



1. Identification

Product identifier:

Trade name: UV-353

Substance name: Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

CAS No.: 41556-26-7 & 82919-37-7

Recommended use of the chemical and restrictions on use

Recommended use*: stabilizer

Unsuitable for use: The product is not recommended to be used in contact with mucous membranes, abraded skin, or blood; or for the manufacture of implants for the human body as it has not been tested for these applications. Suitable for use in industrial sector: Polymers industry; chemical industry

Manufacturer/supplier:

The Hanson Group, LLC

3044 Adriatic Court

Peachtree Corners, GA 30071 USA

Tel: +770-495-9554

Emergency telephone number:

CHEMTREC, (24 hours) 800-424-9300

Note: This CHEMTREC number is strictly for emergencies, and not for technical assistance.

2. Hazard(s) Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200/GHS:

Skin Sens.	1A	Skin sensitization
Repr.	2 (fertility)	Reproductive toxicity
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

Label elements in accordance with paragraph (d) of §1910.1200/GHS:

GHS pictogram(s):



Signal word:

Warning

Hazard statement(s):

H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.



Precautionary Statements (Prevention):

- P280 Wear protective gloves, protective clothing and eye protection or face protection.
P273 Avoid release to the environment.
P261 Avoid breathing mist or vapour or spray.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P391 Collect spillage.
P308 + P313 IF exposed or concerned: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

- P405 Store locked up.

Precautionary Statements (Disposal):

- P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/information on ingredients

Chemical name		CAS number	EC number	Concentration
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	255-437-1	75 – 85%
	Methyl (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	82919-37-7	280-060-4	15 – 25 %

Ingredients which are classified as health hazards:

CAS No.: 41556-26-7 & 82919-37-7 - Skin sensitization category 1

4. First-aid measures

Description of first aid measures

General advice:

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

If inhaled: Keep patient calm, remove to fresh air, seek medical attention.

If on skin: Wash affected areas with water while removing contaminated clothing. Seek medical attention.



If in eyes: Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. 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: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Symptoms: Overexposure may cause: skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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

Generation 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 extinguishing water must be disposed of in accordance with official regulations.

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.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and storage

Precautions for safe handling:

Wear suitable protective clothing, gloves, eye protection and/or respiratory protection.



Use with local exhaust ventilation. Provide extract ventilation to points where emissions occur (LEV).
Avoid contact with the skin, eyes and clothing. Provide specific employee training to prevent/minimize exposures.

Protection against fire and explosion:
No special precautions necessary.

Conditions for safe storage, including any incompatibilities:

No applicable information available.

Unsuitable materials for containers: Paper/Fibreboard

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 substance specific occupational exposure limits known.

Advice on system design: Ensure adequate ventilation.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Respiratory protection in case of vapour/aerosol release. 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: Body protection must be chosen based on level of activity and exposure., Protective coverall and/or impermeable apron and boots as necessary.

General safety and hygiene measures:

Wearing of closed work clothing is required additionally to the stated personal protection equipment.

No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	:	Light yellow liquid
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	8.4 (1% in water)
Melting point/freezing point	:	< 20 °C
Boiling point/ boiling range	:	> 350 °C (622 °F)
Flash point	:	92.2 °C (198 °F)
Evaporation rate	:	No data available
Flammability	:	No data available
Upper/lower flammability or explosive limits	:	No data available
Vapor pressure	:	< 1.0 x 10 ⁻⁴ mmHg @ 20 °C
Vapor density	:	No data available
Density	:	0.99 g/cm ³ @ 20 °C
Specific gravity	:	0.982



Solubility in water	:	Insoluble
Partition coefficient - n-octanol/water	:	2.4
Auto-ignition temperature	:	380 °C (716 °F)
Decomposition temperature	:	325 °C
Viscosity	:	400 m Pa s @ 20 °C
Molecular weight	:	508.79 g/mol

10. Stability and reactivity

Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
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 acid, strong base and strong oxidizing agents.
Hazardous decomposition products:	Thermal decomposition and burning will produce toxic fume, carbon monoxide, carbon dioxide and nitrogen oxides.

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. Virtually nontoxic after a single skin contact.

Oral

Type of value: LD50

Species: rat (male/female)

Value: 3,230 mg/kg (similar to OECD guideline 401)

Inhalation

not determined

Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 3,170 mg/kg (similar to OECD guideline 402)

No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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

Method: similar to OECD guideline 405

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of sensitization:

Sensitization after skin contact possible.

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Assessment of sensitization:

Sensitization after skin contact possible.

Guinea pig maximization test

Species: guinea pig

Result: skin sensitizing

Method: OECD Guideline 406

Aspiration Hazard

No aspiration hazard expected.

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 fully tested. The statements have been derived in parts from products of a similar structure or composition.

Genetic toxicity

Assessment of mutagenicity: In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: No data available concerning carcinogenic effects.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: In animal studies the substance did not cause malformations. The potential to cause toxicity to development cannot be excluded at maternally toxic doses.



Experiences in humans

Sensitizing effects by skin contact.

Other Information

Tested as a preparation.

12. Ecological information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity: 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) 0.9 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

Study does not need to be conducted.

Aquatic plants

EC50 (72 h) 1.68 mg/l (growth rate), Desmodismus 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.

Chronic toxicity to fish

Study not necessary due to exposure considerations.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 1 mg/l, Daphnia magna (OECD Guideline 211, 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.

Assessment of terrestrial toxicity

No data available.

Study not necessary due to exposure considerations.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic activated sludge, domestic/EC20 (3 h): ≥ 100 mg/l

The details of the toxic effect relate to the nominal concentration.

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/EWG, C.4-D) (aerobic, aerobic microorganisms)

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.



Information on Stability in Water (Hydrolysis)

t1/2 51 d (25 °C, pH value 7), (OECD Guideline 111, pH 7)

The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

t1/2 68 d (25 °C, pH value 7), (OECD Guideline 111, pH 7)

The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

t1/2 3.6 d (25 °C, pH value 9), (OECD Guideline 111, pH 9)

The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

t1/2 2.6 d (25 °C, pH value 9), (OECD Guideline 111, pH 9)

The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Bioaccumulative potential

Assessment bioaccumulation potential

Accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: < 9.7 (8 d), Cyprinus carpio (other)

Bioconcentration factor: < 31.4 (8 d), Cyprinus carpio (other)

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 drains/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

Not Classified as a dangerous good under transport regulations

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

DSL/NDSL Complies

EINECS/ELINCS Complies

Japan (ENCS) Complies

Inventory of Existing Chemical Substances in China Complies

Korea (KECL) Complies

Philippines (PICCS) Complies

AIIC Complies

NZIoC Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

All substances are TSCA listed and active.

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including FORMALDEHYDE (GAS), which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

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



RCRA status: Not a hazardous waste under RCRA (40 CFR 261).

CERCLA status: Not listed.

SARA/TITLE III - TOXIC CHEMICALS LIST: This product does not contain a toxic chemical for routine annual toxic chemical release reporting under sec. 313 (40 CFR 372).

16. Other information

Last Revision Date: See bottom of each page under 'Revised Date'

Shelf life: 2 years minimum in sealed containers protected from light and air.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.