

SAFETY DATA SHEET

according to Regulation No 1907/2006 of the European Parliament and of the Council, as subsequently amended

Date of issue: 23. 09. 2019

Product code: -

Version: 1.0

Date of revision: -

Replaced version from: first issue

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Název látky nebo směsi: **Anti-Calc Remover**

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

1.1 Product identifier

Trade Name	Anti-Calc Remover
Mixture description	Aqueous solution of organic compounds and surfactants

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

Identified uses	Scale removal.
Uses advised against	It is recommended to use the product only for the identified uses. Other uses may expose users to unpredictable risks.

1.3 Details of the supplier of the safety data sheet

Humdakin
Estrupvej 1
8380 Trige
Denmark
tel: +45 6014 1588
e-mail address of the competent person responsible for the Safety Data Sheet: info@humdakin.com

1.4 Emergency telephone number

112 (General emergency phone), 998 (fire brigade), 999 (ambulance service).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The mixture is classified as **dangerous** according to regulation 1272/2008/EC.

Classification according to 1272/2008/EC **Eye Irrit. 2; H319**

Full text of classifications and H-phrases: see section 16.

The most important adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2 Label elements

hazard pictograms



signal word

Warning

components of the mixture to be placed on the label

none

hazard statements

H319 - Causes serious eye irritation.

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precautionary statements

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read carefully and follow all instructions.

P280 - Wear protective gloves/eye protection.

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.

supplemental hazard information

EUH208 – Contains 1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one. May produce an allergic reaction.

2.3 Other hazards

Mixture or its components are not classified as PBT or vPvB, nor they are listed on the candidate list for Annex XIV of the REACH Regulation as of the date of issue of this safety data sheet.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Aqueous solution organic compounds and surfactants

3.2.1 Components of a mixture classified as hazardous

Chemical identity	CAS Number EC Number Index Number	Registration Number	Content % hm.	Classification 1272/2008/EC
Citric acid	77-92-9 201-069-1 not specified	01-2119457026-42-XXXX	10 - 30	Eye Irrit. 2; H319
Alcohols, C12-14, ethoxylated, sulfates, sodium salts*	68891-38-3 500-234-8 not specified	01-2119488639-16-XXXX	1-3	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	54464-57-2259-174-3 not specified	not specified	< 0,2	Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 1; H410

*) Specific concentration limits applied to the substance: Eye Dam. 1; H318: C ≥ 10%, Eye Irrit.; H319: 5% ≤ C < 10%

SECTION 4: First aid measures

In all cases keep the victim at physical and mental rest and warm. In case of doubt or if symptoms persist, seek medical attention. Never give anything to an unconscious person. Pay attention to personal safety during rescue work.

4.1 Description of first aid measures

Inhalation

Interrupt the exposure, transfer the person to the fresh air. Seek medical attention if symptoms appear.

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Skin contact

Remove contaminated clothing, shoes and wash thoroughly with water (preferably lukewarm) and soap. Do not use solvents or thinners. Seek medical attention if soreness or redness persists.

Eye contact

Rinse with a gentle stream of water for at least 15 minutes. Keep the eyelids wide open with your thumb and forefinger. If the affected person is wearing contact lenses, remove them before rinsing eyes if it is easy. Seek medical attention if soreness or redness persists.

Ingestion

Rinse affected person's mouth and then let drink 1-2 glasses of water. Do not induce vomiting. Do not give milk or alcoholic beverages. Never give anything to an unconscious person. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂, extinguishing powder, alcohol resistant foam

Extinguishing media which shall not be used for safety reasons

Strong water jet can cause the fire spreading.

5.2 Special hazards arising from the substance or mixture

Fire water and the rest of the product must be contained and prevented from being discharged to any waterway, sewer or drain. Collect it separately and dispose of safely in accordance with applicable laws and local regulations.

In the event of fire, hazardous combustion gases are formed: carbon oxides, sulphur oxides, sodium oxides and products of an incomplete combustion.

