

Material Safety Data Sheet

HALS 770

1. Identification

Product identifier used on the label

HALS 770

Recommended use of the chemical and restriction on use

Recommended use*: stabilizer

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.

Details of the supplier of the safety data sheet

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Emergency telephone number

Other means of identification

Synonyms: bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

2. Hazards Identification

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

Classification of the product

Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

Label elements



Signal Word

Danger

Hazard Statement:

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting

H400 effects Very toxic to aquatic life.

Precautionary Statements (Prevention)

P280 Wear eye/face protection.

P273 Avoid release to the environment

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

P310 contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or

P391 doctor/physician

Collect spillage.

Precautionary Statements (Disposal)

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

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

Labeling of special preparations (GHS):

To avoid inhalation hazard, do not grind.

This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size.

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

Emergency overview

WARNING:

Toxic by inhalation.

Severely irritating to the eyes.

May cause sensitization by skin contact.

Repeated or prolonged contact may cause skin irritation or allergic skin reactions.

MAY BE HARMFUL IF SWALLOWED.

May cause metallic taste in mouth.

Prolonged or repeated exposure effects:

CAN CAUSE NERVOUS SYSTEM DAMAGE.

Refer to MSDS Section 7 and 10 for Dust Explosion information.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 CAS Number Weight % Chemical name

52829-07-9 100.0 % bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 CAS Number Weight % Chemical name

52829-07-9 100.0 % bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If on skin:

Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Rinse mouth immediately with water. Never induce vomiting or give anything by mouth if the

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: dry powder, foam

Unsuitable extinguishing media for safety reasons: carbon dioxide

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

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:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

Impact Sensitivity:

Assessment: no

6. Accidental release measures

Further accidental release measures:

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing.

Environmental precautions

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

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s⁻¹).

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

No occupational exposure limits known.

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment Respiratory protection:

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

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:

9. Physical and Chemical Properties

Form:	granules, crystalline
Odour:	odourless
Odour threshold:	No data available.

pH value:	9.7 (1 %(m), 20 - 25 °C) (as suspension)	
Melting point:	81 - 85°C	(calculated)
Boiling point:	> 350 °C	
Sublimation point:	(1,013 hPa)	(DIN 51584)
Flash point:	No data available.	(Directive)
Flammability:	> 150 °C	
Lower explosion limit:	not highly flammable	
Upper explosion limit:		
Autoignition:	For solids not relevant for classification and labelling. For solids not relevant for classification and labelling. 310 °C	(BAM)
Vapour pressure:		
Density:		
Relative density:		
Bulk density:		
Vapour density:	0.0000013 hPa	
Partitioning coefficient n- octanol/water (log Pow):	1. 05	
Self-ignition temperature:	α/cm3	
Thermal decomposition:	Based on its structural properties the product is not classified as self- igniting.	
Viscosity, dynamic:	> 350 °C (dynamic (Lutolf oven))	
Viscosity, kinematic:	No data available.	
% volatiles:	No data available.	
Solubility in water:	No data available.	
Solubility (quantitative):	0.5 %	
Solubility (qualitative):	< 100 mg/l (20 °C)	
Molar mass:	No data available.	
Evaporation rate:	No data available.	
Other Information:	480.73 g/mol	
	The product is a non-volatile solid.	
	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

Dust explosivity characteristics: Kst: 272 m.bar/s Revaluation 2015

Dust explosion class:
Dust explosion class 2 (Kst-value 200 up to 300 bar m (St 2)

Minimum ignition energy:

No data available.

Reactions with water/air:	Reaction with:	water
	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
	Reaction with:	air
	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no
Formation of flammable gases:	Remarks:	Forms prese

Chemical stability

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

Possibility of hazardous reactions

Dust explosion hazard.

Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products 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: Overexposure to dust may cause lung damage.

Oral

Type of value: LD50 Species: rat Value: > 2,000 mg/kg

Inhalation

Type of value: LC50 Species: rat Value: 0.5 mg/l Exposure time: 4 h

An aerosol with respirable particles was tested.

Dermal

Type of value: LD50 Species: rat Value: > 2,000 mg/kg

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 the skin. May cause severe damage to the eyes. Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit Result: Corrosive.

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. Human data do not fully exclude a skin sensitizing potential.

Guinea pig maximization test Species: guinea pig Result: Non-sensitizing.

Method: OECD Guideline 406

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No adverse effects were observed after repeated oral exposure in animal studies. Based on the chemical structure a neurotoxic effect by repeated administration cannot be excluded.

Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

Genetic toxicity in vitro: Ames-test negative

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a fertility impairing

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The results of a more recent animal study gave no evidence that the substance causes a developmental toxicity. After the uptake of small doses toxicity to development will not be expected in humans.

Other Information

There is no formation of respirable dust during intended uses. However, if dust formation occurs at processing/finishing processing steps like regranulation, mechanical machining (for example drilling, grinding etc.), occupational protection regulations have to be considered.

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:

Acutely toxic for 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) 4.4 mg/l, *Lepomis macrochirus* (OECD 203; ISO 7346; 92/69/EEC, C.1, Flow through.) The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates

EC50 (48 h) 8.6 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants

EC10 (72 h) 0.188 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

EC50 (72 h) 0.705 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

Assessment of terrestrial toxicity Study scientifically not justified.

Microorganisms/Effect on activated sludge

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

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Moderately/partially biodegradable.

Elimination information

24 % CO₂ formation relative to the theoretical value (28 d) (Directive 84/449/EEC, C.5) (aerobic, activated sludge) Moderately/partially biodegradable.

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Bioaccumulative potential

Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) 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 discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

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

Container disposal:

Dispose of in accordance with national, state and local regulations. Recommend crushing,

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 3077 9, EHSM YES
Hazard label: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Marine pollutant: Proper shipping name: (contains BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) SEBACATE)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3077 9, EHSM
Hazard label: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper shipping name: (contains BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) SEBACATE)

15. Regulatory Information**Federal Regulations**

Registration status: US released / listed
Chemical TSCA,

EPCRA 311/312 (Hazard categories): Acute;

NFPA Hazard codes: Reactivity: 0 Special:
Health : 3 Fire: 1

HMIS III rating

Health: 3 Flammability: 1 Physical hazard:0

16. Other Information

SDS Prepared by:

