

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

1.1 Product identifier

Identification of the substance	Castor oil, hydrogenated
Trade name	<u>Hydrogenated Castor Oil (HCO)</u>
Registration number (REACH)	01-2119498298-18-xxxx
EC number	232-292-2
CAS number	8001-78-3

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

Relevant identified uses	Manufacture of substances Intermediate Adhesive Sealant Alkyd resins Coating and paint Additive for polyurethane systems Grease Plastic additive Polish
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1.3 Details of the supplier of the safety data sheet

Mercur Handel GmbH Schinkelstraße 44a 40211 Düsseldorf Germany	Telephone: +49 (0)211 159887-0 Telefax: +49 (0)211 159887-87 e-mail: info@mercuroleo.com Website: www.mercuroleo.com
e-mail (competent person)	sdb@csb-compliance.com

1.4 Emergency telephone number

Emergency information	Mercur Handel GmbH +49 (0)211 159887-0 This number is only available during the following office hours: Mon-Fri 08:00 - 17:00 Outside office hours: +49 (0)172 747 59 87
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

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

Not required.

2.3 Other hazards

Dust explosion hazards.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Not listed.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Castor oil, hydrogenated
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Identifiers

REACH Reg. No	01-2119498298-18-xxxx
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CAS No	8001-78-3
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EC No	232-292-2
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Molecular formula	C57H110O9
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Molar mass	939.5 g/mol
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Purity	>99%
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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

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Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Danger of dust explosion.

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

self-contained breathing apparatus (EN 133)

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.

Avoid contact with skin and eyes.

Avoid breathing dust.

Control of dust.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Knock down dust with water spray.

Remove from the water surface (e.g. skimming, sucking).

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not breathe dust.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

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Specific notes/details

Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere.

Dust deposits may accumulate on all deposition surfaces in a technical room.

Danger of dust explosion.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharge.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, UV-radiation/sunlight

Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Keep in a cool place.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	336.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	47.75 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
CR: chloroprene (chlorobutadiene) rubber	≥ 0,5 mm	>480 minutes (permeation: level 6)
NBR: acrylonitrile-butadiene rubber	≥ 0,4 mm	>480 minutes (permeation: level 6)
PVC: polyvinyl chloride	≥ 0,5 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particle filter device (DIN EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid (solid in various forms) solid in various forms powder, flakes
Colour	white
Odour	odourless
Melting point/freezing point	85 – 88 °C
Boiling point or initial boiling point and boiling range	>300 °C
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not applicable (solid)
Flash point	not applicable
Auto-ignition temperature	not applicable (solid)
Decomposition temperature	not relevant
pH (value)	not applicable
Viscosity	not relevant (solid)
Solubility(ies)	
Water solubility	<0.05 mg/l at 20 °C not miscible in any proportion
Partition coefficient n-octanol/water (log value)	18.75
Vapour pressure	<0.001 Pa at 20 °C
Density and/or relative density	
Density	0.88 – 0.97 g/cm ³
Relative vapour density	not applicable
Particle characteristics	no data available

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9.2 Other information

Information with regard to physical hazard classes

hazard classes acc. to GHS (physical hazards):
not relevant

Other safety characteristics

there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Danger of dust explosion.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
UV-radiation/sunlight.
Take precautionary measures against static discharge.

10.5 Incompatible materials

acids, bases, oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Shall not be classified as acutely toxic.

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Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>20,000 mg/kg	rat	OECD Guideline 401	ECHA
dermal	LD50	>2,000 mg/kg	rat	79/831/EWG, Annex V, Part B	ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Skin sensitisation

Shall not be classified as a skin sensitiser.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Not listed.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Endpoint	Value	Species	Method	Source	Exposure time
LC50	>10,000 mg/l	zebra fish (Danio rerio)	ISO 7346-1	ECHA	96 h
EL50	>100 mg/l	daphnia magna	EU method C.2	ECHA	48 h
ErC50	>100 mg/l	algae (Desmod-esmus subspicatus)	EU method C.3	ECHA	72 h
EC50	>10 µg/l	algae (Desmod-esmus subspicatus)	EU method C.3	ECHA	72 h

Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

Endpoint	Value	Species	Method	Source	Exposure time
NOEC	≥0.01 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d
LOEC	>0.01 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d

12.2 Persistence and degradability

Process of degradability				
Process	Degradation rate	Time	Method	Source
oxygen depletion	64 %	28 d	ISO 10708	ECHA

Biodegradation

The substance is readily biodegradable.

Persistence

No data available.

12.3 Bioaccumulative potential

n-octanol/water (log KOW)

18.75
(ECHA)

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12.4 Mobility in soil

Henry's law constant

0 Pa m³/mol at 25 °C
(ECHA)

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): nwg

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number or ID number not assigned

14.2 UN proper shipping name -

14.3 Transport hazard class(es)

14.4 Packing group -

14.5 Environmental hazards -

14.6 Special precautions for user -

14.7 Maritime transport in bulk according to IMO instruments -

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SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Not listed.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

Not listed.

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

Not listed.

Regulation on the marketing and use of explosives precursors

Not listed.

Regulation on drug precursors

Not listed.

Regulation on substances that deplete the ozone layer (ODS)

Not listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

Not listed.

Regulation on persistent organic pollutants (POP)

Not listed.

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)

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Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH).

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Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.