5.3 Advice for firefighters

In case of fire, wear self-contained breathing apparatus with full-face mask and fire-resistant suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes, wear suitable protective equipment and clothing, see Section 8. Ensure adequate ventilation.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let large amounts of product to enter drains. If this cannot be avoided, inform the competent authorities (police and firefighters) immediately.

6.3 Methods and material for containment and cleaning up

According to the amount of spilled liquid, drain away the substance (large spillage) or in case of small spillage, absorb it with suitable absorbent (vermikulit, dry sand, earth), put into labelled closed containers and dispose of them accordingly to Section 13. Flush residues with water and collect it for waste disposal.

If container is damaged, transfer the content to the new undamaged container and label it properly again.

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6.4 Reference to other sections

Also comply with the provisions of Sections 7, 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the place of use. Observe the safety regulations for handling of chemicals. Wash hands before breaks and at the end of work. There is a high risk of slipping if the product leaks or spills.

7.2 Conditions for safe storage, including any incompatibilities

Store in original, tightly closed containers at dry, cool and well well-ventilated place.

Storage conditions:

Store at room temperature (10-30 ° C) away from sparks and open flames.

Protect from moisture, UV / sunlight, heat, frost and extreme temperatures.

7.3 Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 Exposure limit value

None are determined in EU

8.1.3 Biological limit values

None are determined in EU.

8.1.4 DNEL and PNEC values

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

CAS: 68891-38-3

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	175 mg/m ³
Workers	Dermal	Systemic effect	Long term	2750 mg/kg/day
Workers	Dermal	Local effect	Long term	132 µg/cm ²
General population	Inhalation	Systemic effect	Long term	52 mg/m ³
General population	Dermal	Systemic effect	Long term	1650 mg/kg/day
General population	Dermal	Local effect	Long term	79 µg/cm ²
General population	Oral	Systemic effect	Long term	15 mg/kg/day

PNEC

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Fresh water	Marine water	Intermittent releases	STP	Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
0.24 mg/l	0.024 mg/l	0.071 mg/l	10.0 mg/l	0.917 mg/kg	0.092 mg/kg	no effect	7.5 mg/kg	no effect

Citric acid

CAS: 77-92-9

DNEL

not available

PNEC

Fresh water	Marine water	Intermittent releases	STP	Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
0.44 mg/l	0.044 mg/l	not available	1000 mg/l	34.6 mg/kg	3.46 mg/kg	not available	33.1 mg/kg	not available

8.2 Exposure controls

8.2.1 Exposure reduction (technical measures)

Use only in well-ventilated areas. Take precautions for handling of chemicals. The degree of effectiveness of personal protective equipment depends on the temperature and level of ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Respiratory protection

Not necessary for standard use.

Hand protection

In case of prolonged or repeated contact, wear chemical resistant gloves (eg. butyl rubber or nitrile rubber gloves).

Eye/face protection

Wear safety goggles. They are not necessary when used by a consumer.

Skin protection

Not necessary for standard use by a consumer.

Do not eat, drink or smoke. After work, wash thoroughly with warm water and soap. Use protective cream. Do not use soiled protective equipment, do not use solvents for washing.

8.2.3 Environmental exposure reduction

Uncontrolled release of the substance/formulation into environment is to be avoided. Observe the emission limits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance (at 20 °C)	liquid
Colour	clear, yellowish
Odour threshold	characteristic
Odour threshold	not determined
pH (at 20 °C)	3 - 5
Melting point/freezing point	not determined
Boiling point (range)	approx 100°C

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Flash point		not determined
Evaporation rate		not determined
Flammability		not determined
Explosive limits	lower	not determined
	upper	not determined
Vapour pressure (at 20°C)		not determined
Vapour density		not determined
Relative density		not determined
Solubility in water (at 20°C)		completely soluble
Solubility in organic solvents		not determined
Partition coefficient: n-octanol/water		not applicable to mixtures
Auto-ignition temperature		not specified
Decomposition temperature		not specified
Viscosity (at 20 °C)		not specified
Explosive properties		is not classified as explosive
Oxidising properties		is not classified as an oxidant

9.2 Other information

not known

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture is stable under normal conditions. Dangerous reactions do not occur.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal conditions of use.

