

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : MANDATE PLUS

Other means of identification : Not applicable

Recommended use : Sanitizer

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.13 % - 0.26 %

Company : Ecolab Inc.  
1 Ecolab Place  
St. Paul, Minnesota USA 55102  
1-800-352-5326

Emergency health information : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 06/10/2024

**SECTION 2. HAZARDS IDENTIFICATION**
**GHS Classification**
**Product AS SOLD**

Acute toxicity (Oral) : Category 4  
Acute toxicity (Inhalation) : Category 4  
Acute toxicity (Dermal) : Category 3  
Skin corrosion : Category 1  
Serious eye damage : Category 1

**Product AT USE DILUTION**

Eye irritation : Category 2B

**GHS label elements**
**Product AS SOLD**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed or if inhaled.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**  
Avoid breathing mist or vapors. Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.  
Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce

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vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. 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/ doctor. Take off contaminated clothing and wash before reuse.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Product AT USE DILUTION**

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling.  
**Response:**  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

**Product AS SOLD**

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

**Product AT USE DILUTION**

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Product AS SOLD**

Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
Acetic acid	64-19-7	10 - 30
Nitric acid	7697-37-2	10 - 30
Phosphoric acid	7664-38-2	5 - 10
Secondary Alkanesulphonates	5324-84-5	5 - 10
Nonanoic acid	112-05-0	6.3
Decanoic Acid	334-48-5	1.09
Nonionic surfactants	26316-40-5	0.1 - 1

**Product AT USE DILUTION**

Chemical name	CAS-No.	Concentration (%)
Nonanoic acid	112-05-0	0.0164
Decanoic Acid	334-48-5	0.0028

### SECTION 4. FIRST AID MEASURES

**Product AS SOLD**

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

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In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention.
Protection of first-aiders	: If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

#### Product AT USE DILUTION

In case of eye contact	: Rinse with plenty of water.
In case of skin contact	: Rinse with plenty of water.
If swallowed	: Rinse mouth. Get medical attention if symptoms occur.
If inhaled	: Get medical attention if symptoms occur.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Product AS SOLD

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during fire fighting	: Oxidizer. Contact with other material may cause fire.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus
Special protective equipment for fire-fighters	: Use personal protective equipment.
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Product AS SOLD

Personal precautions,	: Ensure adequate ventilation. Keep people away from and upwind of
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protective equipment and emergency procedures : spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Isolate absorbed wastes contaminated with this product from other waste streams containing combustible materials (paper, wood fibers, cloth, etc.). Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

#### Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

### SECTION 7. HANDLING AND STORAGE

#### Product AS SOLD

Advice on safe handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Conditions for safe storage : Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from strong bases. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : -10 °C to 50 °C

#### Product AT USE DILUTION

Advice on safe handling : Wash hands thoroughly after handling. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Product AS SOLD

#### Ingredients with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm 25 mg/m3	NIOSH REL
		STEL	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z1
Nitric acid	7697-37-2	TWA	2 ppm	ACGIH
		STEL	4 ppm	ACGIH
		STEL	4 ppm 10 mg/m3	NIOSH REL
		TWA	2 ppm 5 mg/m3	NIOSH REL
		TWA	2 ppm 5 mg/m3	OSHA Z1
Phosphoric acid	7664-38-2	TWA	1 mg/m3	ACGIH
		STEL	3 mg/m3	ACGIH
		TWA	1 mg/m3	NIOSH REL
		STEL	3 mg/m3	NIOSH REL
		TWA	1 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Wear eye protection and/or face protection.

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.  
Wash face, hands and any exposed skin thoroughly after handling.  
Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

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Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Personal protective equipment

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Eye protection	: No special protective equipment required.
Hand protection	: No special protective equipment required.
Skin protection	: No special protective equipment required.
Respiratory protection	: No personal respiratory protective equipment normally required.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Color	: light yellow	colorless
Odor	: pungent	slight
pH	: 1.0, (100 %)	1.0 - 3.0
Flash point	: Not applicable	
Odor Threshold	: No data available	
Melting point/freezing point	: No data available	
Initial boiling point and boiling range	: No data available	
Evaporation rate	: No data available	
Flammability (solid, gas)	: Not applicable	
Upper explosion limit	: No data available	
Lower explosion limit	: No data available	
Vapor pressure	: No data available	
Relative vapor density	: No data available	
Relative density	: 1.17	
Water solubility	: No data available	
Solubility in other solvents	: No data available	
Partition coefficient: n-octanol/water	: No data available	
Autoignition temperature	: No data available	
Thermal decomposition	: No data available	
Viscosity, kinematic	: No data available	
Explosive properties	: No data available	
Oxidizing properties	: No data available	
Molecular weight	: No data available	
VOC	: No data available	

### SECTION 10. STABILITY AND REACTIVITY

#### Product AS SOLD

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.

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Possibility of hazardous reactions	: Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	: None known.
Incompatible materials	: Bases Metals
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Sulfur oxides Oxides of phosphorus

### SECTION 11. TOXICOLOGICAL INFORMATION

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

#### Potential Health Effects

##### Product AS SOLD

Eyes	: Causes serious eye damage.
Skin	: Toxic in contact with skin. Causes severe skin burns.
Ingestion	: Harmful if swallowed. Causes digestive tract burns.
Inhalation	: Harmful if inhaled. May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

##### Product AT USE DILUTION

Eyes	: Causes eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.

