

Printing date 17.10.2018

Version number 11

Revision: 17.10.2018

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

· 1.1 Product identifier

· Trade name <u>NEUKADUR hardener H 118 V</u>

• 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



· Signal word Danger

- Hazard-determining components of labelling: diphenylmethanediisocyanate, isomeres and homologues • Hazard statements
- H332 Harmful if inhaled.

(Contd. on page 2)

GB

altropol

Printing date 17.10.2018

Safety data sheet according to 1907/2006/EC, Article 31

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

	(Contd. of page 1)
H315 Causes st	kin irritation.
H319 Causes se	erious eye irritation.
H334 May caus	se allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May caus	se an allergic skin reaction.
H351 Suspected	d of causing cancer.
H335 May caus	se respiratory irritation.
H373 May caus	se 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+P	338 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 info	rmation:
Contains isocyc	anates. May produce an allergic reaction.
\cdot 2.3 Other haza	rds
· 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:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Immediately remove any clothing soiled by the product.

• 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:
- In contact with the skin preferably with cleaners based
- Polyethylene wash or clean with plenty of hot water and soap. In reactions of
- Skin doctor immediately.
- If skin irritation continues, consult a doctor.
- After eye contact:
- Protect unharmed eye.
- 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.

(Contd. on page 3)



Printing date 17.10.2018

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

• 4.2 Most important symptoms and effects, both acute and delayed The product is irritating to the respiratory tract and may trigger skin and Respiratory sensitization. Treatment of acute irritation or bronchial is primarily symptomatic. Depending on the degree of exposure and the Complaints may be necessary long-term medical care.

• **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.
- · For safety reasons unsuitable extinguishing agents:
- Water with full jet Water
- \cdot 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.

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

- Wear fully protective suit.
- · Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Protective equipment (see section 8). adequate

Provide ventilation. Keep unnecessary people away.

Wear protective equipment. Keep unprotected persons away.

- \cdot 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13. 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 Leave days. 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

 \cdot 7.1 Precautions for safe handling

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

(Contd. on page 4)

(Contd. of page 2)

