



# Safety Data Sheet

Preparation Date 07-Apr-2015

Revision date 11-Dec-2015

Revision Number: 1

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Product identifier

**Product Description:** FRUIT & VEGETABLE KLEEN® 451

### Other means of identification

**Item#:** 24-451  
**UN-No** 1824  
**Synonyms** Not Available

### Recommended use of the chemical and restrictions on use

**Recommended use** Alkaline cleaner.  
**Uses advised against** Activities contrary to label recommendation

### Details of the Supplier of the Safety Data Sheet

#### Manufacturer Address

**DECCO**  
Decco U.S. Post Harvest, Inc.  
1713 S. California Ave.  
Monrovia, CA 91016-0120

#### Emergency telephone number

**Company Phone Number** 626-358-1838  
8:00 am - 5:00 pm (PST)  
**Emergency telephone number** Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 673-6671 (24hrs)

## 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
Serious eye damage/eye irritation	Category 1

### Label elements

#### EMERGENCY OVERVIEW

**DANGER**

#### hazard statements

Causes severe skin burns and eye damage



**appearance** clear light brown

**Physical state** liquid

**Odor** No information available

### 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

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician  
 IF IN EYES: Rinse continuously 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

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC)****OTHER INFORMATION**

- Harmful to aquatic life with long lasting effects

### 3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Sodium hydroxide	1310-73-2	1-20	
Ethylene diamine tetraacetic acid	60-00-4	1-20	

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

### 4. First aid measures

**FIRST AID MEASURES**

<b>Eye contact</b>	Hold eye open and rinse slowly and gently with water for 30 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>Skin contact</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.
<b>Inhalation</b>	If breathing is irregular or stopped, administer artificial respiration. Call a poison control center or doctor for further treatment advice.
<b>Ingestion</b>	Call a physician or poison control center immediately. If able to swallow, give plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects** No information available.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician** No information available.

### 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.

**Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products** Avoid breathing fumes from fire exposed material.

**Explosion data****Protective equipment and precautions for firefighters**

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Avoid contact with the skin and the eyes. Use personal protective equipment.

**Environmental Precautions**

**Environmental precautions** Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

**Methods and material for containment and cleaning up**

**Methods for Clean-Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## 7. Handling and Storage

**Precautions for safe handling**

**Handling** Keep out of reach of children. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Wear personal protective equipment. Empty containers may contain hazardous residues.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep out of the reach of children. Keep in a dry, cool and well-ventilated place. Keep only in original container. Store out of direct sunlight. Store at temperatures below 90 F.

**incompatible materials** May react violently with strong acids and oxidizers. Avoid contact with zinc, aluminum, tin, bronze, lead, wool and leather. Avoid contact with combustible materials. Halogens. anhydrides.

## 8. Exposure Controls/Personal Protection

**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Sodium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>

**Engineering controls** Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Personal protective equipment****Eye/Face Protection**

Use eye protection to avoid eye contact. Where there is potential for eye contact have eye

**Skin protection**  
**Respiratory protection**

flushing equipment available. Goggles.  
 Chemical resistant gloves. Chemical resistant protective clothing.  
 Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

**General hygiene considerations**

Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

## 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	No information available
<b>appearance</b>	clear light brown		
<b>color</b>	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	12	
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	No information available	
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	1.01	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

**OTHER INFORMATION**

<b>Softening point</b>	No information available
<b>molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>density</b>	No information available
<b>Bulk density</b>	8.4 lbs/gal

## 10. Stability and Reactivity

**Reactivity**  
 no data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Keep away from children.

**incompatible materials**

May react violently with strong acids and oxidizers. Avoid contact with zinc, aluminum, tin, bronze, lead, wool and leather. Avoid contact with combustible materials. Halogens. anhydrides.

**Hazardous decomposition products**

Nitrogen oxides (NOx). Ammonical vapors.

## 11. Toxicological Information

**Information on Likely Routes of Exposure**

<b>Inhalation</b>	There is no data available for this product.
<b>Eye contact</b>	There is no data available for this product.
<b>Skin contact</b>	There is no data available for this product.
<b>Ingestion</b>	There is no data available for this product.

