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SECTION 1. IDENTIFICATION

Substance name : ENZOL Enzymatic Detergent
ASP

Manufacturer or supplier's details

Company name of supplier : Advanced Sterilization Products

Address : 33 Technology Drive
Irvine, CA 92618
US

Telephone : (800) 755-5900
E-mail address Responsible/issuing person : SDSJanssen@its.jnj.com

Emergency telephone number : **CHEMTREC US: 1-800-424-9300**
CHEMTREC International: +1 703-527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Detergent

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

Respiratory sensitisation : Category 1

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.



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P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Liquid

Hazardous components

Chemical name	CAS-No.	Concentration (%)
disodium tetraborate decahydrate	1303-96-4	>= 1 - <= 5
subtilisin	9014-01-1	>= 0.1 - <= 1

SECTION 4. FIRST AID MEASURES

If inhaled : If breathed in, move person into fresh air.
Artificial respiration and/or oxygen may be necessary.
Call a physician immediately.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,
for at least 15 minutes.
Remove contact lenses.



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Consult a physician.

If swallowed : If swallowed, rinse mouth with water (only if the person is conscious).
Call a physician immediately.

Most important symptoms and effects, both acute and delayed : Irritating to eyes.
Sensitisation
Cough
Shortness of breath
Nausea
Headache
Vomiting
Irritating to nose, throat and respiratory tract

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : None known.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.

Further information : In the event of fire, cool tanks with water spray.

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 : Evacuate personnel to safe areas.
In the event of an accidental release the emergency response team must respond based on a risk assessment and use personal protective equipment as appropriate.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Should not be released into the environment.

Methods and materials for containment and cleaning up : Large spills + Small spills: Keep in suitable, closed containers for disposal. Treat recovered material as described in the section "Disposal considerations".



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Large spills: Dam up. Soak up with inert absorbent material.
 Keep in properly labelled containers.
 Small spills: Gently cover the spill with an absorbent towel or pad.
 After cleaning, flush away traces with water.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : No data available
- Advice on safe handling : Avoid inhalation, ingestion and contact with skin and eyes.
 To avoid thermal decomposition, do not overheat.
 Use only with adequate ventilation.
 Use personal protective equipment as required.
- Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
 Keep away from heat and sources of ignition.
 Store in original container.
 To avoid thermal decomposition, do not overheat.
- Recommended storage temperature : 15 - 30 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
disodium tetraborate decahydrate	1303-96-4	TWA	5 mg/m ³	ACGIH
		TWA	5 mg/m ³	NIOSH REL
		TWA	10 mg/m ³	OSHA P0
		TWA (Inhalable fraction)	2 mg/m ³ (Borate)	ACGIH
		STEL (Inhalable fraction)	6 mg/m ³ (Borate)	ACGIH
		PEL	5 mg/m ³	CAL PEL
subtilisin	9014-01-1	C	0.00006 mg/m ³	OSHA P0
		C	0.00006 mg/m ³ (crystalline active enzyme)	ACGIH
		ST	0.00006 mg/m ³	NIOSH REL
		STEL	0.00006 mg/m ³ (crystalline active enzyme)	CAL PEL

Engineering measures : All personal protective equipment should be based on a risk assessment. Consult a Environment Health Safety expert if



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necessary.

Personal protective equipment

- Respiratory protection : Engineering controls should always be the primary method of controlling exposures.
If respiratory protective equipment is needed for certain activities, the type as well as the corresponding protection factor will depend upon the risk assessment and air concentrations, hazards, physical and warning properties of substances present.
In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
No personal respiratory protective equipment normally required.
- Hand protection
- Remarks : Impervious gloves
- Eye protection : Safety glasses with side-shields
- Skin and body protection : Wear suitable protective clothing.
- Protective measures : The type of protective equipment must be selected based on the Environmental Health and Safety risk assessment. Consult a Environmental Health and Safety expert if necessary.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before eating, drinking, or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Bottle, liquid
- Colour : clear, violet
- Odour : mint-like
- pH : 7.8 - 8.8
- Flash point : > 93 °C
- Solubility(ies)
Water solubility : soluble

SECTION 10. STABILITY AND REACTIVITY

- Reactivity : None reasonably foreseeable.
- Chemical stability : Stable under normal conditions.



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Possibility of hazardous reactions	:	Hazardous polymerisation does not occur. No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat, flames and sparks. To avoid thermal decomposition, do not overheat.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

No data available

Skin corrosion/irritation

Components:

subtilisin

Result: Skin irritation

Remarks: Classification according to Regulation 1272/2008 Annex VI

Serious eye damage/eye irritation

Components:

subtilisin

Result: Corrosive to eyes

Remarks: Classification according to Regulation 1272/2008 Annex VI

Respiratory or skin sensitisation

Components:

subtilisin

Assessment: Probability of respiratory sensitisation in humans based on animal testing

Remarks: Classification according to Regulation 1272/2008 Annex VI

Germ cell mutagenicity

No data available

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.



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Reproductive toxicity**Product:**

Reproductive toxicity - Assessment : Suspected of damaging fertility or the unborn child.

Components:**disodium tetraborate decahydrate**

Reproductive toxicity - Assessment : May damage fertility. May damage the unborn child.
Remarks: Classification according to Regulation 1272/2008 Annex VI

STOT - single exposure**Components:****subtilisin**

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the



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U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with National, Federal, State and Local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

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

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

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.

Clean Air Act



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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

disodium tetraborate decahydrate	1303-96-4	5 - 10 %
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Pennsylvania Right To Know

disodium tetraborate decahydrate	1303-96-4	5 - 10 %
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New Jersey Right To Know

disodium tetraborate decahydrate	1303-96-4	5 - 10 %
subtilisin	9014-01-1	1 - 5 %

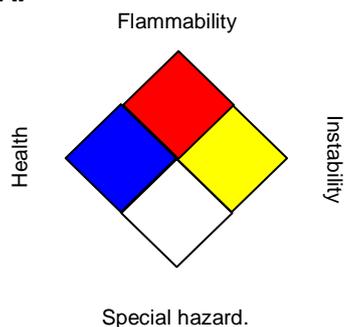
California Prop 65

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

Other regulations

: Restricted to professional users.

This product is not subject to TSCA and TSCA 12(b) Export notification because Food, Drugs and cosmetic products are exempt.

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HEALTH	
FLAMMABILITY	
PHYSICAL HAZARD	

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

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Date and Number Formats

This document uses the following notation for printing dates and numbers:

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.

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