

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

**1.1 Product identifier**

Trade name : Rapidase® Clear Extreme L  
Unique Formula Identifier (UFI) : R4T0-M0WT-M001-VASS

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

Use of the Sub-stance/Mixture : For use in food industry

**1.3 Details of the supplier of the safety data sheet**

Company : DSM Food Specialties B.V.  
P.O. Box 1  
NL-2600 MA Delft  
Telephone : +31 15 279 2911  
E-mail address of person responsible for the SDS : sds.nutritionalproducts@dsm.com

**1.4 Emergency telephone number**

+41 848 00 11 77 (Carechem 24 International)

**SECTION 2: Hazards identification**


**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Respiratory sensitisation, Category 1 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms : 

Signal word : Danger

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

Precautionary statements : **Prevention:**  
P261 Avoid breathing mist or vapours.  
P284 Wear respiratory protection.  
**Response:**  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

9032-75-1 Polygalacturonase  
9067-74-7 Arabinofuranosidase, alpha-l-

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

None known.

## SECTION 3: Composition/information on ingredients

Brief description of the product : Mixture  
product

### 3.2 Mixtures

#### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Polygalacturonase	9032-75-1 232-885-6	Resp. Sens. 1; H334	>= 1 - < 5
Arabinofuranosidase, α-l-	9067-74-7 232-957-7	Resp. Sens. 1; H334	>= 1 - < 5

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.  
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with soap and plenty of water.  
If symptoms persist, call a physician.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Rinse mouth with water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.

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

Symptoms : Inhalation may induce sensitization and may cause allergic reactions in sensitized individuals.

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

Treatment : Treat symptomatically.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam  
Dry chemical  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Specific hazards during fire-fighting : None known.

#### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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### SECTION 6: Accidental release measures

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

Personal precautions : Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.

#### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.  
Avoid formation of dust and aerosols.

#### 6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).

For personal protection see section 8.  
Avoid formation of aerosol.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.  
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge.  
Product will burn under fire conditions.

Hygiene measures : When using do not eat or drink. When using do not smoke.  
Avoid contact with skin, eyes and clothing. Do not breathe vapours, aerosols.

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

Requirements for storage areas and containers : Keep container tightly closed and dry. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

To maintain product quality, do not store in heat or direct sunlight.

### 7.3 Specific end use(s)

Specific use(s) : Not applicable

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Polygalacturonase	9032-75-1	STEL (Total dust)	0.000060 mg/m <sup>3</sup>	DSM Internal Limit
	Derived minimal effect level			
Arabinofuranosidase, alpha-l-	9067-74-7	STEL (Total dust)	0.000060 mg/m <sup>3</sup>	DSM Internal Limit
	Derived minimal effect level			

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Safety glasses with side-shields

Hand protection : Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.  
Glove material: for example nitrile rubber

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.  
Suitable mask with particle filter P3 (European Norm 143)

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance	: liquid
Colour	: colourless - brown - (Product colour may vary from batch to batch)
Odour	: slight fermentation odor
Odour Threshold	: No information available.
pH	: 3 - 6
Melting point/range	: not determined
Boiling point/boiling range	: not determined
Flash point	: ca. 220 °C boils before flash
Evaporation rate	: not determined
Lower explosion limit	: not determined
Upper explosion limit	: not determined
Vapour pressure	: not determined
Relative vapour density	: Not applicable
Density	: not determined
Water solubility	: not determined
Partition coefficient: n-octanol/water	: Not applicable
Self-ignition	: No data available
Ignition temperature	: not determined
Decomposition temperature	: No data available
Viscosity, kinematic	: not determined

**9.2 Other information**

Explosive properties	: Not explosive
Oxidizing properties	: No data available

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No hazards to be specially mentioned.

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Possible incompatibility with materials listed under section 10.5.

**10.4 Conditions to avoid**

Heat

**10.5 Incompatible materials**

Strong acids and strong bases

Strong oxidizing agents

### 10.6 Hazardous decomposition products

No decomposition if used as directed.

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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity	: Acute toxicity estimate : 5,000 mg/kg (Calculation method)
Skin irritation	: Prolonged skin contact may cause skin irritation.
Sensitisation	
Polygalacturonase	: May cause sensitisation by inhalation.
Arabinofuranosidase, $\alpha$ -l-	: May cause sensitisation by inhalation.
Genotoxicity in vitro	: No indication for mutagenicity known.
Carcinogenicity	: No indication for carcinogenicity known.
Reproductive toxicity	: No indication for adverse effects on fertility known.
STOT - single exposure (A- cute exposure)	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: This information is not available.
Aspiration toxicity	: No aspiration toxicity classification

### 11.2 Information on other hazards

#### Endocrine disrupting properties

##### Product:

Assessment	: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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#### Experience with human exposure

##### Components:

##### **Polygalacturonase:**

Inhalation	: Remarks: Inhalation may induce sensitization and may cause
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allergic reactions in sensitized individuals.

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## SECTION 12: Ecological information

### 12.1 Toxicity

No data is available on the product itself.

### 12.2 Persistence and degradability

Biodegradability

Arabinofuranosidase,  $\alpha$ -I- : Readily biodegradable.  
100 % (28 d)  
(OECD Test Guideline 301F)  
Test performed using a similar product.

No data is available on the product itself.

### 12.3 Bioaccumulative potential

Bioaccumulation : No data available

Partition coefficient: n-  
octanol/water : Not applicable

### 12.4 Mobility in soil

Distribution among environ-  
mental compartments : No data available

### 12.5 Results of PBT and vPvB assessment

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

#### Product:

Additional ecological informa-  
tion : There is no data available for this product.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Dispose of as unused product.  
Do not re-use empty containers.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Not applicable

#### Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

Not applicable

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## SECTION 16: Other information

#### Full text of H-Statements

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

#### Full text of other abbreviations

Resp. Sens. : Respiratory sensitisation

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



**Rapidase® Clear Extreme L**

**DFSC\_0000446**

Version 1.1

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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

DNEL - Derived No-Effect Level; NFPA - National Fire Protection Association (USA); PNEC - Predicted No-Effect Concentration; STEL - Short term exposure limit; TLV-C - Ceiling Limit Value; TWA - Time Weighted Average; WEL - Workplace Exposure Limit.

## Further information

### Classification of the mixture:

Resp. Sens. 1

H334

### Classification procedure:

Calculation method

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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