

**Material Safety Data Sheet  
HALS 791**

**1. Identification**

**Product identifier used on the label**

**HALS 791**

**Recommended use of the chemical and restriction on use**

Recommended use\*: stabilizer

**Details of the supplier of the safety data sheet**

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www.additivesforpolymer.com

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**Emergency telephone number**

**Other means of identification**

Chemical family: Mixture of additives for plastic material stabilization

**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 chronic	2	Hazardous to the aquatic environment - chronic

**Label elements**

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318 Causes serious eye damage.  
H411 Toxic to aquatic life with long lasting effects.  
H400 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 contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P391 Collect spillage.

Precautionary Statements (Disposal):

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

#### **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:

Causes serious eye irritation.

AVOID CREATING DUST.

Avoid contact with the skin, eyes and clothing.

Wear NIOSH-certified chemical goggles.

Take precautionary measures against static discharges.

### **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	30.0 - 60.0%	bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate
70624-18-9	30.0 - 60.0%	1,6-Hexanediamine, N, N'-bis(2, 2, 6, 6-tetramethyl-4-piperidyl)-, polymer with 2, 4, 6-trichloro-1, 3, 5-triazine, reaction products with 2, 4, 4-trimethyl-2-pentanamine

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

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
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#### 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.

Hazards: The intoxication may have a two-phase progression.

#### 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.

## **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.

Closed containers should only be opened in well-ventilated areas. Avoid dust formation. Do not use any sparking tools.

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.

## 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

### 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.,

### Personal protective equipment Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

### Hand protection:

Wear chemical resistant protective gloves.

### Eye protection:

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

### Body protection:

Body protection must be chosen based on level of activity and exposure.

### Physical and Chemical Properties

Form:	pellets
Odour:	odourless
Odour threshold:	No data available.
Colour: pH value:	white to slightly yellow
Melting point:	of low solubility
Boiling point:	approx. 55 °C
Sublimation point:	not applicable
Flash point:	No data available.
Flammability:	>150 °C
Lower explosion limit:	not flammable For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.

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Autoignition:	> 250 °C
	The product has not been tested. The statement has been derived from the properties of the individual components.
Vapour pressure:	< 0.01 Pa (20 °C)
Density:	1 - 1.2 g/cm <sup>3</sup> (20 °C)
Relative density:	1 - 1.2
Bulk density:	approx. 400 kg/m <sup>3</sup>
Vapour density:	No data available.
Partitioning coefficient n-octanol/water (log Pow):	Study scientifically not justified.
Self-ignition temperature:	not self-igniting
Thermal decomposition:	> 350 °C > 220 °C (Isoperibolic (Lutolf oven))
Viscosity, dynamic:	not determined
% volatiles:	not determined
Solubility in water:	insoluble
Solubility (quantitative):	No data available.
Solubility (qualitative):	No data available.
Evaporation rate:	The product is a non-volatile solid.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

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## 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: not fire-propagating

### Chemical stability

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

### Possibility of hazardous reactions

In spite of the dedusting carried out for reasons of industrial health the product resp. the fine dust of the product is capable of dust explosion.

### Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid a | | 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.

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Thermal decomposition:

> 350 °C

> 220 °C (Isoperibolic (Lutolf oven))

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## 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

The product has not been tested. The statement has been derived from the properties of the individual components.

Inhalation

*Information on: bis(2, 2, 6, 6-tetramethyl-4-piperidyl) sebacate*

*Type of value: LC50*

*Species: rat*

*Value: 0.5 mg/l*

*Exposure time: 4 h*

*An aerosol with respirable particles was tested.*

*Information on: Polymeric sterically hindered amine light stabiliser Type of value: LC50 Species: rat*

*Value: 0.112 mg/*

Dermal

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

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: May cause severe damage to the eyes.

Skin

Species: rabbit Result: non-irritant

The product has not been tested. The statement has been derived from the properties of the individual components.

Eye

Species: rabbit Result: Irritant.

The product has not been tested. The statement has been derived from the properties of the individual components.

Sensitization

Assessment of sensitization: No sensitizing effect.

Result: Non-sensitizing.

The product has not been tested. The statement has been derived from the properties of the individual components.

### **Chronic Toxicity/Effects**

Repeated dose toxicity

Assessment of repeated dose toxicity: Based on the chemical structure a neurotoxic effect by repeated administration cannot be excluded. The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity

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

Carcinogenicity

Assessment of carcinogenicity: Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

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

Reproductive toxicity

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

Teratogenicity

Assessment of teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

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. The product has not been tested. The statement has been derived from the properties of the individual components.

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

Toxicity to fish Fish

No data available.

Aquatic invertebrates EC50, daphnia No data available.

**Microorganisms/Effect on activated sludge**

Toxicity to microorganisms No data available.

**Persistence and degradability**

Assessment biodegradation and elimination (H2O)

The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Elimination information

Not readily biodegradable (by OECD criteria).

**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.

No data available.

**Additional information**

Other ecotoxicological advice:

The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

**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

**RCRA:**

## 14. Transport Information

### Land transport

Not classified as a dangerous good under transport regulations

### Sea transport

IMDG 9  
Hazard class: III  
Packing group: UN 3077  
ID number: 9, EHSM  
Hazard label: YES  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

### Air transport

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

## 15. Regulatory Information

**VOC content:** not determined **Federal Regulations**

### Registration status:

Chemical TSCA, US released / listed

**EPCRA 311/312 (Hazard categories):** Acute;

### CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

### NFPA Hazard codes:

#### HMIS III rating

Health: 3 Flammability: 1 Physical hazard:0

## 16. Other Information