

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: Rino

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

Organosilicone
Supper wett/spreader for use on all crops

1.3 Details of the supplier of the safety data sheet

Agro-Vital B.V.
Molenstraat 10-1
8391 AJ Noordwolde
Tel. +31(0)561 433 115 email:info@agro-vital.com

1.4 Emergency telephone number

For advice on medical emergencies, fires, spillages or chemical hazards ONLY: **+31(0)88 489 0000**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture: Classification according to Regulation (EC) No 1272/2008 as amended

Serious eye damage/eye irritation Category 2; H319;
Chronic hazards to the aquatic environment Category 2; H411.
Dermal, Acute Tox. 4; H312
Inhalation, Acute Tox. 4; H332

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008



Signal word
Warning

Hazard statements
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection

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

2.3 Other hazards

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:

Chemical name	CAS-No.; EC No.; REACH Registration No.	Classification [Regulation (EC) No. 1272/2008]
Polyalkyleneoxide modified Heptamethyltrisiloxane	27306-78-1	Category 2; Aquatic Chronic; H411; Category 2; Eye Dam.; H319
Allyloxy polyethylene glycol	27252-80-8	Acute Toxicity 4; H302

For full text of hazard phrases, refer to section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation

After inhalation of aerosol/mist seek medical advice immediately. Move the exposed person to fresh air at once. If breathing is difficult, give oxygen. Call a physician or poison control centre immediately.

Skin contact

Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if symptoms persist.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms persist.

Ingestion

Do not induce vomiting. If conscious, drink plenty of water. Call a physician or poison control centre immediately.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

None known.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Alcohol resistant foam. Carbon dioxide Dry chemical.

Unsuitable extinguishing media

None known.

5.2 Special hazards arising from the substance or mixture:

None known.

5.3 Advice for firefighters:

Wear self-contained breathing apparatus and protective clothing. Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin, and clothing. Avoid contact with liquid and vapours. Use personal protective equipment.

6.2 Environmental precautions

Prevent runoff from entering drains, sewers, or streams.

6.3 Methods and material for containment and cleaning up

Absorb spillage with suitable absorbent material. Shovel up and place in a container for salvage or disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling

Do not taste or swallow.
Avoid contact with eyes, skin, and clothing.
Wash hands after handling.
Provide adequate ventilation.
Avoid inhalation of vapours and spray mists.

Other precautions

Consult the manufacturer before using an aerosol of the neat liquid.

Advice on protection against fire and explosion

All equipment used when handling the product must be grounded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep container tightly closed.
Keep away from sources of ignition - No smoking.
Protect from frost.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Contains no substances with occupational exposure limit values.

DNEL-Values

No data available

PNEC-Values

No data available

8.2 Exposure controls

Appropriate engineering controls

Provide eyewash station and safety shower. General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Personal protective equipment (ppe)

Respiratory protection: Respirator with a vapour filter (EN 141)

Hand protection: Advice: This recommendation is valid only for our Product as delivered. If this product will be mixed with other substances you need to contact a supplier of CE approved protective gloves.

Eye protection: Safety glasses with side-shields conforming to EN166

Skin and body protection: Safety shoes. Wear suitable protective clothing.

Hygiene measures: Do not breathe vapour/aerosol. When using do not eat, drink or smoke. Use only with adequate ventilation. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Liquid, Pale yellow

Odour: Polyether

Odour Threshold: No data available.

pH: No data available.

Melting (freezing) Point: -1 °C

Boiling point/boiling range: > 150 °C at 1.013 hPa Copolymer

Flash Point: 116 °C Method: ASTM D 93

Evaporation Rate: <1

Lower explosion limit: No data available.

Upper explosion limit: No data available.

Vapour pressure: < 1,33 hPa at 20 °C

Vapour Density: >1

Density: 1,0070 g/cm³ at 25 °C (1,013 hPa)

Solubility(ies): Solubility in Water: Dispersible

Partition Coefficient: n-octanol/water:

POW: > 1.951, Log Pow (n-Octanol/Water Partition Coefficient): > 3,29

POW: > 1.926, Log Pow (n-Octanol/Water Partition Coefficient): > 3,28

POW: > 3.997, Log Pow (n-Octanol/Water Partition Coefficient): > 3,60

Autoignition Temperature: No data available.

Thermal decomposition: Note: No decomposition if stored and applied as directed.

Viscosity, dynamic: 24 mPa.s

Viscosity, kinematic: No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No dangerous reaction if used as recommended.

10.4 Conditions to avoid

None known.

10.6 Hazardous decomposition products

Carbon oxides, Oxides of silicon.

Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

This product has been tested.

Acute oral toxicity

LD50 Rat

Dose: > 2.000 mg/kg slightly toxic

Acute inhalation toxicity

LC50 Rat

Dose: 2 mg/l

Exposure time: 4 h

Aerosols:

LC50 Rat

Dose: >11,78 mg/l

Exposure time: 4 h Aerosols 5% Diluted aqueous solution.

Acute dermal toxicity

LD50 Rat Dose: > 2.000 mg/kg slightly toxic

Skin irritation

Rabbit Result: No skin irritation

Eye irritation

Rabbit Result: Strongly irritating.

