

1 Identification

· Product identifier

- **Trade name:** STAUF VPU-155 "S"
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- *Product category* PC1 Adhesives, sealants
- *Application of the substance / the mixture* Polyurethane resin

· Details of the supplier of the safety data sheet

· **Manufacturer:**

STAUF Klebstoffwerk GmbH
Oberhausener Strasse 1
57234 Wilnsdorf, Germany
Phone 01149-273-930-1100
Fax 01149-273-930-1200

· **Distributor:**

STAUF USA, LLC.
11121 Hwy 70 Suite 102
Arlington, TN 38002, USA
Phone 1-901-820-0007
Fax 1-901-820-0101

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2 H351 Suspected of causing cancer.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Harmful

Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.



Irritant

Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

· *Information concerning particular hazards for human and environment:*

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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• **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

• **Label elements**

• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**



GHS07 GHS08

• **Signal word** Danger

• **Hazard-determining components of labeling:**

diphenylmethane-4,4'-di-isocyanate
 Aromatisches Polyisocyanat-Prepolymer
 diphenylmethane-2,4'-diisocyanate
 diphenylmethane-2,2'-diisocyanate

• **Hazard statements**

H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H351 Suspected of causing cancer.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.

• **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash thoroughly after handling.
 P284 In case of inadequate ventilation wear respiratory protection.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P321 Specific treatment (see on this label).
 P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 1
 Reactivity = 0

• **WHMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = *1
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

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- **Results of PBT and vPvB assessment**
- *PBT*: Not applicable.
- *vPvB*: Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

72088-97-2	Aromatisches Polyisocyanat-Prepolymer	25-50%
101-68-8	diphenylmethane-4,4'-di-isocyanate	10-25%
5873-54-1	diphenylmethane-2,4'-diisocyanate	10-25%
67815-87-6	Aromatisches Polyisocyanat-Prepolymer	2.5-10%
2536-05-2	diphenylmethane-2,2'-diisocyanate	≤ 2.5%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	≤ 2.5%
41556-26-7	LUBIO UV 6	≤ 2.5%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
 - *Most important symptoms and effects, both acute and delayed* No further relevant information available.
 - *Danger* Danger of impaired breathing.
 - *Indication of any immediate medical attention and special treatment needed*
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.
Mount respiratory protective device.
Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
· *Requirements to be met by storerooms and receptacles:* No special requirements.
· *Information about storage in one common storage facility:* Not required.
· *Further information about storage conditions:*
Protect from humidity and water.
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

101-68-8 diphenylmethane-4,4'-di-isocyanate

PEL	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm
REL	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m ³ , 0.005 ppm

· *Additional information:* The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· *General protective and hygienic measures:*

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· *Breathing equipment:*

Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.

· *Protection of hands:* Not required.

· *Material of gloves*

Butyl rubber, BR
Natural rubber, NR
Nitrile rubber, NBR

· *Eye protection:*



Tightly sealed goggles

· *Body protection:* Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· *Appearance:*

<i>Form:</i>	Fluid
<i>Color:</i>	Amber colored
<i>Odor:</i>	Characteristic
<i>Odour threshold:</i>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Boiling point/Boiling range: 208 °C (406 °F)

· **Flash point:** 201 °C (394 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 330 °C (626 °F)

· *Decomposition temperature:* Not determined.

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- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower: 0.4 Vol %
 - Upper: Not determined.
- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.1 g/cm³ (9.18 lbs/gal)
- *Relative density*: Not determined.
- *Vapour density*: Not determined.
- *Evaporation rate*: Not determined.
- **Solubility in / Miscibility with**
 - Water: Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic at 20 °C (68 °F): 800 mPas
 - Kinematic: Not determined.
- **Solvent content:**
 - Organic solvents: 0.0 %
 - VOC Content: 0.00 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- *Thermal decomposition / conditions to be avoided:* No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Exothermic reaction with amines and alcohols; reacts with water forming CO₂; in closed containers, risk of bursting owing to increase of pressure.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· *LD/LC50 values that are relevant for classification:*

