		Page: 1
<b>SAFETY DATA SHEET</b>		Revision Date: 05/22/2017
		Print Date: 6/2/2017
		SDS Number: R0296911
Zerex™ SUPER FLUSH		Version: 1.2
ZXC01		

29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**

Trade name : Zerex™  
SUPER FLUSH


<p><b>Details of the supplier of the safety data sheet</b> Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL</p>	<p><b>Emergency telephone number</b> 1-800-VALVOLINE (1-800-825-8654)</p> <p><b>Regulatory Information Number</b> 1-800-TEAMVAL</p> <p><b>Product Information</b> 1-800-TEAMVAL</p>
---	---

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification**

Specific target organ systemic toxicity - repeated exposure (Inhalation) : Category 2 (Respiratory Tract)

**GHS label elements**

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary Statements : **Prevention:**  
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
**Response:**  
Get medical advice/ attention if you feel unwell.  
**Disposal:**  
Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT	64-02-8	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Irrit. 2A; H319 STOT RE 2; H373	6.1127

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:



<b>SAFETY DATA SHEET</b>	Revision Date: 05/22/2017
	Print Date: 6/2/2017
	SDS Number: R0296911
Zerex™ SUPER FLUSH ZXC01	Version: 1.2

stomach or intestinal upset (nausea, vomiting, diarrhea)  
 irritation (nose, throat, airways)  
 Cough  
 lung edema (fluid buildup in the lung tissue)  
 Difficulty in breathing

Notes to physician : No hazards which require special first aid measures.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
 Water spray  
 Foam  
 Carbon dioxide (CO2)  
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Ammonia  
 toxic fumes  
 Nitrogen oxides (NOx)  
 carbon dioxide and carbon monoxide
- Specific extinguishing methods :  
  
 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.  
 Prevent further leakage or spillage if safe to do so.  
 If the product contaminates rivers and lakes or drains inform

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

respective authorities.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

**SECTION 7. HANDLING AND STORAGE**

Advice on safe handling : Do not breathe vapours/dust.  
Do not smoke.  
Container hazardous when empty.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Hazardous components without workplace control parameters**

Components	CAS-No.
ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT	64-02-8

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

Skin and body protection : Wear as appropriate:  
 Impervious clothing  
 Safety shoes  
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH : Average 9.0

Melting point/freezing point : No data available

Boiling point/boiling range : 212 °F / 100 °C  
 (1,013.333333 hPa)  
 Calculated Phase Transition Liquid/Gas

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : 23.3333333 hPa (20 °C)  
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 1.045 g/cm3

Solubility(ies)  
 Water solubility : No data available

Solubility in other solvents : No data available

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Version: 1.2

Zerex™ SUPER FLUSH

ZXC01

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity  
Viscosity, dynamic : No data available

Viscosity, kinematic :  
No data available

Oxidizing properties : No data available

---

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : aluminum  
Copper  
Copper alloys  
Nickel  
Oxidizing agents  
reactive metals such as aluminum and magnesium  
steel  
Strong bases  
strong mineral acids  
Zinc

Hazardous decomposition products : carbon dioxide and carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)  
toxic fumes  
Ammonia

---

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

## Ingestion

**Acute toxicity**

Not classified based on available information.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Acute oral toxicity : LD50 (Rat, Female): 1,780 mg/kg

Acute inhalation toxicity : LC50 (Rat): &gt; 1 - 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit): &gt; 5,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Species: Rabbit

Result: No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Remarks: Unlikely to cause eye irritation or injury.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Result: Severely irritating to eyes

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

## Germ cell mutagenicity

Not classified based on available information.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Genotoxicity in vitro : Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Exposure routes: Inhalation

Target Organs: Respiratory Tract

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

Remarks: No data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Toxicity to fish : LC50 (Bluegill (Lepomis macrochirus)): 792 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 140 mg/l  
Exposure time: 48 h  
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Method: Directive 67/548/EEC, Annex V, C.3.

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): >= 25.7 mg/l  
Exposure time: 35 d  
Test Type: flow-through test



**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

Method: OECD Test Guideline 210

Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 25 mg/l  
 Exposure time: 21 d  
 Test Type: semi-static test

Remarks: Information given is based on data obtained from similar substances.

**Persistence and degradability**

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: < 10 %

Exposure time: 28 d

Method: OECD Test Guideline 301E

Biodegradation: 90 - 100 %

Exposure time: 72 d

Method: OECD Test Guideline 301E

No data available

**Bioaccumulative potential**

**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Partition coefficient: n-octanol/water : log Pow: < 3

No data available

**Mobility in soil**

**Components:**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

**Components:**

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Send to a licensed waste management company.