10.4 Conditions to avoid

Protect from moisture, UV / sunlight, heat, frost and extreme temperatures.

10.5 Incompatible materials

Not known

10.6 Hazardous decomposition products

In the event of fire, hazardous combustion gases are formed: carbon oxides, sulphur oxides, sodium oxides and products of an incomplete combustion.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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- *LD₅₀ oral, rat or mouse (mg/kg)*

Data for the mixture are not available

- 4 100 (rat) - CAS 68891-38-3
- 5 400 (mouse) - CAS 77-92-9

- *LD₅₀ skin, rat or rabbit (mg/kg)*

Data for the mixture are not available

- ≥ 2 000 (rat) - CAS 68891-38-3
- > 2 000 (rat) - CAS 77-92-9

- *LC₅₀ inhalation, rat (mg/l, 4h)*

Data for the mixture are not available

Skin corrosion/irritation

Data for the mixture are not available

- mean erythema score = 3.2 (full reversible) and oedema = 3.2 (full reversible) - CAS 68891-38-3 (rabbit, OECD 404)
- mean erythema and oedema score = 0.3 - CAS 77-92-9 (rabbit, OECD 404)

Serious eye damage/irritation

The mixture is classified as eye irritating

- mean corneal opacity = 0.7 (fully reversible), iris = 1 (full reversible), conjunctival redness = 3 (fully reversible), chemosis = 3.3 (fully reversible) - CAS 68891-38-3 (rabbit, 21 d., OECD 405)
- overall irritation score = 16 (not fully reversible after 14 days) - CAS 77-92-9 (rabbit, OECD 405)

Respiratory or skin sensitisation

The mixture contains substances, which may produce a skin allergic reaction in an amount less than the classification limit

Carcinogenicity

Not containing these substances (or less than the classification limit)

Germ cell mutagenicity

Not containing these substances (or less than the classification limit)

- negative - CAS 68891-38-3 (mouse, OECD 476)
- negative - CAS 77-92-9 (OECD 471)

Reproductive toxicity

Not containing these substances (or less than the classification limit)

- NOAEL = 250 mg/kg/day - CAS 68891-38-3 (rat, systemic effects)
- NOAEL > 272 mg/kg/day - CAS 77-92-9 (mouse, teratogenicity)

Specific target organ toxicity – single exposure

The classification criteria are not met

Specific target organ toxicity – repeated exposure

The classification criteria are not met

- NOAEL > 225 mg/kg, target organs: liver (rat, oral, 90 d) - CAS 68891-38-3
- NOAEL = 4000 mg/kg/day (oral, rat) - CAS 77-92-9 (total effects, body weight, mortality)

Aspiration hazard

The classification criteria are not met

Other information

See section 2 and 4.

SECTION 12: Ecological information

12.1 Toxicity

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Fish Data for the mixture are not available.
LC₅₀, 96 hrs., Danio rerio: 7.1 mg/l - CAS 68891-38-3
NOEC, 28 d, Oncorhynchus mykiss: 0.14 mg/l - CAS 68891-38-3
LC₅₀, 48 hrs., Leuciscus idus melanotus: 440 mg/l - CAS 77-92-9

Daphnia Data for the mixture are not available.
EC₅₀, 48 hrs., Daphnia Magna: 7.4 mg/l - CAS 68891-38-3
NOEC, 21 d., Daphnia Magna: 0.27 mg/l - CAS 68891-38-3
EC₅₀, 24 hrs., Daphnia Magna: 1535 mg/l - CAS 77-92-9