72088-97-2 Aromatisches Polyisocyanat-Prepolymer

Oral	LD50	>5000 mg/kg (Ratte)
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101-68-8 diphenylmethane-4,4'-di-isocyanante

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
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Dermal	LD50	>9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
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Inhalative	LC50/ 4h	0.368 mg/l (Ratte)
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5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50	0.31 mg/l (Ratte) (4h, Aerosol)

67815-87-6 Aromatisches Polyisocyanat-Prepolymer

Oral	LD50	≥ 5000 mg/kg (Ratte) (OECD- Prüfrichtlinie 423)
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2536-05-2 diphenylmethane-2,2'-diisocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	> 2000 mg/kg (Ratte)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50/48 h	490 mg/l (Ratte) (als Aerosol, Exposition)

- *Primary irritant effect:*
- *on the skin:* Irritant to skin and mucous membranes.
- *on the eye:* Irritating effect.
- *Sensitization:*
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
- *Carcinogenic categories*

- *IARC (International Agency for Research on Cancer)*

101-68-8	diphenylmethane-4,4'-di-isocyanante	3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3

- *NTP (National Toxicology Program)*

None of the ingredients is listed.

- *OSHA-Ca (Occupational Safety & Health Administration)*

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

101-68-8 diphenylmethane-4,4'-di-isocyanante

EC50	>1000 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202)
LC50/ 96h	>1000 mg/l (Danio rerio (Zebrafisch)) (OECD- Prüfrichtlinie 203)
NOEC	>10 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202 (Fortpflanzung))

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

EC50	>1000 mg/l (Daphnia magna Wasserfloh) (OECD-Prüfrichtlinie 202)
LC0	>1000 mg/l (Fisch) (96h)

- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Liquid product must not be disposed of together with household garbage. Do not allow product to reach sewage system. If product has aged or solidified conventional means of disposal are acceptable.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- *Sara*

· *Section 355 (extremely hazardous substances):*

None of the ingredient is listed.

· *Section 313 (Specific toxic chemical listings):*

101-68-8 diphenylmethane-4,4'-di-isocyanate

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9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
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• *TSCA (Toxic Substances Control Act):*

72088-97-2	Aromatisches Polyisocyanat-Prepolymer
101-68-8	diphenylmethane-4,4'-di-isocyanante
5873-54-1	diphenylmethane-2,4'-diisocyanate
67815-87-6	Aromatisches Polyisocyanat-Prepolymer
2536-05-2	diphenylmethane-2,2'-diisocyanate
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
6425-39-4	2,2- Dimorpholin diethylether
125643-61-0	A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate
41556-26-7	LUBIO UV 6

• *Proposition 65*

• *Chemicals known to cause cancer:*

None of the ingredients is listed.

• *Chemicals known to cause reproductive toxicity for females:*

None of the ingredients is listed.

• *Chemicals known to cause reproductive toxicity for males:*

None of the ingredients is listed.

• *Chemicals known to cause developmental toxicity:*

None of the ingredients is listed.

• *Canadian Ingredient disclosure list*

• *Limit 0,1%*

101-68-8	diphenylmethane-4,4'-di-isocyanante
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• *Limit 1%*

None of the ingredients is listed.

• *Carcinogeny categories*

• *EPA (Environmental Protection Agency)*

101-68-8	diphenylmethane-4,4'-di-isocyanante		D, CBD
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues		CBD

• *TLV (Threshold Limit Value established by ACGIH)*

77-58-7	dibutyltin dilaurate		A4
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• *MAK (German Maximum Workplace Concentration)*

101-68-8	diphenylmethane-4,4'-di-isocyanante		4
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues		4

• *NIOSH-Ca (National Institute for Occupational Safety and Health)*

None of the ingredients is listed.

• **National regulations:**

• *Technical instructions (air):*

Class	Share in %
I	25-50

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

US

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Technical Department
- **Contact:**
Dr. Frank Gahlmann +49-(0)2739-301165 gahlmann@stauf.de
Wolfgang Stauf, Phone 901-820-0007, Email wolfgang.stauf@staufusa.com
- **Date of preparation / last revision** 10/15/2015 / 65
- **Abbreviations and acronyms:**
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

US