Sensitization

Guinea Pig Result: Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Oral Rat Exposure time: 28 d

NOAEL: 150 mg/kg

Method: OECD 422

Component data: Polyalkyleneoxide modified heptamethyltrisiloxane

Acute oral toxicity

LD50 Rat Dose: > 2.000 mg/kg

Acute inhalation toxicity

LC50 Rat

Dose: 2 mg/l

Exposure time: 4 h

LC50 Rat

Dose: > 11,78 mg/l

Exposure time: 4 h

5% Diluted aqueous solution

Acute dermal toxicity

LD50 Rat

Dose: > 2.000 mg/kg

Eye irritation

Rabbit Result: Strongly irritating.

Sensitization

Guinea Pig Result: negative

Genetic Toxicity in vitro

Test type: Ames-Test - Result: negative

Test type: Chinese Hamster Ovary (CHO) - Result: negative

Test type: Mammalian cytogenicity test - Result: negative

Genetic toxicity in vivo

Test type: Micronucleus test - Result: negative

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product has been tested. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to fish

LC50 Species: Zebra Fish

Dose: 2,75 mg/l

Exposure time: 96 h

NOEC Species: Zebra Fish

Dose: 0,56 mg/l

Exposure time: 96 h

LC50 Species: *Lepomis macrochirus*

Dose: 6 mg/l

Exposure time: 96 h

NOEC Species: *Lepomis macrochirus*

Dose: 2,5 mg/l

Toxicity to other organisms

EC50 Species: *Daphnia similis*

Dose: 22,61 mg/l

Exposure time: 48 h

NOEC Species: *Daphnia similis*

Dose: 10 mg/l
Exposure time: 48 h
EC50 Species: *Daphnia magna*
Dose: 37 mg/l
Exposure time: 48 h
NOEC Species: *Daphnia magna*
Dose: 25 mg/l
Exposure time: 48 h

Toxicity to algae

EC50 Species: *Selenastrum capricornutum*
Dose: 5,5 mg/l
Exposure time: 96 h
NOEC Species: *Selenastrum capricornutum*
Dose: 1 mg/l
Exposure time: 96 h

Toxicity to microorganisms

MEC90 Species: *Spirillum volutans*
Dose: > 0,201 mg/l
Exposure time: 120 min (highest concentration tested)
Uncoordinated mobility in 90% of the population

Component data: Polyalkyleneoxide modified Heptamethyltrisiloxane

Toxicity to fish

LC50 Species: Zebra Fish
Dose: 2,75 mg/l
Exposure time: 96 h
NOEC Species: Zebra Fish
Dose: 0,56 mg/l
Exposure time: 96 h

Toxicity to other organisms

EC50 Species: *Daphnia similis*
Dose: 22,6 mg/l
Exposure time: 48

Toxicity to algae

EC50 Species: Algae
Dose: 5,5 mg/l
Exposure time: 96 h
NOEC Species: Algae
Dose: 1 mg/l
Exposure time: 96 h

Toxicity to microorganisms

MEC90 Species: *Spirillum volutans*
Exposure time: 2 h (highest concentration tested)
Uncoordinated mobility in 90% of the population

Toxicity other non-mammal terrestrial species

LC50 Species: Earthworm
Dose: > 4.777,78 mg/kg
Exposure time: 14 d (highest concentration tested)

12.2 Persistence and degradability

The product is not readily biodegradable.

12.3 Bioaccumulation

Product: No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product: No data available

No data available

12.6 Other adverse effects

None known.

13. DISPOSAL INFORMATION

13.1 Waste treatment methods

Product: Can be incinerated when in compliance with local regulations.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 **UN Number:** 3082

14.2 **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Contains: Polyalkyleneoxide
Modified Heptamethyltrisiloxane

14.3 **Transport hazard class(es):** 9

14.4 **Packing group:** III

Classification code: M6

Hazard identification no.: 90

14.6 **Special precautions for user:** Limited quantities (ADR) 5L

Inland waterway transport (ADNR)

14.1 **UN Number:** 3082

14.2 **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Contains: Polyalkyleneoxide
Modified Heptamethyltrisiloxane

14.3 **Transport hazard class(es):** 9

14.4 **Packing group:** III

Classification code: M6

Hazard identification no.: 90

Sea transport (IMDG)

14.1 **UN Number:** 3082

14.2 **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Contains: Polyalkyleneoxide
Modified Heptamethyltrisiloxane

14.3 **Transport hazard class(es):** 9

14.4 **Packing group:** III

14.5 **Marine pollutant:** YES

IMDG-Label: 9

EmS: F-A, S-F

14.6 **Special precautions for user:** Limited quantities (IMDG) 5L

Air transport (ICAO/IATA)

14.1 **UN Number:** 3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Contains: Polyalkyleneoxide
Modified Heptamethyltrisiloxane
14.3 Transport hazard class(es): 9
14.4 Packing group: III
ICAO-Labels: 9MI

15. REGULATORY INFORMATION

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

None known.

15.2 Chemical safety assessment

National legislation

Water contaminating class: WGK 1 slightly water endangering (Germany)

16. OTHER INFORMATION

Always read the label and product information before use.

Wording of the H-statements in section 2 and 3

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

H312: Harmful in contact with skin.

H332: Harmful if inhaled.

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