**Component Information**

Sodium hydroxide Single exposure studies indicate that this material is slightly toxic if absorbed through skin (rat LD50 1,350 mg/kg) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria. No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 + years. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-24 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material. EDTA (Ethylene diamine tetraacetic acid)

Single exposure studies indicate that this material is slightly toxic if swallowed (rat LD50 >2,000 mg/kg), slightly to moderately irritating to rabbit eyes. Skin allergy was reported in guinea pigs following repeated exposures to Tetrasodium EDTA in controlled skin contact studies. The biological effects of EDTA are associated with its chelating properties which allows it to bind with metal ions and may cause essential element deficiencies which interfere with normal enzymatic processes. Animal studies indicate that repeated exposure to EDTA may result in alterations in tissue metal distributions with secondary changes to the kidney, intestinal tract, and enzyme system function. At levels that were maternally toxic, EDTA has shown the ability to produce birth defects in the offspring.

In studies where zinc was supplemented, rats given up to 1000 mg/kg EDTA showed no increase in birth defects. Long-term administration of disodium and trisodium EDTA salts have not shown evidence for carcinogenicity. EDTA does not cause genetic changes in standard bacterial assays, but has shown weak activity in producing chromosomal mutations and chromosomal aberrations in mammalian cell assays. Workers exposed to EDTA and other materials did not have increased chromosomal aberrations in circulating white blood cells. EDTA and salts are used in medical therapy as anticoagulants and detoxicants for heavy metal poisoning.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg ( Rabbit )	-
Ethylene diamine tetraacetic acid 60-00-4	= 1700 mg/kg ( Rat )	-	-

**Information on Toxicological Effects**

**Symptoms** No information available.

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

<b>sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<b>Reproductive effects</b>	Not Available.
<b>STOT - Single Exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

Numerical Measures of Toxicity - No information available**12. Ecological Information**ecotoxicity

No information available

Persistence/Degradability

No information available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

No information available

**13. Disposal Considerations**Waste Treatment Methods

<b>Waste Disposal Method</b>	Dispose of in accordance with all applicable federal, state, and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse empty containers.

Chemical name	Sodium hydroxide
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**14. Transport Information**DOT

<b>UN-No</b>	1824
<b>Proper shipping name</b>	Sodium hydroxide solution
<b>Hazard class</b>	8
<b>Packing group</b>	PG II
<b>Reportable Quantity (RQ):</b>	1,000 lbs (NaOH)

ICAO

<b>UN-No</b>	1824
<b>Proper shipping name</b>	Sodium hydroxide solution
<b>Hazard class</b>	8
<b>Packing group</b>	PG II

IATA

<b>UN-No</b>	1824
<b>Proper shipping name</b>	Sodium hydroxide solution
<b>Hazard class</b>	8

Packing group PG II

**IMDG/IMO**

UN-No 1824  
 Proper shipping name Sodium hydroxide solution  
 Hazard class 8  
 Packing group PG II  
 EmS No. F-A, S-B

**15. Regulatory Information**

**International Inventories**

USINV Not determined  
 DSL/NDSL Not determined  
 EINECS/ Does not comply  
 ELINCS  
 ENCS Does not comply  
 China Complies  
 KECL Complies  
 PICCS Complies  
 AICS Complies  
 TSCA Complies

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 Commercial Chemical Substances/EU 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

**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 and Title 40n of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous**

**Categorization**

Acute health hazard yes  
 Chronic health hazard NO  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb			X
Ethylene diamine tetraacetic acid 60-00-4	5000 lb			X

Chemical name	RQ	CERCLA EHS RQs	RQ
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Ethylene diamine tetraacetic acid 60-00-4	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**CERCLA**

Component	RQ
Sodium hydroxide 1310-73-2 ( 1-20 )	1000 lb
Ethylene diamine tetraacetic acid 60-00-4 ( 1-20 )	5000 lb

**RCRA****Pesticide Information****State Regulations****State Right-to-Know**

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium hydroxide	X	X	X		
Ethylene diamine tetraacetic acid	X	X	X		

**International regulations****U.S. EPA Label information**

EPA Pesticide registration number Not applied

**16. Other Information**

**NFPA**                      **HEALTH 3**                      **flammability 0**                      **Instability 0**                      **Physical hazard -**

Preparation Date                      07-Apr-2015

Revision date                      11-Dec-2015

**Revision Summary**

Update Section 9 Update section 12

**Disclaimer****CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return product at once, unopened, and the purchase price will be refunded. It is impossible to eliminate all risks associated with the use of this product. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Decco US Post-Harvest, Inc. harmless from any claims relating to such factors.

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