321 - Specific treatment (see Labelling on this label)  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/container to an approved waste disposal plant

#### 2.3. Other hazards

Other hazards not contributing to the classification

: None.

#### 2.4. Unknown acute toxicity (GHS-CA)

No data available

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS-CA)
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt	Dodecyloxypoly(ethyleneoxy) ethyl sulfate, sodium salt / Sodium lauryl ether sulfate / Sodium lauryl ether sulphate / Dodecanol, ethoxylated, monoether with sulfuric acid, sodium salt / Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecanoxy)-, sodium salt / SODIUM LAURETH SULFATE / Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (1:1) / Sodium polyethoxyethyl dodecylsulfate / Sodium laureth sulfate / Sodium dodecylpoly(oxyethylene) sulfate / SODIUM LAURETH-40 SULFATE / Sodium polyoxyethylene lauryl ether sulfate / .alpha.-Sulfo-.omega.-(dodecyloxy)poly(oxyethylene) sodium salt	(CAS No) 9004-82-4	1 - 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
Ethylenediaminetetraacetic acid	Acetic acid, (ethylenedinitrilo)tetra- / 3,6-Diazaoctanedioic acid, 3,6-bis(carboxymethyl)- / Edetic acid / EDTA / N,N'-1,2-Ethanediylbis(N-(carboxymethyl)glycine) / Ethylenediamine-N,N,N',N'-tetraacetic acid / Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- / Versene / Glycine, N,N'-1,2-ethanediylbis(N-(carboxymethyl)- / N,N'-Ethane-1,2-diylbis[N-(carboxymethyl)glycine]	(CAS No) 60-00-4	0.1 - 1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Immediately remove contaminated clothing or footwear. Call a physician immediately. Seek medical attention if burns develop. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. Consult an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.
First-aid measures general	: Call a physician immediately. If you feel unwell, seek medical advice (show the label where possible). Concerning personal protective equipment to use, see section 8.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.
Symptoms/injuries after ingestion	: Burns.
Chronic symptoms	: None known.

#### 4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: Not applicable.
-----------------------------------	-------------------

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
------------------------------	--

#### 5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	: None known.
--------------------------------	---------------

#### 5.3. Specific hazards arising from the hazardous product

No additional information available

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### 5.4. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.  
Personal Precautions, Protective Equipment and Emergency Procedures : Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer). Evacuate unnecessary personnel. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Methods and materials for containment and cleaning up

For containment : Do not allow to enter into surface water or drains.  
Methods for cleaning up : In case of large spillages: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Shovel or sweep up and put in a closed container for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.  
Hygiene measures : Separate working clothes from town clothes. Wash contaminated clothing before reuse. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.  
Incompatible products : Strong acids. Strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

### 8.3. Individual protection measures/Personal protective equipment

Hand protection : Chemically resistant protective gloves.  
Eye protection : Chemical goggles or safety glasses. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.  
Thermal hazard protection : Not available.  
Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Clear, colorless liquid.  
Colour : Colourless  
Odour : characteristic  
Odour threshold : No data available  
pH : 12 - 13  
pH solution : No data available  
Relative evaporation rate (butylacetate=1) : No data available  
Relative evaporation rate (ether=1) : No data available  
Melting point : Not applicable

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Soluble.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Oxidizing agents and reducing agents.
Incompatible materials	: Acids. Bases. Oxidizing agent.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and CO <sub>2</sub> ).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)

LD50 oral rat	1600 mg/kg
---------------	------------

#### Ethylenediaminetetraacetic acid (60-00-4)

LD50 oral rat	1700 mg/kg
---------------	------------

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 12 - 13
Serious eye damage/irritation	: Causes serious eye damage. pH: 12 - 13
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

##### Ethylenediaminetetraacetic acid (60-00-4)

LC50 fish 1	34 - 62 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish 2	44.2 - 76.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	113 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

#### 12.2. Persistence and degradability

##### H/D Dryflow Cleaner

Persistence and degradability	Not established.
-------------------------------	------------------

#### 12.3. Bioaccumulative potential

##### H/D Dryflow Cleaner

Bioaccumulative potential	Not established.
---------------------------	------------------

#### 12.4. Mobility in soil

##### H/D Dryflow Cleaner

Ecology - soil	Not established.
----------------	------------------

#### 12.5. Other adverse effects

Effect on the global warming : Not established.

GWPmix comment : No known effects from this product.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Do not allow into drains or water courses.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

### SECTION 14: Transport information

#### 14.1. Basic shipping description

In accordance with TDG

##### TDG

UN-No. (TDG)	: UN1760
Packing group	: III - Minor Danger
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
Transport document description	: UN1760 CORROSIVE LIQUID, N.O.S., 8, III
Proper Shipping Name (TDG)	: CORROSIVE LIQUID, N.O.S.

Hazard labels (TDG) : 8 - Corrosive substances



# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

**TDG Special Provisions** : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306

**Explosive Limit and Limited Quantity Index** : 5 L

**Excepted quantities (TDG)** : E1

**Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index** : 5 L

### 14.2. Transport information/DOT

#### DOT

**DOT NA no.** : UN1760  
**UN-No.(DOT)** : 1760  
**Packing group (DOT)** : III - Minor Danger  
**DOT Symbols** : G - Identifies PSN requiring a technical name

**Transport document description** : UN1760 Corrosive liquids, n.o.s., 8, III  
**Proper Shipping Name (DOT)** : Corrosive liquids, n.o.s.  
**Contains Statement Field Selection (DOT)** :

**Class (DOT)** : 8 - Class 8 - Corrosive material 49 CFR 173.136  
**Division (DOT)** : 8  
**Hazard labels (DOT)** : 8 - Corrosive



**Dangerous for the environment** : No

**DOT Special Provisions (49 CFR 172.102)** : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / (1 + a (tr - tf))$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling  
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP

**DOT Packaging Exceptions (49 CFR 173.xxx)** : 154  
**DOT Packaging Non Bulk (49 CFR 173.xxx)** : 203  
**DOT Packaging Bulk (49 CFR 173.xxx)** : 241  
**DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)** : 5 L  
**DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)** : 60 L

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 154
Other information	: No supplementary information available.

### 14.3. Air and sea transport

#### IMDG

UN-No. (IMDG)	: 1760
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, N.O.S.
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: III - substances presenting low danger

#### IATA

UN-No. (IATA)	: 1760
Proper Shipping Name (IATA)	: Corrosive liquid, n.o.s.
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. National regulations

#### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Ethylenediaminetetraacetic acid (60-00-4)

Listed on the Canadian DSL (Domestic Substances List)

### 15.2. International regulations

#### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9004-82-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on CICC (Turkish Inventory and Control of Chemicals)

#### Trisodium citrate dihydrate (6132-04-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

#### Ethylenediaminetetraacetic acid (60-00-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICC (Turkish Inventory and Control of Chemicals)

## SECTION 16: Other information

Date of issue : 28/10/2016

Full text of H-statements:

H302

Harmful if swallowed

# H/D Dryflow Cleaner

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation

SDS Canada (GHS)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*