

**Safety Data Sheet dated 8/6/2015, version 0**

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## 1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: ENARTIS ZYM RS

Other means of identification:

Product codes: 35-160-0001

Recommended use of the chemical and restrictions on use

Recommended use:

FOR PROFESSIONAL USE

Restrictions on use:

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Enartis USA Inc.

7795 Bell Road

Windsor

CA 95492

Competent person responsible for the safety data sheet:

compliance@enartisvinquiry.com

Emergency phone number


Phone: +1 (707) 838 6312

Fax: +1 (707) 838 1765

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## 2. HAZARD(S) IDENTIFICATION

Classification of the chemical

 Danger, Resp. Sens. 1B, May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Label elements

Symbols:



Danger

Hazard statements:

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:

P261 Avoid breathing vapours.

P261 Avoid breathing spray.

P284 [In case of inadequate ventilation] wear respiratory protection.

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

P342+P311 If experiencing respiratory symptoms: Call a doctor.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

>= 3% - < 5% Pectin lyase

CAS: 9033-35-6, EC: 232-894-5

⚠ A.4.1/1B Resp. Sens. 1B H334

>= 3% - < 5% Glucanase, endo-1,3(4)  $\beta$

CAS: 62213-14-3, EC: 263-462-4

⚠ A.4.1/1B Resp. Sens. 1B H334

>= 0.5% - < 1% Pectinesterase

CAS: 9025-98-3, EC: 232-807-0

⚠ A.4.1/1B Resp. Sens. 1B H334

>= 0.5% - < 1% Polygalacturonase

CAS: 9032-75-1, EC: 232-885-6

⚠ A.4.1/1B Resp. Sens. 1B H334

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### 4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Induce vomiting. SEEK A MEDICAL EXAMINATION IMMEDIATELY and present the safety-data sheet.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

None

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

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### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Hazardous combustion products:

None

Explosive properties: N.A.

Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Remove persons to safety.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and materials for containment and cleaning up

Wash with plenty of water.

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## 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

Storage temperature:

Store at 4°C for keeping the product activity

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No occupational exposure limit available

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection.

Suitable material:

UNI EN 420/UNI EN 374

Respiratory protection:

Gas filtering device (DIN EN 141).  
Thermal Hazards:  
None

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:	Liquid
Odour:	None
Odour threshold:	N.A.
pH:	N.A.
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A. °F
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	± 1.20 g/cm <sup>3</sup> (20°C)
Solubility in water:	100%
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

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## 10. STABILITY AND REACTIVITY

Reactivity  
Stable under normal conditions

Chemical stability  
Stable under normal conditions

Possibility of hazardous reactions  
None

Conditions to avoid  
Heat

Incompatible materials  
Oxidants, alkalis, strong acids

Hazardous decomposition products  
None.

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## 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
Toxicological information of the mixture:  
N.A.

Toxicological information of the main substances found in the mixture:  
N.A.

Substance(s) listed on the NTP report on Carcinogens:  
None.

Substance(s) listed on the IARC Monographs:  
None.

Substance(s) listed as OSHA Carcinogen(s):  
None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

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## 12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

N.A.

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

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## 13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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## 14. TRANSPORT INFORMATION

UN number

Not classified as dangerous in the meaning of transport regulations.

UN proper shipping name

N.A.

Transport hazard class(es)

N.A.

Packing group

N.A.

Environmental hazards

Marine pollutant: No

N.A.

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

N.A.

Special precautions

N.A.

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## 15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

List of substances included in the TSCA inventory: Glucanase, endo-1,3(4)  $\beta$ ,  
Pectinesterase, Polygalacturonase.

List of substances not included in the TSCA inventory: Pectin lyase.

TSCA listed substances:

None.

SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: no substances listed.

Section 313 – Toxic chemical list: no substances listed.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

No substances listed.

CAA - Clean Air Act

CAA listed substances:

None.

CWA - Clean Water Act

CWA listed substances:

None.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

None.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

No substances listed.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

No substances listed.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

No substances listed.

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## 16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PNEC:	Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
STE: Short-term exposure.  
STEL: Short Term Exposure limit.  
STOT: Specific Target Organ Toxicity.  
TLV: Threshold Limiting Value.  
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).