#### Experience with human exposure

##### Product AS SOLD

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

##### Product AT USE DILUTION

Eye contact	: Redness, Irritation
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Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

#### Toxicity

##### Product AS SOLD

##### Product

Acute oral toxicity : Acute toxicity estimate : > 300 mg/kg

Acute inhalation toxicity : 4 h Acute toxicity estimate : > 1 mg/l  
Test atmosphere: dust/mist

Acute dermal toxicity : Acute toxicity estimate : > 200 mg/kg

Skin corrosion/irritation : No data available

Serious eye damage/eye irritation : No data available

Respiratory or skin sensitization : No data available

Carcinogenicity : No data available

Reproductive effects : No data available

Germ cell mutagenicity : No data available

Teratogenicity : No data available

STOT-single exposure : No data available

STOT-repeated exposure : No data available

Aspiration toxicity : No data available

### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Product AS SOLD

Environmental Effects : This product has no known ecotoxicological effects.

##### Product AT USE DILUTION

Environmental Effects : This product has no known ecotoxicological effects.

##### Product AS SOLD

##### Product

Toxicity to fish : No data available

Toxicity to daphnia and other aquatic invertebrates : 48 h EC50 Daphnia magna (Water flea): > 120 mg/l  
Test substance: Product

Toxicity to algae : No data available

#### Components

Toxicity to fish : Acetic acid  
96 h LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l

Nitric acid  
96 h LC50: 72 mg/l

Nonanoic acid



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96 h LC50 Pimephales promelas: 104 mg/l

Decanoic Acid

96 h LC50 Oryzias latipes (Japanese medaka): > 16 mg/l

#### Components

Toxicity to algae

: Acetic acid

72 h EC50 Skeletonema costatum (marine diatom): > 1,000 mg/l

Phosphoric acid

72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l

Nonanoic acid

72 h EC50 Pseudokirchneriella subcapitata (algae): 60 mg/l

Decanoic Acid

72 h EC50 Pseudokirchneriella subcapitata (algae): 15 mg/l

#### Persistence and degradability

##### Product AT USE DILUTION

Not applicable - Biocide

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

No data available

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Product AS SOLD

Disposal methods

: Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations

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

RCRA - Resource

Conservation and Recovery

Authorization Act Hazardous

waste

: D002 (Corrosive)

#### Product AT USE DILUTION

Disposal methods

: Diluted product can be flushed to sanitary sewer.

Disposal considerations

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

### SECTION 14. TRANSPORT INFORMATION

#### Product AS SOLD

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The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

UN number : 1760  
Description of the goods : Corrosive liquids, n.o.s.  
(acetic acid, Nitric acid)  
Class : 8  
Packing group : II  
Environmentally hazardous : no

#### Sea transport (IMDG/IMO)

UN number : 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.  
(acetic acid, Nitric acid)  
Class : 8  
Packing group : II  
Marine pollutant : no

### SECTION 15. REGULATORY INFORMATION

#### Product AS SOLD

EPA Registration number : 1677-194

#### EPCRA - Emergency Planning and Community Right-to-Know

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Nitric acid	7697-37-2	1000	7107

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Nitric acid	7697-37-2	1000	7107

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 302** : The following components are subject to reporting levels established by SARA Title III, Section 302:  
Nitric acid 7697-37-2 10 - 20 %

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
Nitric acid 7697-37-2 10 - 20 %

#### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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#### California Cleaning Product Right to Know Act of 2017 (SB 258)

This regulation does not apply to this product.

The ingredients of this product are reported in the following inventories:

#### United States TSCA Inventory :

All substances listed as active on the TSCA inventory

#### Canadian Domestic Substances List (DSL) :

This product contains one or several components listed in the Canadian NDSL.

#### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :

not determined

#### New Zealand. Inventory of Chemical Substances :

not determined

#### Japan. ENCS - Existing and New Chemical Substances Inventory :

not determined

#### Korea. Korean Existing Chemicals Inventory (KECI) :

On the inventory, or in compliance with the inventory

#### Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

On the inventory, or in compliance with the inventory

#### China. Inventory of Existing Chemical Substances in China (IECSC) :

On the inventory, or in compliance with the inventory

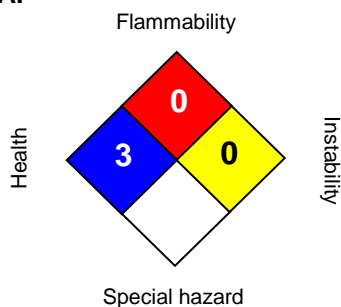
#### Taiwan Chemical Substance Inventory (TCSI) :

On the inventory, or in compliance with the inventory

### SECTION 16. OTHER INFORMATION

#### Product AS SOLD

##### NFPA:



##### HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

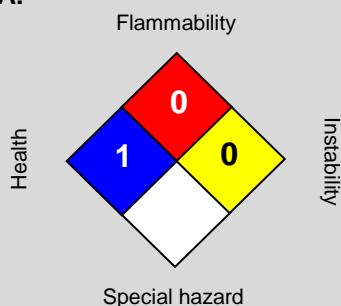
0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

#### Product AT USE DILUTION

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### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Issuing date : 06/10/2024  
Version : 1.2  
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this 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.