



SAFETY DATA SHEET AQUARESIN CINNAMON NS

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

1.1. Product identifier

Product name AQUARESIN CINNAMON NS

Product number 65108

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

Identified uses Food / Feed additive Food industry

1.3. Details of the supplier of the safety data sheet

Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 BD3 7AY
 +44 1274 267300
 +44 1274 267306
 SDS.EMEA@univarsolutions.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 65108

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning

Hazard statements H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.

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Precautionary statements

P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

Contains CINNAMALDEHYDE, EUGENOL

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

CINNAMALDEHYDE	10-30%
CAS number: 104-55-2	EC number: 203-213-9

Classification

Acute Tox. 4 - H312

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Skin Sens. 1A - H317

EUGENOL

1-5%

CAS number: 97-53-0

EC number: 202-589-1

Acute Toxicity Estimate (oral):

LD₅₀ 2300 mg/kg, Oral, Rat

Acute Toxicity Estimate (inhalation):

LD₅₀ 2580 mg/l, , Dust/Mist Rat

Classification

Eye Irrit. 2 - H319

Skin Sens. 1 - H317

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if symptoms are severe or persist.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Get medical attention if symptoms are severe or persist.
Skin contact	Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. Continue to rinse. Get medical attention if symptoms are severe or persist.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

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

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Provide adequate ventilation.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures above 8°C.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

CINNAMALDEHYDE (CAS: 104-55-2)

DNEL

Workers - Inhalation; Long term systemic effects: 13.6 mg/m³
 Workers - Oral; Long term systemic effects: 3.85 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 2.4 mg/m³
 Consumer - Oral; Long term systemic effects: 1.37 mg/kg/day

PNEC

Fresh water; 0.021 mg/l
 marine water; 0.002 mg/l
 STP; 7.1 mg/l
 Sediment (Freshwater); 0.021 mg/kg
 Sediment (Marinewater); 0.002 mg/kg
 Soil; 0.004 mg/kg

EUGENOL (CAS: 97-53-0)

DNEL

Workers - Inhalation; Long term systemic effects: 21.2 mg/m³
 Workers - Dermal; Long term systemic effects: 6 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 5.22 mg/m³
 Consumer - Dermal; Long term systemic effects: 3 mg/kg/day
 Consumer - Oral; Long term systemic effects: 3 mg/kg/day

PNEC

Fresh water; 1.13 µg/l
 marine water; 0.113 µg/l
 Sediment (Freshwater); 0.081 mg/kg
 Sediment (Marinewater); 0.008 mg/kg
 Soil; 0.015 mg/kg

8.2. Exposure controls

Protective equipment



Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

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Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Red-brown. to Green-yellow.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Pour Point	No information available.
Freezing Point	No information available.
Initial boiling point and range	No information available.
Flash point	94°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.980 - 1.000 @ 25°C
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

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Refractive index	1.485 - 1.510
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.4. Conditions to avoid

Conditions to avoid	Avoid exposure to high temperatures or direct sunlight.
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10.5. Incompatible materials

Materials to avoid	Not determined.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - dermal

ATE dermal (mg/kg)	10,000.0
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Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction.
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Germ cell mutagenicity

Genotoxicity - in vitro	No information available.
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Carcinogenicity

Carcinogenicity	No information available.
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Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity - development No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Toxicological information on ingredients.

CINNAMALDEHYDE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2200 mg/kg, Oral, Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,100.0

Species Rabbit

Notes (dermal LD₅₀) Harmful in contact with skin.
LD₅₀ 1100 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 1,100.0

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.
Irritating to eyes. Rabbit

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

EUGENOL

Acute toxicity - oral

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Acute toxicity oral (LD₅₀ mg/kg) 2,300.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 2300 mg/kg, Oral, Rat

ATE oral (mg/kg) 2,300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 2,580.0

Species Rat

Notes (inhalation LC₅₀) LC₅₀ 2580 mg/l, Dust/Mist, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 2,580.0

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.
Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Toxicokinetics 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.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Ecological information on ingredients.

CINNAMALDEHYDE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 4.5 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 3.21 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hour: 16.09 mg/l, Algae

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Acute aquatic toxicity

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Acute toxicity - fish	LC ₅₀ , 96 hour: 13 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hour: 1.3 mg/l, Daphnia magna OECD 202
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 24 mg/l, Algae NOEC, 72 hours: 23 mg/l, Algae

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

CINNAMALDEHYDE

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Degradation 88%: 28 day

EUGENOL

Persistence and degradability	The product is readily biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

CINNAMALDEHYDE

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	log Pow: 2.1

12.4. Mobility in soil

Mobility No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

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Other adverse effects	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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SECTION 13: Disposal considerations

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13.1. Waste treatment methods

General information	Do not puncture or incinerate, even when empty. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
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14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. This product may impact SEVESO storage regulations.
Restrictions (Annex XVII Regulation 1907/2006)	This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. Kow: Octanol-water partition coefficient. LC₅₀: Lethal Concentration to 50 % of a test population. LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. vPvB: Very Persistent and Very Bioaccumulative. IARC: International Agency for Research on Cancer. MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. cATpE: Converted Acute Toxicity Point Estimate. BCF: Bioconcentration Factor. BOD: Biochemical Oxygen Demand. EC₅₀: 50% of maximal Effective Concentration. LOAEC: Lowest Observed Adverse Effect Concentration. LOAEL: Lowest Observed Adverse Effect Level. NOAEC: No Observed Adverse Effect Concentration. NOAEL: No Observed Adverse Effect Level. NOEC: No Observed Effect Concentration. LOEC: Lowest Observed Effect Concentration. DMEL: Derived Minimal Effect Level. EL50: Exposure Limit 50 hPa: Hectopascal LL50: Lethal Loading fifty OECD: Organisation for Economic Co-operation and Development POW: Octanol-water partition coefficient SCBA: self-contained breathing apparatus STP: Sewage Treatment Plant VOC: Volatile Organic Compounds
Classification abbreviations and acronyms	Acute Tox. = Acute toxicity Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Key literature references and sources for data	Supplier's information.
Classification procedures according to Regulation (EC) 1272/2008	Skin Irrit. 2 - H315: Calculation method. Skin Sens. 1 - H317: Calculation method. Eye Irrit. 2 - H319: Calculation method.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.

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Revision date	14/02/2023
Version number	1.000
SDS number	65108
SDS status	Approved.
Hazard statements in full	H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.
Signature	Jitendra Panchal

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