**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Zerex™ SUPER FLUSH

Version: 1.2

ZXC01

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION**

**International transport regulations**

**REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
-----------	----------------------	---------------	--------------------	---------------	------------------------------

**U.S. DOT - ROAD**

Not dangerous goods
---------------------

**CFR\_RAIL\_C**

Not dangerous goods
---------------------

**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods
---------------------

**TDG\_ROAD\_C**

Not dangerous goods
---------------------

**TDG\_RAIL\_C**

Not dangerous goods
---------------------

**TDG\_INWT\_C**

Not dangerous goods
---------------------

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods
---------------------

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods
---------------------



**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Version: 1.2

Zerex™ SUPER FLUSH

ZXC01

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods

**MX\_DG**

Not dangerous goods

**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**SECTION 15. REGULATORY INFORMATION**

**EPCRA - Emergency Planning and Community Right-to-Know Act  
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SODIUM HYDROXIDE	1310-73-2	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Chronic Health Hazard

**SARA 313** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** Proposition 65 warnings are not required for this product based on the results of a risk assessment.

**The components of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL


AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

		Page: 12
<b>SAFETY DATA SHEET</b>		Revision Date: 05/22/2017
		Print Date: 6/2/2017
		SDS Number: R0296911
Zerex™ SUPER FLUSH		Version: 1.2
ZXC01		

TSCA : On TSCA Inventory

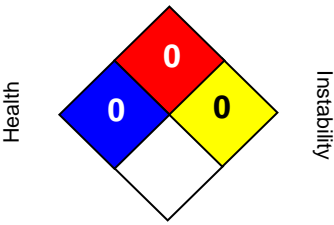
**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date: 05/22/2017

<p><b>NFPA:</b></p> <div style="text-align: center;"> <p>Flammability</p>  <p>Health                      Instability</p> <p>Special hazard.</p> </div>	<p><b>HMIS III:</b></p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;"><b>HEALTH</b></td> <td style="text-align: center;"><b>0*</b></td> </tr> <tr> <td style="background-color: red; color: white;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td style="background-color: yellow; color: black;"><b>PHYSICAL HAZARD</b></td> <td style="text-align: center;"><b>0</b></td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>0*</b>	<b>FLAMMABILITY</b>	<b>0</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>0*</b>						
<b>FLAMMABILITY</b>	<b>0</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

**NFPA Flammable and Combustible Liquids Classification**

Not applicable


**Full text of H-Statements**

- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

		Page: 13
<b>SAFETY DATA SHEET</b>		Revision Date: 05/22/2017
		Print Date: 6/2/2017
		SDS Number: R0296911
Zerex™ SUPER FLUSH		Version: 1.2
ZXC01		

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists  
 BEI : Biological Exposure Index  
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).  
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction  
 FG : Food grade  
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.  
 H-statement : Hazard Statement  
 IATA : International Air Transport Association.  
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization  
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"  
 IMDG : International Maritime Code for Dangerous Goods  
 ISO : International Organization for Standardization  
 logPow : octanol-water partition coefficient  
 LCxx : Lethal Concentration, for xx percent of test population  
 LDxx : Lethal Dose, for xx percent of test population.  
 ICxx : Inhibitory Concentration for xx of a substance  
 Ecxx : Effective Concentration of xx  
 N.O.S.: Not Otherwise Specified  
 OECD : Organization for Economic Co-operation and Development  
 OEL : Occupational Exposure Limit  
 P-Statement : Precautionary Statement  
 PBT : Persistent , Bioaccumulative and Toxic  
 PPE : Personal Protective Equipment  
 STEL : Short-term exposure limit  
 STOT : Specific Target Organ Toxicity  
 TLV : Threshold Limit Value  
 TWA : Time-weighted average  
 vPvB : Very Persistent and Very Bioaccumulative  
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act  
 DOT : Department of Transportation  
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act  
 HMIRC : Hazardous Materials Information Review Commission  
 HMIS : Hazardous Materials Identification System  
 NFPA : National Fire Protection Association  
 NIOSH : National Institute for Occupational Safety and Health  
 OSHA : Occupational Safety and Health Administration  
 PMRA : Health Canada Pest Management Regulatory Agency  
 RTK : Right to Know  
 WHMIS : Workplace Hazardous Materials Information System



**SAFETY DATA SHEET**

Revision Date: 05/22/2017

Print Date: 6/2/2017

SDS Number: R0296911

Version: 1.2

Zerex™ SUPER FLUSH

ZXC01