

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

PU Sealant & Adhesive 534

Product no.

-

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

1-component polyurethane sealant.

Uses advised against

For professional and industrial use only. Not recommended for DIY-use.

The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

Dana Lim A/S
Københavnsvej 220
DK-4600 Køge
Denmark
phone: +45 56 64 00 70
fax: +45 56 64 00 90

Contact person

Product Safety Department

E-mail

info@danalim.dk

SDS date

2019-09-18

SDS Version

4.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Sens. 1; H317

Resp. Sens. 1; H334

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)**Signal word**

Danger

Hazard statement(s)

May cause an allergic skin reaction. (H317)
 May cause allergy or asthma symptoms or breathing difficulties if inhaled. (H334)

Precautionary statements

General -
Prevention Avoid breathing vapours. (P261).
 [In case of inadequate ventilation] wear respiratory protection. (P284).
Response IF INHALED: Call a POISON CENTER/doctor if you feel unwell. (P304+P312).
 IF ON SKIN: Wash with plenty of water and soap. (P302+P352).
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338).
Storage -
Disposal Dispose of contents/container to an approved waste disposal plant. (P501).

Identity of the substances primarily responsible for the major health hazards

4,4'-methylenediphenyl diisocyanate; reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Additional labelling

Contains isocyanates. May produce an allergic reaction. (EUH204)

Unique formula identifier (UFI)

-

2.3. Other hazards

Not applicable

Additional warnings

Not applicable

VOC (volatile organic compound)

Not applicable

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	polyvinyl chloride
IDENTIFICATION NOS.:	CAS-no: 9002-86-2
CONTENT:	40-60%
CLP CLASSIFICATION:	NA
NAME:	xylene
IDENTIFICATION NOS.:	CAS-no: 1330-20-7 EC-no: 215-535-7 REACH-no: 01-2119488216-32-XXXX Index-no: 601-022-00-9
CONTENT:	5 - <10%
CLP CLASSIFICATION:	Flam. Liq. 3, Asp. Tox. 1, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Acute Tox. 4, STOT SE 3, STOT RE 2 H226, H304, H312, H315, H319, H332, H335, H373 O L
NOTE:	
NAME:	calcium oxide
IDENTIFICATION NOS.:	CAS-no: 1305-78-8 EC-no: 215-138-9
CONTENT:	1 - <2.5%
CLP CLASSIFICATION:	STOT SE 3, Skin Irrit. 2, Eye Dam. 1 H315, H318, H335
NAME:	ethylbenzene
IDENTIFICATION NOS.:	CAS-no: 100-41-4 EC-no: 202-849-4 REACH-no: 01-2119489370-35-XXXX Index-no: 601-023-00-4
CONTENT:	1 - <2.5%
CLP CLASSIFICATION:	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1 H225, H304, H332, H373 O L
NOTE:	
NAME:	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
IDENTIFICATION NOS.:	EC-no: 926-141-6 REACH-no: 01-2119456620-43
CONTENT:	1 - <2.5%
CLP CLASSIFICATION:	Asp. Tox. 1 H304, EUH066

According to EC-Regulation 2015/830

NAME:	calciumdihydroxid
IDENTIFICATION NOS.:	CAS-no: 1305-62-0 EC-no: 215-137-3
CONTENT:	0.25 - <1%
CLP CLASSIFICATION:	STOT SE 3, Skin Irrit. 2, Eye Dam. 1 H315, H318, H335
NOTE:	L
NAME:	4,4'-methylenediphenyl diisocyanate
IDENTIFICATION NOS.:	CAS-no: 101-68-8 EC-no: 202-966-0 REACH-no: 01-2119457014-47-xxxx Index-no: 615-005-00-9
CONTENT:	0.25 - <1%
CLP CLASSIFICATION:	Acute Tox. 4, STOT RE 2, STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, Carc. 2 H315, H317, H319, H332, H334, H335, H351, H373
NOTE:	I
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
IDENTIFICATION NOS.:	CAS-no: 1065336-91-5 EC-no: 915-687-0 REACH-no: 01-2119491304-40-0000
CONTENT:	0.1 - <0.25%
CLP CLASSIFICATION:	Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1 H317, H400, H410 (M-acute = 1) (M-chronic = 1)

(*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.
O = Organic solvent I = Isocyanate monomer L = European occupational exposure limit.

Other information

ATEmix(inhale, vapour) > 20
ATEmix(inhale, dust/mist) > 5
ATEmix(dermal) > 2000
N chronic (CAT 4) Sum = $\sum(Ci/(M(\text{chronic})^i * 25) * 0.1 * 10^{\text{CAT}4}) = 0,007968 - 0,011952$
N acute (CAT 1) Sum = $\sum(Ci/M(\text{acute})^i * 25) = 0,007968 - 0,011952$

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service: Dial 0344 892 0111 (24 h service). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with soap and water. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 15 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Not applicable

4.2. Most important symptoms and effects, both acute and delayed

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

Sensitisation: This product contains substances, which may produce an allergic reaction through inhalation. The allergic reaction is typically taking place within an hour subsequent to exposure. The reaction results in an inflammatory reaction to the lungs.

4.3. Indication of any immediate medical attention and special treatment needed

Call a POISON CENTER/doctor if you feel unwell.

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Some metal oxides. Fire will result in dense black smoke. Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours from spilled material. Avoid direct contact with spilled substances.

6.2. Environmental precautions

No specific requirements.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid static electricity. Protect electrical equipment in accordance with current standards. To divert static electricity during transmission, containers must be grounded and connected by wire with the receiving containers. Do not use spark-forming tools. Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection. Avoid direct contact with the product.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature

Frost free

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

▼ OEL

4,4'-methylenediphenyl diisocyanate

Long-term exposure limit (8-hour TWA reference period): - ppm | 0,02 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | 0,07 mg/m³

According to EC-Regulation 2015/830

Comments: Sen (Sen = Capable of causing respiratory sensitisation.)

calciumdihydroxid

Long-term exposure limit (8-hour TWA reference period): - ppm | 5 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

ethylbenzene

Long-term exposure limit (8-hour TWA reference period): 100 ppm | 441 mg/m³

Short-term exposure limit (15-minute reference period): 125 ppm | 552 mg/m³

Comments: Sk (Sk = Can be absorbed through skin.)

calcium oxide

Long-term exposure limit (8-hour TWA reference period): - ppm | 2 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

Titanium dioxide

Long-term exposure limit (8-hour TWA reference period): - ppm | 10(inh)/4(resp) mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

xylene

Long-term exposure limit (8-hour TWA reference period): 50 ppm | 220 mg/m³

Short-term exposure limit (15-minute reference period): 100 ppm | 441 mg/m³

Comments: Sk BMGV (Bmgv = Biological Monitoring Guidance Value. Sk = Can be absorbed through skin.)

polyvinyl chloride

Long-term exposure limit (8-hour TWA reference period): - ppm | 10(inh)/4(resp) mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

▼ DNEL / PNEC

DNEL (4,4'-methylenediphenyl diisocyanate): 0,025 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Local effects - General population

DNEL (4,4'-methylenediphenyl diisocyanate): 0,05 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - General population

DNEL (4,4'-methylenediphenyl diisocyanate): 0,1 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - Workers

DNEL (4,4'-methylenediphenyl diisocyanate): 0,05 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Local effects - Workers

PNEC (4,4'-methylenediphenyl diisocyanate): 1 mg/l

Exposure: Freshwater

PNEC (4,4'-methylenediphenyl diisocyanate): 0,1 mg/l

Exposure: Marine water

PNEC (4,4'-methylenediphenyl diisocyanate): 1 mg/l

Exposure: Sewage Treatment Plant

PNEC (4,4'-methylenediphenyl diisocyanate): 1 mg/kg dryweight

Exposure: Soil

PNEC (4,4'-methylenediphenyl diisocyanate): 10 mg/l

Exposure: Intermittent release

8.2. Exposure controls

▼ Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations

Observe general occupational hygiene standards.

Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep containment materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

Respiratory Equipment

Recommended: Combination Filter A2B2. Brown/Gray

Not relevant if the room is well ventilated. If used in small and very badly ventilated rooms a respirator may be used. In this case an AX-filter is recommended.

Skin protection

Wear appropriate protection clothing, e.g. coveralls in polypropylene approved type 6 and Category III.

Hand protection

Butyl rubber

When applying the sealant with a caulking gun and when finishing with a joint nail, work can be carried out without gloves if skin contact is avoided.

Eye protection

No specific requirements.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Pasta
Colour	Various colours
Odour	Mild
Odour threshold (ppm)	No data available.
pH	No data available.
Viscosity (40°C)	No data available.
Density (g/cm ³)	1,16

Phase changes

Melting point (°C)	No data available.
Boiling point (°C)	137
Vapour pressure	No data available.
Decomposition temperature (°C)	No data available.
Evaporation rate (n-butylacetate = 100)	No data available.

Data on fire and explosion hazards

Flash point (°C)	40-55
Ignition (°C)	No data available.
Auto flammability (°C)	No data available.
Explosion limits (% v/v)	0,6 - 7
Explosive properties	No data available.

Solubility

Solubility in water	Insoluble
n-octanol/water coefficient	No data available.

9.2. Other information

Solubility in fat (g/L)

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

▼ 10.3. Possibility of hazardous reactions

Nothing special

▼ 10.4. Conditions to avoid

Nothing special

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

▼ Acute toxicity

Substance: 4,4'-methylenediphenyl diisocyanate

Species: Rat

Test: LD50

Route of exposure: Oral

Result: >2000 mg/kg

Substance: 4,4'-methylenediphenyl diisocyanate

Species: Rabbit

Test: LD50

Route of exposure: Dermal

Result: >9400 mg/kg

Substance: 4,4'-methylenediphenyl diisocyanate

Species: Rat

Test: LD50

Route of exposure: Inhalation

Result: 0,368 mg/l (dust)

Substance: Titanium dioxide

Species: Rat

Test: LD50

Route of exposure: Oral

Result: >10000

Substance: xylene

Species: Rat

Test: LD50

Route of exposure: Oral

Result: >3900 mg/kg

Substance: xylene

Species: Rat

Test: LC50

Route of exposure: Inhalation

Result: 20 mg/l 4h

▼ Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory or skin sensitisation

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Data on substance: 4,4'-methylenediphenyl diisocyanate

According to EC-Regulation 2015/830

Organism: Guinea pig
Result: Positive

Data on substance: 4,4'-methylenediphenyl diisocyanate
Test: Mouse local lymphnode assay
Organism: Mouse
Result: Positive

Germ cell mutagenicity

No data available.

Carcinogenicity

Data on substance: 4,4'-methylenediphenyl diisocyanate
Test: OECD TG 453
Organism: Rat
Result: Tumors in highest dosis group

Reproductive toxicity

Data on substance: 4,4'-methylenediphenyl diisocyanate
Test: OECD TG 414
Organism: Rat
Result: No teratogene effects observed

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

▼ Long term effects

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

SECTION 12: Ecological information

▼ 12.1. Toxicity

Substance: xylene
Species: Fish
Test: LC50
Duration: 96 h
Result: 2 mg/l

Substance: xylene
Species: Daphnia
Test: EC50
Duration: 48 h
Result: 8,5 mg/l

Substance: xylene
Species: Algae
Test: LC50
Duration: 72 h
Result: 3,2 mg/l

▼ 12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
4,4'-methylenediphenyl diisocy...	No	No data available	No data available
Titanium dioxide	No	No data available	No data available
xylene	Yes	No data available	No data available

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
4,4'-methylenediphenyl diisocy...	No	No data available	No data available

12.4. Mobility in soil

xylene: Log Koc= 2,572885, Calculated from LogPow (Moderate mobility potential.).

▼ 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

According to EC-Regulation 2015/830

▼ **12.6. Other adverse effects**

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.

Waste

EWC code

08 04 09

waste adhesives and sealants containing organic solvents or other dangerous substances

▼ **Specific labelling**

Not applicable

▼ **Contaminated packing**

Contaminated packaging must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 – 14.4

Not dangerous goods according to ADR, IATA and IMDG.

ADR/RID

- 14.1. UN number -
- 14.2. UN proper shipping name -
- 14.3. Transport hazard class(es) -
- 14.4. Packing group -
- Notes -
- Tunnel restriction code -

IMDG

- UN-no. -
- Proper Shipping Name -
- Class -
- PG* -
- EmS -
- MP** -
- Hazardous constituent -

IATA/ICAO

- UN-no. -
- Proper Shipping Name -
- Class -
- PG* -

14.5. Environmental hazards

-

14.6. Special precautions for user

-

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

According to EC-Regulation 2015/830

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

Use of this product requires dedicated training in work with polyurethane and epoxy products.

Additional information

Not applicable

Seveso

-

Biocidal reg. no.

Not applicable

Sources

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

Regulation (EC) 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225 - Highly flammable liquid and vapour.

H226 - Flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

H373 - May cause damage to organs through prolonged or repeated exposure.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

EUH066 - Repeated exposure may cause skin dryness or cracking.

The full text of identified uses as mentioned in section 1

-

Additional label elements

Not applicable

Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked



According to EC-Regulation 2015/830

with a blue triangle.

The safety data sheet is validated by

Robert Pedersen

Date of last essential change

(First cipher in SDS version)

2016-11-03(3.0)

Date of last minor change

(Last cipher in SDS version)

2016-11-03

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