

**Material Safety Data Sheet
HALS 292**

1. Identification

Product identifier used on the label

HALS 292

Recommended use of the chemical and restriction on use

Recommended use*: stabilizer; polyurethane component

Unsuitable for use: This material is not intended for use in products for which prolonged contact with mucous membranes, body fluids or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with nationally and internationally applicable safety testing requirements. Because of the wide range of such potential uses, we are not able to recommend this material as safe and effective for such uses and assume no liability for such uses.

Suitable for use in industrial sector: Polymers industry; chemical industry

Details of the supplier of the safety data sheet

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Emergency telephone number

Other means of identification

Chemical family: Sterically hindered amine light stabilizer

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Sens.	1A	Skin sensitization
Aquatic	1	Hazardous to the aquatic environment - acute

Aquatic Chronic

Label elements

1

Hazardous to the aquatic environment - chronic

Pictogram:

Signal Word:

Warning

Hazard Statement:

H317 May cause an allergic skin reaction

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves.

P 273 Avoid release to the environment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements (Response):

P333+ P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.

P303 + P352 IF ON SKIN (on hair): Wash with plenty of soap and water.
P391 Collect spillage.

P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:

Skin sensitizer.

Avoid contact with the substance.

Use NIOSH approved respirator as needed to mitigate exposure.

Wear protective clothing.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 CAS Number Content (W/W) Chemical name

41556-26-7 50.0 - 100.0 % bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

82919-37-7 20.0 - 50.0 % Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

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4. First-Aid Measures Description of first aid measures General advice:

Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:

Remove contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If irritation develops, seek medical attention.

If swallowed:

Rinse mouth immediately with water. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting due to aspiration hazard. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons: water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting: harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing. Keep people away and stay on the upwind side. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

7. Handling and Storage**Precautions for safe handling**

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

The packed product is not damaged by low temperatures or by frost.

8. Exposure Controls/Personal Protection**Personal protective equipment Respiratory protection:**

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields.

Body protection:

Impermeable protective clothing

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	ester-like	
Odour threshold:		No applicable information available.
Colour:	light yellow	
pH value:	8.4	(1 %(m), 20 - 25 °C) (as suspension)
glass transition temperature:	-57.8 °C	(1,013 hPa) (Directive 92/69/EEC, A.1)
boiling temperature:	> 300 °C	(Directive 92/69/EEC, A.2)
Sublimation point:		No applicable information available.
Flash point:	209.5 °C	(Directive 92/69/EEC, A.9)
Flammability:	not applicable	
Lower explosion limit:		For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.
Upper explosion limit:		For liquids not relevant for classification and labelling.
Autoignition:	380 °C	(DIN 51794)
Vapour pressure:	0.000001 hPa	(20 °C) (OECD Guideline 104)
Density:	0.993 g/cm ³	(20 °C) (OECD Guideline 109)
Relative density:	0.99	(OECD Guideline 109)
Vapour density:		No applicable information available.
Partitioning coefficient n-octanol/water (log Pow):	2.37 - 2.77	(25 °C) (OECD Guideline 107)
Self-ignition temperature:		Based on its structural properties the product is not classified as self-igniting.
Thermal decomposition:	325 °C	
	No decomposition if stored and handled as prescribed/indicate	
Viscosity, dynamic:	400 mPa.s	(20 °C)
Viscosity, kinematic:	478 mm ² /s	(20 °C) (Capillary viscometer)
Particle size:		The substance / product is marketed or used in a non solid or granular form.
% volatiles:	0.5 %	
Solubility in water:	21.5 - 29.8 mg/l	(21 °C)
Solubility (qualitative):	miscible	
	solvent(s): organic solvents.	
Molar mass:	508.79 g/mol	
Evaporation rate:		Value can be approximated from Henry's Law Constant or vapor pressure.
Other Information:	If necessary, information on other physical and chemical	

parameters is indicated in this section.

10. Stability and Reactivity Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing. Minimum ignition energy:

No data available.	Reaction with:	water
Reactions with water/air:	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
Formation of flammable	Reaction with:	air
	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
	Remarks:	Form presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

The product is chemically stable.

Conditions to avoid

No special precautions other than good housekeeping of chemicals.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Thermal decomposition:

325 °C

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of low toxicity after single ingestion.

Oral

Type of value: LD50 Species: rat

Value: 3,230 mg/kg (Conventional method)

Inhalation not determined

Dermal

not determined

Assessment other acute effects Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin. Skin

Species: rabbit

Result: non-irritant

Method: OPP 81-5 (EPA-Guideline)

Eye

Species: rabbit Result: non-irritant

Sensitization Species: guinea pig Result: sensitizing Method: OECD Guideline 406

Aspiration Hazard No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No known chronic effects. Genetic toxicity

Genetic toxicity in vitro: Ames-test negative

Carcinogenicity

Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Experiences in humans Sensitizing effects by skin contact.

Other Information Tested as a preparation.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

May cause long-term adverse effects in the aquatic environment.

Very toxic (acute effect) to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) 0.97 mg/l, *Lepomis macrochirus* (OECD Guideline 203)

LC50 (96 h) 7.9 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203)

LC50 (96 h) 0.9 mg/l, *Brachydanio rerio* (OECD Guideline 203, semistatic)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Aquatic invertebrates

EC50 (24 h) 20 mg/l, *Daphnia magna* (OECD Guideline 202, part 1)

Aquatic plants

EC50 (72 h) 1.68 mg/l (growth rate), *Desmodesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 aerobic
activated sludge, domestic/EC50 (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H₂O)
Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.

Elimination information

38 % DOC reduction (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, aerobic microorganisms)

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Bioaccumulative potential

Assessment bioaccumulation potential Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

Additional information

Other ecotoxicological advice:

Do not allow to enter soil, waterways or waste water channels. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

13. Disposal considerations Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. Do not discharge into drain/surface waters/groundwater

It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA. **Container disposal:**

Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport

USDOT

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains BIS-(1,2,2,6,6-PENTAMETHYL-4-
PIPERIDYL)SEBACATE)

Air transport

IATA/ICAO
Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains BIS-(1,2,2,6,6-PENTAMETHYL-4-
PIPERIDYL)SEBACATE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 1 Physical hazard:0 (Essentially no hazard)

16. Other Information

SDS Prepared by:

