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Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Name** HD DISHMACHINE DETERGENT**Other means of identification****Product Code** 149HDD
UN/ID No. NA1760
Synonyms None**Recommended use of the chemical and restrictions on use****Recommended Use** Chlorinated dishmachine detergent.
Uses advised against No information available**Manufacturer Address**

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation | Category 1 Sub-category A |
| Serious eye damage/eye irritation | Category 1 |
| Corrosive to metals | Category 1 |

Label elements**Emergency Overview****Danger****Hazard statements**Causes severe skin burns and eye damage
May be corrosive to metals**Appearance** No information available**Physical state** liquid**Odor** Slight chlorine**Precautionary Statements - Prevention**Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see Section 4 on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in a corrosive resistant container.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

- Very toxic to aquatic life with long lasting effects

- Very toxic to aquatic life

Unknown Acute Toxicity 4.4% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|---------------------|-----------|----------|--------------|
| Sodium hydroxide | 1310-73-2 | 13 | |
| Sodium hypochlorite | 7681-52-9 | 2.6 | |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures**

| | |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice | Immediate medical attention is required. |
| Eye contact | Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention. |
| Skin Contact | Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse. |
| Inhalation | Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. |
| Ingestion | Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person. |

Most important symptoms and effects, both acute and delayed

| | |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms | Corrosive. Causes irritation (possibly severe), burns to the eyes. May cause permanent eye damage. Causes irritation (possibly severe), burns to the skin. Causes irritation (possibly severe), burns, pulmonary edema to the respiratory tract. Causes irritation (possibly severe), burns, nausea, vomiting to the gastrointestinal tract. The severity of effects depend on concentration and how soon after exposure the area is washed. |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available. None known.

Specific hazards arising from the chemical

If the stock solution container breaks, the solution should be handled with care as it is corrosive. Direct contact with water can cause a violent exothermic reaction. The product causes burns of eyes, skin and mucous membranes. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products Toxic fumes of sodium oxide.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool fire exposed containers. Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

See Section 12 for additional ecological information. Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for containment

Completely contain spilled material with dikes or sand bags, etc.

Methods for cleaning up

Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed and properly labeled. Containers that have been emptied will retain product residue and should be handled as if they were full. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas can be generated.

Incompatible materials Acids, ammonia, ether, halogenated compounds, oxidizing agents, reducing agents, oxidizable or combustible materials such as wood, cloth or organic materials, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys. Avoid contact with heavy metal such as iron, magnesium, aluminum, manganese, chromium, nickel and their alloys. Avoid contact with leather, wool, organic nitro compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------------|------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| Sodium hydroxide 1310-73-2 | Ceiling: 2 mg/m ³ | TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³ | IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³ |

Appropriate engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Tight sealing safety goggles.
- Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|--------------------------------------|--------------------------|-------------------------|--------------------------|
| Physical state | liquid | Odor | Slight chlorine |
| Appearance | No information available | Odor threshold | No information available |
| Color | clear light yellow | | |
| Property | Values | Remarks • Method | |
| pH | 12.15, 1% solution | | |
| Melting point/freezing point | No information available | | |
| Boiling point / boiling range | No information available | | |
| Flash point | Not applicable | | |
| Evaporation rate | No information available | | |

| | |
|-------------------------------------|--------------------------|
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Specific Gravity | 1.212 |
| Water solubility | Soluble in water |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |

Other Information

| | |
|-------------------------|--------------------------|
| Softening point | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | No information available |

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| 10. STABILITY AND REACTIVITY |
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Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Will react with some metals forming flammable hydrogen gas. Will react with acids to produce chlorine gas.

Incompatible materials

Acids, ammonia, ether, halogenated compounds, oxidizing agents, reducing agents, oxidizable or combustible materials such as wood, cloth or organic materials, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys. Avoid contact with heavy metal such as iron, magnesium, aluminum, manganese, chromium, nickel and their alloys. Avoid contact with leather, wool, organic nitro compounds.

Hazardous Decomposition Products

Toxic fumes of sodium oxide.

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|--------------------------------------|
| 11. TOXICOLOGICAL INFORMATION |
|--------------------------------------|

Information on likely routes of exposure

| | |
|----------------------------|-----------------------------------------------------------|
| Product Information | No data available |
| Inhalation | May cause irritation of respiratory tract. |
| Eye contact | Severely irritating to eyes. May cause burns. |
| Skin Contact | Contact causes severe skin irritation and possible burns. |
| Ingestion | Harmful if swallowed. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------------|----------------------|--------------------------|-----------------|
| Sodium hydroxide 1310-73-2 | - | = 1350 mg/kg (Rabbit) | - |
| Sodium hypochlorite 7681-52-9 | = 8200 mg/kg (Rat) | > 10000 mg/kg (Rabbit) | - |

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------------------------|-------|---------|-----|------|
| Sodium hypochlorite 7681-52-9 | - | Group 3 | - | - |

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 4.4% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (dermal) 10112 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

4.4% of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|----------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Sodium hydroxide 1310-73-2 | - | 45.4: 96 h Oncorhynchus mykiss mg/L LC50 static | - |
| Sodium hypochlorite 7681-52-9 | 0.095: 24 h Skeletonema costatum mg/L EC50 | 0.06 - 0.11: 96 h Pimephales promelas mg/L LC50 flow-through 4.5 - 7.6: 96 h Pimephales promelas mg/L LC50 static 0.4 - 0.8: 96 h Lepomis macrochirus mg/L LC50 static 0.28 - 1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.05 - 0.771: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.03 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.18 - 0.22: 96 h Oncorhynchus mykiss mg/L LC50 static | 2.1: 96 h Daphnia magna mg/L EC50 0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

| Chemical Name | California Hazardous Waste Status |
|-------------------------------|-----------------------------------|
| Sodium hydroxide 1310-73-2 | Toxic Corrosive |

14. TRANSPORT INFORMATION

DOT Regulated

UN/ID No. NA1760

Proper shipping name Compounds, Cleaning Liquid
(Sodium Hydroxide/Sodium Hypochlorite)

Hazardous ingredients

Hazard Class 8

Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL/NDSL Complies

EINECS/ELINCS Complies

ENCS Does not comply

IECSC Complies

KECL Complies

PICCS Complies

AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard Yes

Chronic Health Hazard No

Fire hazard No
 Sudden release of pressure hazard No
 Reactive Hazard Yes

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Sodium hydroxide 1310-73-2 | 1000 lb | - | - | X |
| Sodium hypochlorite 7681-52-9 | 100 lb | - | - | X |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|----------------------------------|--------------------------|----------------|-------------------------------------------|
| Sodium hydroxide 1310-73-2 | 1000 lb | - | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Sodium hypochlorite 7681-52-9 | 100 lb | - | RQ 100 lb final RQ RQ 45.4 kg final RQ |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------------|------------|---------------|--------------|
| Sodium hydroxide 1310-73-2 | X | X | X |
| Sodium hypochlorite 7681-52-9 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA Health hazards 3 Flammability 0 Instability 1 Physical and Chemical Properties -
HMIS Health hazards 3 Flammability 0 Physical hazards 1 Personal protection X

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Revision Note
 No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet