

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/07/2014

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : ADVANTAGE  
Product code : WA-ADV  
Other means of identification : All Temp Auto Dish Detergent

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Institutional Auto Dish Detergent

#### 1.3. Details of the supplier of the safety data sheet

WATERMark Solutions  
3637 W. Roanoke, Ste. 8  
Phoenix, AZ 85009 - USA  
T (623) 326-7945

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300

### SECTION 2: Hazards identification

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

##### GHS-US classification

Acute Tox. 4 (Oral) H302  
Skin Corr. 1A H314  
Aquatic Acute 3 H402

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) :

**Danger**

Hazard statements (GHS-US) :

Harmful if swallowed  
Causes severe skin burns and eye damage  
Harmful to aquatic life

Precautionary statements (GHS-US)

Prevention

: Do not breathe fume, gas, mist, spray, vapours  
Wash hands, face, exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Avoid release to the environment  
Wear eye protection, face protection, protective clothing, protective gloves

Response

: IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing  
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 swallowed, rinse mouth  
Wash contaminated clothing before reuse

Storage

: Store locked up

Disposal

: Dispose of contents/container to comply with local/state/federal regulations.

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.3. Other hazards

No additional information available

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

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Sodium hydroxide	(CAS No) 1310-73-2	10 - 20	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Aquatic Acute 3, H402
Potassium hydroxide	(CAS No) 1310-58-3	10 - 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Aquatic Acute 3, H402
Etidronic acid	(CAS No) 2809-21-4	3 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
Tetrasodium ethylenediaminetetraacetate	(CAS No) 64-02-8	1 - 3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Dam. 1, H318

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Reactivity	: Thermal decomposition generates: Corrosive vapours.
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### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume/gas/mist/spray/vapours. Avoid contact during pregnancy/while nursing.  
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed skin thoroughly after handling.

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

Technical measures : Comply with applicable regulations.  
Storage conditions : Keep only in the original container in a cool, well ventilated place away from: Direct sunlight., Heat sources. Keep container closed when not in use.  
Incompatible products : Strong acids. Oxidizing agents. Strong bases.  
Incompatible materials : Thermal decomposition generates: Corrosive vapours, Hydrogen chloride, Phosphines, Phosgene, Potassium oxide, Sodium oxide, Nitrogen oxides, Carbon dioxide, Carbon monoxide. Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	Remark (ACGIH)	URT, eye, & skin irr

Sodium hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	Remark (ACGIH)	URT, eye, & skin irr

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.  
Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or face shield.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : Wear appropriate mask.  
Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : Clear, red liquid  
Colour : Red  
Odour : Characteristic  
Odour threshold : No data available

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

pH	: > 12.5
pH solution	: 1 %
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
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)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.28 - 1.29
Density	: 10.72 lbs/gal
Solubility	: Soluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 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

Thermal decomposition generates: Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Oxidizing agents.

### 10.6. Hazardous decomposition products

Thermal decomposition generates: Corrosive vapours. Hydrogen chloride. Phosphines. Phosgene. Potassium oxide. Sodium oxide. Nitrogen oxides. Carbon dioxide. Carbon monoxide. Fume.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

<b>Potassium hydroxide (1310-58-3)</b>	
LD50 oral rat	333 mg/kg (Rat; Experimental value,Rat; Experimental value)
ATE (oral)	333.000 mg/kg bodyweight

  

<b>Tetrasodium ethylenediaminetetraacetate (64-02-8)</b>	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	4.14 mg/l/4h Dust
ATE (oral)	500.000 mg/kg bodyweight

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Sodium hydroxide (1310-73-2)</b>	
LD50 oral rat	100 mg/kg
LD50 dermal rabbit	1350 mg/kg (Rabbit; Literature,Rabbit; Literature)

<b>Etidronic acid (2809-21-4)</b>	
LD50 oral rat	> 1878 mg/kg (Rat; Calculated value,Rat; Calculated value)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

<b>Phosphonic acid (13598-36-2)</b>	
LD50 oral rat	1500 mg/kg (Rat)

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: > 12.5
Serious eye damage/irritation	: Not classified pH: > 12.5
Respiratory or skin sensitisation	: 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
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Harmful to aquatic life.