GB



Printing date 17.10.2018

*

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

Wash and apply skin	n cream. Store work clothes separately. contaminated,
Take off immediatel	y all contaminated clothing.
Ensure good ventila	tion/exhaustion at the workplace.
Open and handle re	ceptacle with care.
<i>wear suitable respire</i> • <i>Information about</i>	ratory protective device when decanting larger quantities without extractor facilities. fire - and explosion protection: Keep ignition sources away - Do not smoke.
• 7.2 Conditions for s	afe storage, including any incompatibilities
· Storage: Dogwinow outs to ho	mat hu stanona and nacontrolos.
Keep container tigh	tly closed and dry and storage in a good ventilated room.
Storage temperature	e: 20 - 25 °C.
· Information about	storage in one common storage facility:
Store away from for	odstuffs.
Store away from wa	ter.
• Further information	n about storage conditions:
Keep container tigh	tly sealed.
Protect from humid	ity and water.
Protect from heat an	nd direct sunlight.
• Storage class: 10 7.2 Specific and use	(a) No furth on volument information quailable
· 7.5 specific ena use	(s) No juriner relevant information available.
SECTION 8: Ex	posure controls/personal protection
· Additional informa	tion about design of technical facilities: No further data; see item 7.
· Additional informa · 8.1 Control parame	tion about design of technical facilities: No further data; see item 7. ters
· Additional informa · 8.1 Control parame · Ingredients with lin	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace:
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenvl	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocvanate.isomeres and homologues
 Additional information 8.1 Control parametic Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain 	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate, isomeres and homologues Short-term value: 0.07 mg/m ³
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 F mg/m ³
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany)	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1:=2=(1):DEG. H. Sah. Y. 12
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) • Additional informa	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis.
• Additional informa • 8.1 Control parame • Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) • Additional informa	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis.
Additional information of the second se	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis.
 Additional information 8.1 Control parame Ingredients with line 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information 8.2 Exposure control Personal protective 	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygicanic measures:
 Additional information 8.1 Control parame Ingredients with line 9016-87-9 diphenyle WEL (Great Britain AGW (Germany) Additional information 8.2 Exposure control Personal protective of Keep away from for 	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. pls equipment: and hygienic measures: wistuffs beverages and feed
 Additional information of the second state of the sec	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. pls equipment: and hygienic measures: dstuffs, beverages and feed. all soiled and contaminated clothing
 Additional information of the second system of the second s	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: odstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work
 Additional information of the second state of the sec	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: valstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eves and skin.
Additional information Additional information S.1 Control parame Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information S.2 Exposure control Personal protective of Keep away from food Immediately remove Wash hands before a Avoid contact with t Respiratory protect	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: distuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion:
Additional information Additional information S.1 Control parame Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information S.2 Exposure control Personal protective of Keep away from food Immediately remove Wash hands before Avoid contact with to Respiratory protect	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate, isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. pls equipment: and hygienic measures: odstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator
 Additional information information in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structur	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: vdstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator mended to be fresh-air mask or filter combination for short-term work
 Additional information information in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure in the second structure is second structure in the second structure is second structure in	tion about design of technical facilities: No further data; see item 7. ters it values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: vdstuffs, beverages and feed. a all soiled and contaminated clothing breaks and at the end of work. he eyes and skin. ion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work
 Additional information of the second state of the second	tion about design of technical facilities: No further data; see item 7. ters mit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues More than ediisocyanate,isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. Pols equipment: and hygienic measures: edituffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tillated places and during spraying respirator tiended to be fresh-air mask or filter combination for short-term work
Additional information Additional information S.1 Control parame Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information Additional information S.2 Exposure control Personal protective General protective General protective Wash hands before Avoid contact with t Respiratory protect In inadequately ven necessary. Recommon A2-P2 Protection of hands	tion about design of technical facilities: No further data; see item 7. ters it values that require monitoring at the workplace: interhanediisocyanate, isomeres and homologues interhanediisocyanate, isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.07 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: edstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work
 Additional informa. 8.1 Control parame Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional informa. 8.2 Exposure control Personal protective of Keep away from food Immediately remove Wash hands before Avoid contact with t Respiratory protection In inadequately ven necessary. Recomm A2-P2 Protection of hands 	tion about design of technical facilities: No further data; see item 7. ters mit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: md hygienic measures: dstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work ::
Additional information Additional information S.1 Control parame Ingredients with lin 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information Additional information S.2 Exposure control Personal protective General protective General protective Keep away from food Immediately remove Wash hands before Avoid contact with to Respiratory protect In inadequately ven necessary. Recomming A2-P2 Protection of hands	tion about design of technical facilities: No further data; see item 7. ters nit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: distuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work :: re gloves
 Additional information of the second structure of the second stru	tion about design of technical facilities: No further data; see item 7. ters mit values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: mathygienic measures: ve gloves desuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work re gloves
Additional information Additional information S.1 Control parame Ingredients with lim 9016-87-9 diphenyl WEL (Great Britain AGW (Germany) Additional information Additional information S.2 Exposure control Personal protective General protective Keep away from food Immediately remove Wash hands before Avoid contact with t Respiratory protect In inadequately ven necessary. Recommediately Protection Protective Protective	tion about design of technical facilities: No further data; see item 7. ters it values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1:=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: odstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. tion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work re gloves exction (3-point program) required
 Additional information of the second state of the second	tion about design of technical facilities: No further data; see item 7. ters it values that require monitoring at the workplace: methanediisocyanate,isomeres and homologues) Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO Long-term value: 0.05 E mg/m ³ 1;=2=(1);DFG, H, Sah, Y, 12 tion: The lists valid during the making were used as basis. ols equipment: and hygienic measures: dstuffs, beverages and feed. e all soiled and contaminated clothing breaks and at the end of work. the eyes and skin. ion: tilated places and during spraying respirator tended to be fresh-air mask or filter combination for short-term work :: re gloves rection (3-point program) required has to be impermeable and resistant to the product/ the substance/ the preparation.



Printing date 17.10.2018

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

(Contd. of page 4) Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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 chemi	cal properties	
• 9.1 Information on basic physical and co • General Information • Appearance:	hemical properties	
Form.	Fluid	
Colour:	Brown	
· Odour:	Characteristic	
· Odour threshold:	Not determined.	
· pH-value:	Not determined.	
• Change in condition Melting point/freezing point: Initial boiling point and boiling range.	Undetermined. : 300 °C	
· Flash point:	250 °C	
· Flammability (solid, gas):	Not applicable.	
· Ignition temperature:	400 °C	
· Decomposition temperature:	Not determined.	
• Auto-ignition temperature:	Not determined.	
· Explosive properties:	Product does not present an explosion hazard.	
· Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapour pressure:	Not determined.	
· Density at 20 °C:	1,23 g/cm ³	
Relative density	Not determined.	
· Vapour density	Not determined.	
• Evaporation rate	Not determined.	

- GB



Printing date 17.10.2018

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

		(Contd. of page 5)
 Solubility in / Miscibility with water: 	reacts with water forming CO2, risk of bursting	
· Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Organic solvents:	0,0 %	
• 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: > 200 °C polymerisation, CO 2 separation.
- 10.3 Possibility of hazardous reactions Exothermic reaction with amines and alcohols; reacts with water forming C02, in closed containers risk of bursting owing to increase of pressure.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: water, alcohol, amine, base and acid Incompatible with oxidizing agents, acids
- 10.6 Hazardous decomposition products: At the air > 300 °C: acrolein

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity
- Harmful if inhaled.

· LD/LC50 values relevant for classification:

Acute toxicity, by inhalation:

- LC50 rat: 0.31 mg / l, 4 h Test atmosphere: dust / mist
- Method: OECD Test Guideline 403

Toxicological studies of a comparable product. The fabric was in a

- Form (ie, special particle size distribution) tested which differ from the forms, as
- marketed and used in all probability, is different. Therefore, a
- modified classification of acute inhalation toxicity justified.

Converted acute toxicity: 1.5 mg / l

Test atmosphere: dust / mist Method: Professional assessment

Assessment: Harmful if inhaled.

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
 Primary skin irritation
 Diisocyanate: isomers and homologues
 Species: rabbit
 Result: Slightly irritating
 Method: OECD Test Guideline 404
 Primary mucous membrane irritation
 Species: rabbit
 Result: non-irritant

(Contd. on page 7)

⁻ GB

altropol

Printing date 17.10.2018

Safety data sheet according to 1907/2006/EC, Article 31

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

	(Contd. of page 6)
Classification: No eye irritation	
Method: OECD Test Guideline 405	
Toxicological examination of a comparable product.	
Causes skin irritation.	
· Serious eye damage/irritation	
Causes serious eye irritation.	
· Respiratory or skin sensitisation	
Diisocyanate: isomers and homologues	
Skin sensitization according to Magnusson / Klingman (maximization test):	
Species: guinea pig	
Result: negative	
Classification: Does not cause skin sensitization	
Method: OECD Test Guideline 406	
Skin sensitization (local lymph node assay (LLNA)):	
Species: Mouse	
Result: positive	
Classification: May cause sensitization by skin contact.	
Method: OECD Test Guideline 429	
<i>Toxicological examination of a comparable product.</i>	
Respiratory sensitization:	
Species: rat	
Result: positive	
Classification: May cause sensitization by inhalation	
May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
May cause an allergic skin reaction.	
Subacute to chronic toxicity:	
Dusocyanate: isomers and homologues	
NOAEL: $0.2 \text{ mg} / \text{m}^3$	
LOAEL: I mg / m ³	
Application Koute: Innalation	
Species: rat	
$Dosage: 0 to 0.2 - 1 - 0 mg / m^3$	
Exposure auration: 2 Encause of the atment 6 hours a day 5 days per week	
Taraat organs: lungs, nasal cavities	
Targer organs. lungs, nasar cavines Tart substance: as aerosol	
Mathod: OFCD Test Guideline 453	
Findings: irritation of the nasal cavity and the lungs	
Investigation of a comparable product	
· Additional toxicological information:	
Over-exposure - especially when spraying isocyanate based varnishes without prote	ective measures - there is a
risk of concentration-dependent irritation eve. nose, throat and airways. Del	laved appearance of the
complaints and development of hypersensitivity (difficult breathing, coughin	g. asthma) are possible.
Hypersensitive persons may already be initiated at low isocvanate concentration	ons. also below the value
MAK .	
$\cdot CMR$ effects (carcinogenity, mutagenicity and toxicity for reproduction)	
Mutagenicity: In vitro tests show no mutagenic effects. If the available data basis,	the classification criteria
are not met.	5
Teratogenicity: is based on the available data, the classification criteria are not met	•
Reproductive toxicity: is based on the available data, the classification criteria are r	not met.
Germ cell mutagenicity	
Genotoxicity in vitro:	
Diphenylmethanediisocyanate, isomers and homologues	
Test type: Salmonella / microsome test (Ames test)	
Test system: Salmonella typhimurium	
Metabolic activation: with / without	
Result: negative	
Method: OECD Test Guideline 471	
	(Contd. on page 8)

altropol

Printing date 17.10.2018

Safety data sheet according to 1907/2006/EC, Article 31

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

	(Contd. of page 7)
· Carcinogenicity	
Diphenylmethanediisocyanate, isomers and homologues	
Application Route: Inhalation	
Species: rat	
Dosage: 0 to $0.2 - 1 - 6 mg / m^3$	
Exposure duration: 2	
Frequency of treatment: 6 hours a day, 5 days a week	
Test substance: as aerosol	
Method: OECD Test Guideline 453	
Appearance of tumors in the highest dose group	
Suspected of causing cancer.	
· Reproductive toxicity	
teratogenicity	
Diphenylmethanediisocyanate, isomers and homologues	
NOAEL (teratogenicity): $12 \text{ mg} / m^3$	
NOAEL (maternal): $4 \text{ mg} / m^3$	
NOAEL (developmental toxicity): $4 \text{ mg} / m^3$	
Species: rat	
Application Route: Inhalation	
Doses: $0 - 01/04/12 \text{ mg} / \text{m}^3$	
Frequency of treatment: 6 hours per day (exposure duration: 10 days (Day 6 - 15 pc))	
Test duration: 20 days	
Test substance: as aerosol	
Method: OECD Test Guideline 414	
NOAEL (developmental toxicity): $4 \text{ mg} / m^3$	
Did not show teratogenic effects in animal experiments.	
· STOT-single exposure	
Diphenylmethanediisocyanate, isomers and homologues	
Route of exposure: inhalation	
Target organs: respiratory system	
May cause respiratory irritation.	
May cause respiratory irritation.	
· STOT-repeated exposure	
Diphenylmethanediisocyanate, isomers and homologues	
Route of exposure: inhalation	
Target organs: respiratory system	
Can cause damage to organs through prolonged or 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 Persiste	ence and degradability	
biodegradation:		
Diphenylmethanediisocyanate, isomers and homologues		
Test type: Aerobic		
Inoculum: Activated sludge		
Biodegradation: 0%, 28 d, ie not potentially degradable		

Method: OECD Test Guideline 302C

According to the results of tests of biodegradability this product is not readily biodegradable.

(Contd. on page 9)

GB

altropol Printing date 17.10.2018

Safety data sheet according to 1907/2006/EC, Article 31

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

	(Contd. of page 8)
Stability in water:	
Diphenylmethanediisocyanate, isomers and homologues	
Test Type: hydrolysis	
Half-life: at 25 ° C for 20 h	
The cloth rapidly hydrolyzed in water.	
Investigation of a comparable product	
Photodegradation:	
Diphenylmethanediisocyanate, isomers and homologues	
Test Type: phototransformation in air	
<i>Temperature: 25 ° C</i>	
Sensitizer: OH radicals	
Sensitizer concentration: 500,000 1 / cm ³	
Indirect photolysis half-life: 0.92 d	
Method: SRC-AOP (calculation)	
After release or contact with air is a moderate photochemical degradation of the substance.	
Investigation of a comparable product.	
· Other information: Elimination by adsorption onto activated sludge	
· 12.3 Bioaccumulative potential	
Diphenylmethanediisocyanate, isomers and homologues	
Bioconcentration factor (BCF): <14	
Species: Cyprinus carpio (Carp)	
Exposure time: 42 d	
Concentration: 0.2 mg / l	
Method: OECD Test Guideline 305C	
Accumulation in aquatic organisms is not expected.	
Investigation on hydrolyzate.	
The substance rapidly hydrolyzed in water.	
· 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 c	ourse or sewage
system.	
· 12.5 Results of PBT and vPvB assessment	
· PBT: Not applicable.	
• vPvB: Not applicable.	
• 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:

Packaging must be emptied directly after the last product removal (tear drops, powder rest, scraped carefully). After neutralization of adhering to the walls of residues are product and labeling of hazardous substances to devalue. These packages can packaging-specifically to access points to the existing collection systems chemical industry will be given for recycling. Containers must be recycled in accordance with national legislation and environmental regulations occur.

(Contd. on page 10)

GB

altropol Printing date 17.10.2018

according to 1907/2006/EC, Article 31 Version number 11

Safety data sheet

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

Disposal must be made according to official regulations.

SECTION 14: Transport informat	tion
· 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	No dangerous cargo. Avoid temperatures below 0 ° C. Heat above +50 ° C. Protect from moisture. Keep away from food, stimulants, acids and alkalis
• 14.7 Transport in bulk according to Anno Marpol and the IBC Code	ex II of 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

×



· 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.
- 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.

(Contd. on page 11)

(Contd. of page 9)



Printing date 17.10.2018

Version number 11

Revision: 17.10.2018

Trade name NEUKADUR hardener H 118 V

	(Contd. of page 10)
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P33	8 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 %
Ι	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)

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

 \cdot * Data compared to the previous version altered.