Algae Data for the mixture are not available.
EC₅₀, 72 hrs., Scenedesmus subspicatus: 27.0 mg/l - CAS 68891-38-3

Bacteria Data for the mixture are not available.
EC₁₀, 16 hrs., Pseudomonas putida: > 10 g/l - CAS 68891-38-3
16 hrs., Pseudomonas putida: > 10000 mg/l - CAS 77-92-9

12.2 Persistence and degradability

Data for the mixture are not available.
Readily biodegradable: ca 100% za 28 days (production CO₂, EU C.4-A) - CAS 68891-38-3
Readily biodegradable: > 70 % za 28 dní (OECD 301 A) - CAS 68891-38-3
Readily biodegradable: 97% za 28 days (production CO₂, OECD 301B) - CAS 77-92-9
Readily biodegradable: 100 % za 19 dní (OECD 301E) - CAS 77-92-9

12.3 Bioaccumulative potential

Data for the mixture are not available
not expected - log Kow: ≤ 3 - CAS 68891-38-3
estimated BCF = 0.5 - CAS 77-92-9

12.4 Mobility in soil

Data for the mixture are not available.
Koc = 2.2 l/kg - CAS 68891-38-3
log Kow: -0.2 - CAS 77-92-9

12.5 Results of PBT and vPvB assessment

Mixture or its components are not classified as PBT or vPvB, nor they are listed on the candidate list for Annex XIV of the REACH Regulation as of the date of issue of this safety data sheet.

12.6 Other adverse effects

Not known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods of the substance or mixture and the contaminated packaging.

Must be disposed in accordance to the applicable European and local regulations (e.g. in a hazardous waste incinerator). Never dispose by flushing into sewer! Do not contaminate ponds or ditches with chemical or used container. Hand over residual amounts and solutions to a licensed disposal company.

Waste Classification and removal of waste is a producer's responsibility

Possible waste code: 20 01 29* - Detergents containing hazardous substances.

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Physical/chemical properties that may affect waste treatment options

None known.

Special precautions recommended for waste management

None known.

Waste legislation

Directive 2008/98/ES

SECTION 14: Transport information

The product is not classified as dangerous for transport (ADR/RID, IMDG, ICAO/IATA).

14.1 UN number

no

14.2 UN proper shipping name

- ADR/RID	no
- other transport	no

14.3 Transport hazard class(es)

no

14.4 Packing group

no

14.5 Environmental hazards

it is not dangerous for the environment during transport

14.6 Special precautions for user

not given

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

not relevant

Marking according to ADR

no

ADR/RID

- classification code	no
- classification code	no
- Kemlers code (hazard identification code)	no
- tunnel restriction code	no

IMDG

- Emergency Schedules (EmS)	no
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SECTION 15: Regulatory information

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

Regulation No.1907/2006/ES, REACH.

Regulation No.1272/2008/ES, CLP.

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15.2 Chemical safety assessment

Not available for the mixture.

SECTION 16: Other information

Reason for alteration

First edition.

Key or legend to abbreviations and acronyms used in the safety data sheet

Aquatic Chronic 1	Hazardous to the aquatic environment, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, category 3
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Serious eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
CLP	Regulation No. 1272/2008/EC
REACH	Regulation No 1907/2006/EC
PBT	Persistent, bioaccumulative and toxic substances.
vPvB	Very persistent and very bioaccumulative (vPvB) substances.
SVHC	Substances of Very High Concern

Důležité odkazy na literaturu a zdroje dat

European legislation, manufacturer's safety data sheet, MedisAlarm database, registration dossier of the compounds involved.

Seznam příslušných standardních vět o nebezpečnosti, pokynů pro bezpečné zacházení

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains . May produce an allergic reaction.
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P280	Wear protective gloves/eye protection.
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.

Training advice

According to SDS.

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Relevant information for classification

According to additional method of CLP. Classification according to manufacturer's data. Use only for the purposes designated by the manufacturer, it will prevent health and environmental risks.

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