<b>Potassium hydroxide (1310-58-3)</b>	
LC50 fishes 1	> 28.6 mg/l (96 h; Pisces; Lethal)
LC50 fish 2	80 mg/l (Gambusia affinis)
TLM fish 1	80 ppm (24 h; Gambusia affinis)

<b>Tetrasodium ethylenediaminetetraacetate (64-02-8)</b>	
LC50 fishes 1	121 mg/l (96 h; Lepomis macrochirus; Soft water)
EC50 Daphnia 1	625 mg/l (24 h; Daphnia magna)
LC50 fish 2	374 - 792 mg/l (96 h; Lepomis macrochirus; pH > 7)
Threshold limit algae 1	> 100 mg/l (72 h; Scenedesmus subspicatus; Growth)

<b>Sodium hydroxide (1310-73-2)</b>	
LC50 fishes 1	45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
EC50 Daphnia 1	40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration)
LC50 fish 2	189 mg/l (48 h; Leuciscus idus)
TLM fish 1	99 mg/l (48 h; Lepomis macrochirus)
TLM fish 2	125 ppm (96 h; Gambusia affinis)

<b>Etidronic acid (2809-21-4)</b>	
LC50 fishes 1	368 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	527 mg/l (48 h; Daphnia magna)
LC50 fish 2	868 mg/l (96 h; Lepomis macrochirus)
Threshold limit algae 1	13 mg/l (336 h; Selenastrum capricornutum)
Threshold limit algae 2	3.5-12,96 h; Pseudokirchneriella subcapitata

<b>Phosphonic acid (13598-36-2)</b>	
LC50 fishes 1	> 9784 mg/l (48 h; Brachydanio rerio)

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 12.2. Persistence and degradability

ADVANTAGE	
Persistence and degradability	Not established.

Potassium hydroxide (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	< 0.002 g O <sup>2</sup> /g substance
Chemical oxygen demand (COD)	0.54 - 0.58 g O <sup>2</sup> /g substance

Sodium hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Etidronic acid (2809-21-4)	
Persistence and degradability	Not readily biodegradable in water. No straightforward conclusion can be drawn based upon the available numerical values.
Chemical oxygen demand (COD)	0.00026 g O <sup>2</sup> /g substance

Phosphonic acid (13598-36-2)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

Potassium hydroxide (1310-58-3)	
Bioaccumulative potential	Bioaccumulation: not applicable.

Tetrasodium ethylenediaminetetraacetate (64-02-8)	
Log Pow	-2.6
Bioaccumulative potential	Bioaccumulation: not applicable.

Sodium hydroxide (1310-73-2)	
Bioaccumulative potential	Bioaccumulation: not applicable.

Etidronic acid (2809-21-4)	
BCF fish 1	71 (Cyprinus carpio)
BCF fish 2	18 (Brachydanio rerio; Test duration: 6 weeks)
Log Pow	-0.81 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Phosphonic acid (13598-36-2)	
Bioaccumulative potential	No bioaccumulation data available.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT

- Transport document description : UN3266 Corrosive liquid, basic, inorganic, n.o.s. (Sodium Hydroxide, Potassium Hydroxide), 8, II
- UN-No.(DOT) : 3266
- DOT NA no. : UN3266
- DOT Proper Shipping Name : Corrosive liquid, basic, inorganic, n.o.s.  
(Sodium Hydroxide, Potassium Hydroxide)
- Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Hazard labels (DOT) : 8 - Corrosive



- DOT Symbols : G - Identifies PSN requiring a technical name
- Packing group (DOT) : II - Medium Danger
- DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.  
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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.  
T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 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) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
- DOT Vessel Stowage Other : 40 - Stow "clear of living quarters", 52 - Stow "separated from" acids

#### Additional information

- Other information : No supplementary information available.

#### ADR

- Transport document description :

# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Potassium hydroxide (1310-58-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
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#### Tetrasodium ethylenediaminetetraacetate (64-02-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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#### Sodium hydroxide (1310-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
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#### Etidronic acid (2809-21-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Phosphonic acid (13598-36-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

#### Potassium hydroxide (1310-58-3)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### Sodium hydroxide (1310-73-2)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### Phosphonic acid (13598-36-2)

U.S. - New Jersey - Right to Know Hazardous Substance List



# ADVANTAGE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H301	Toxic if swallowed
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012) - Custom

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