

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

- **1.1 Product identifier**
- **Trade name** NEUKADUR hardener H 118 VL
- **Utilization of the substance of the formulation:** Hardener for polyols for the production of polyurethanes
- **CAS Number:**
9016-87-9
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
For use in the do-it-yourself section is a further information available, see "Fact Sheet for resellers".
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Suter Kunststoffe AG
Aefligenstrasse 3
CH-3312 Fraubrunnen
Tel. +41 (0)31 763 60 60
Fax. +41 (0)31 763 60 61
e-mail: info@swiss-composite.ch
- **Further information obtainable from:** info@swiss-composite.ch
- **1.4 Emergency telephone number:**
Toxikologisches Infozentrum Zuerich
Tel. 145 (International +41 (0)44 251 51 51)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



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. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
diphenylmethanediisocyanate, isomeres and homologues
- **Hazard statements**
H332 Harmful if inhaled.

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*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/vapours/spray.**P280 Wear protective gloves/protective clothing/eye protection/face protection.**P284 [In case of inadequate ventilation] wear respiratory protection.**P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**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.***· Additional information:***Contains isocyanates. May produce an allergic reaction.***· 2.3 Other hazards***The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.***· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****· 3.1 Chemical characterization: Substance****· CAS No. Description***9016-87-9 diphenylmethanediisocyanate, isomeres and homologues***· Additional information:***As the polymer (s) and the impurities contained therein are exempted from the obligation to register in accordance with Article 2 (9) of REACH Regulation (EC) No 1907/2006, no annexes are provided.***· Dangerous components: Void****SECTION 4: First aid measures****· 4.1 Description of first aid measures****· General information:***Involve doctor immediately.**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:***Wash with polyethylene glycol 400 and then rinse with plenty amounts of water.**If skin irritation continues, consult a doctor.***· After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**· After swallowing:***Do not induce vomiting; call for medical help immediately.**If symptoms persist consult doctor.***· 4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, formation of carbon monoxide, nitrogen oxide, isocyanate vapour, and traces of hydrogen cyanide is possible. Fireman have to wear self-contained breathing apparatus. Do not let enter contaminated extinguishing water into the soil, groundwater or surface waters.
At ambient pressure build fire, danger of bursting. Cool fire exposed containers with water and if possible remove from the danger zone.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Remove mechanically, with residual wet, absorbent material (eg sawdust, chemical binder based on Calcium silicate hydrate, sand). After approx 1 hour transfer to waste container and do not seal (evolution of CO₂). Keep damp in a safe ventilated area for several days. Leave days.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
provide for best ventilation in the work space
At workplaces, or plant parts on which isocyanate aerosols and / or vapors in higher concentrations can occur (eg, pressure relief, mold venting, Cleaning mixing heads with compressed air) must be replaced by air suction exceeding the occupational exposure limits to be prevented. The air should be of the people carried away. The effectiveness of the equipment must be checked periodically.
Noted in Chapter 8 exposure limits to be monitored.
The personal protective measures described in Chapter 8 are observed.
contact avoid with skin and eyes and inhalation of vapors necessarily.
Keep away from foodstuffs, drinks and tobacco. Before breaks and at end of work
Wash and apply skin cream. Store work clothes separately. contaminated,
Take off immediately all contaminated clothing.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep container tightly closed and dry and storage in a good ventilated room.
- Storage temperature: 20 - 25 °C.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from water.
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from humidity and water.
Protect from frost.
Protect from heat and direct sunlight.
- **Storage class: 10**
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
AGW (Germany)	Long-term value: 0.05 E mg/m ³ I; =2=(I); DFG, H, Sah, Y, 12

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 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.
- **Respiratory protection:**
In inadequately ventilated places and during spraying respirator necessary. Recommended to be fresh-air mask or filter combination for short-term work
A2-P2
In case of hypersensitivity of the respiratory tract and skin (asthma, chronic bronchitis, chronic skin disease) is inadvisable to work with the product. Symptoms in the respiratory tract can also occur several hours after overexposure ..
- **Protection of hands:**
chemicals protective gloves according to DIN EN 374 with CE marking
Preventive skin protection (3-point program) required



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

Suitable materials for protective gloves, EN 374-3:

Polychloroprene - CR: thickness > = 0.5 mm, breakthrough time > = 480 min.

NBR - NBR: thickness > = 0,35 mm, Breakthrough time > = 480 min.

Butyl rubber - IIR: thickness > = 0.5 mm, breakthrough time > = 480 min.

Fluorine rubber - FKM: thickness > = 0.4 mm; breakthrough time > = 480 min.

Recommendation: Dispose of contaminated gloves ..

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Brown
Odour:	Characteristic

- **Change in condition**

Melting point/freezing point:	41 °C
Initial boiling point and boiling range:	300 °C

- **Flash point:** 250 °C

- **Ignition temperature:** 400 °C

- **Explosive properties:** Product does not present an explosion hazard.

- **Vapour pressure at 25 °C:** 0,0002 hPa

- **Density at 20 °C:** 1,24 g/cm³

- **Solubility in / Miscibility with water:**

reacts with water forming CO₂, risk of bursting

- **Viscosity:**

Dynamic at 20 °C: 300 mPas

- **Solvent content:**

Organic solvents: 0,0 %
VOC (EC) 0.0 g/l

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

- **10.2 Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **10.3 Possibility of hazardous reactions**
with water CO₂ formation, in closed drums pressure possible, dangerous to explode
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** water, alcohol, amine, base and acid
- **10.6 Hazardous decomposition products:** if handled accordingly no products of decomposition.

SECTION 11: Toxicological information· **11.1 Information on toxicological effects**

- **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:****9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

Oral	LD50	>5,000 mg/kg (Ratte)
Dermal	LD50	>5,000 mg/kg (Kaninchen)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information· **12.1 Toxicity**· **Aquatic toxicity:****9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

LC0(96h)	1,000 mg/l (Danio Rerio) (OECD 203)
EC50 (24h)	>1,000 mg/l (Daphnia Magna) (OECD 202)
EC50(3h)	>100 mg/l (sludge) (OECD 209)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate waste code according to the European Waste Catalogue (EWC) should be used.
No disposal via the sewage
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|-----------------|
| · 14.1 UN-Number
· ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
diphenylmethanediisocyanate, isomeres and homologues
- **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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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/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· National regulations:**· Technical instructions (air):**

Class	Share in %
I	75-100

· **Waterhazard class:** Water hazard class 1 (VwVwS 17.05.99): slightly hazardous for water.

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

SECTION 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:** info@swiss.composite.ch

· Contact:

Herr Karasmann Tel. +41 (0)31 763 60 60

Herr Ottensmann Tel. +49 (0)2056-25863-7

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**