

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

- **1.1 Product identifier**
- **Trade name:** DQ-TOOL® slow drying adhesive B
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Sector of Use**
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC32 Polymer preparations and compounds
- **Process category**
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
PROC14 Tableting, compression, extrusion, pelletisation, granulation
PROC21 Low energy manipulation and handling of substances bound in/on materials or articles
- **Application of the substance / the mixture**
isocyanate component of a 2-component special resin system for industrial or professional applications
- **Applications, which are not recommended:** Not suitable for do-it-your-self-applications
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**
Dongguan Dongquan Mould Materials Co., Ltd
ADD: No.10 Yihuan Road,Chiling Industrial,Dongguan City,CHINA
Email: dqtoolingboard@gmail.com
- **1.4 Emergency telephone number:** +86 0769-85878968

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Carc. 2 H351 Suspected of causing cancer.

(Contd. on page 2)

GB

Material Safety data sheet

STOT SE 3 H335 May cause respiratory irritation.

(Contd. of page 1)

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labelling:

formaldehyde, oligomeric reaction product with aniline and phosgene (oligomeric MDI)
aromatic polyisocyanate-prepolymer

· 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.

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

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

Danger for health when breathing in. Effect of sensitization on the lungs. Recognized allergen. Persons with hypersensitive respiratory tracts (asthma, chronic obstructive pulmonary) should not handle with the product.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

GB

(Contd. on page 3)

Material Safety data sheet

(Contd. of page 2)

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Aromatic polyisocyanate-pre-polymer

- **Dangerous components:**

CAS: 63428-84-2 Polyamide curing agent	50-100%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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:**
Immediately wash with water and soap and rinse thoroughly.
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.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Information for doctor:**
The product irritates the respiratory tract and is a potential sensor for sensitization of skin and respiratory tract. The treatment of the acute irritation or bronchial constriction is primarily symptomatic. Depending on extent of the exposition and disturbances a longer medical care can be necessary.
- **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:**
Water spray
Fire-extinguishing powder

(Contd. on page 4)
GB

Material Safety data sheet

(Contd. of page 3)

Foam

Carbon dioxide

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **5.2 Special hazards arising from the substance or mixture**

When fire carbon monoxide, nitrogen oxides, isocyanate vapours and traces of hydrogen cyanide can be developed.

- **5.3 Advice for firefighters**

- **Protective equipment:** Wear self-contained respiratory protective device.

- **Additional information**

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

In case of flame spread pressure build-up, bursting danger. Containers should be cooled with water and removed from danger zone.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

- **6.2 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.

- **6.3 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.

- **6.4 Reference to other sections**

After approx. 1 hour to be filled in suitable barrels; the barrels should not be closed (liberation of CO₂), but only covered. They should be left outside for 7-14 days, then the containers can be disposed according to official regulations.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

The air limiting values mentioned in chapter 8 have to be controlled. At places of work, where aerosols and/or fumes can occur in higher concentrations, exceeding of limiting hygienic values has to be prevented by specific air exhaust. The air motions have to be carried out from the persons away.

The personal safety measures mentioned in chapter 8 are to be followed. The measures regarding handling with isocyanate are to be followed. Contact with skin and eyes as well as breathing in of vapours is to be avoided.

Safety precautions for handling of just molded polyurethane parts (prototypes, positives or negatives):

Depending on the production parameters, any uncovered surfaces of polyurethane moldings containing isocyanates as raw material, may contain traces of substances (e. g. primary and

(Contd. on page 5)

GB

Material Safety data sheet

(Contd. of page 4)

reaction products, catalysts, release agents) with hazardous characteristics. Avoid any skin contact with traces of

these substances! When demolding or otherwise handling just molded polyurethane parts, use protective nitrile rubber gloves (according to DIN EN 374) or protective nitrile rubber gloves against mechanic exposure. For any further skin protection we recommend to wear protective clothing when handling just molded polyurethane parts.

In case you are aware of any allergic reaction to this material, consult your company physician (in line with risk assessment) before working with the product.

- **Information about fire - and explosion protection:** No special measures required.
- **7.2 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:**
 - Store away from foodstuffs.
 - Store away from foodstuffs.
- **Further information about storage conditions:**
 - Protect against cooling below 20°C and heating over 40°C.
 - Store in dry conditions.
 - Keep container tightly closed.
- **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:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of exceeding the limit value.
 - Filter A2/P2
- **Protection of hands:**
 - Protective gloves
 - For the permanent contact gloves made of Nitrilkautschuk with a layer thickness of at least 0.33 mm are suitable. The penetration time of this glove material is > 480 minutes.
 - The glove material has to be according the requirement of EU-guideline 89/686/EWG and the resulting norm EN374, for example KCL Camatril,0731. The above mentioned penetration times are based on laboratory measurements of KCL according to EN 374.

This recommendation is only valid for the product, which is delivered from us and only for

(Contd. on page 6)

GB

Material Safety data sheet

(Contd. of page 5)

the intended mentioned application. Regarding dissolution or mixing with other substances please contact suppliers of CE-approved gloves. (For example KCL GmbH, D-36124 Eichenzell, internet: www.kcl.de)

DQ gives this recommendation in good faith, without liability for any claims arising from the recommendation or the use of the suggested protection gloves.

· **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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:	light yellow
· Odour:	musty
· pH-value at 20 °C:	< 7 (ISO 8975)
· Change in condition	
· Melting point/freezing point:	< 5 °C
· Initial boiling point and boiling range:	ca. 350 °C (DIN 53171)
· Flash point:	> 200 °C (c.c.)
· Ignition temperature:	>400 °C (DIN 51794)
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Vapour pressure at 20 °C:	<0.00001 mbar
· Density at 20 °C:	1.23 g/cm ³ (ISO 2811)
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Viscosity:	
· Dynamic at 25 °C:	500 mPas (DIN 53019)

(Contd. on page 7)

GB

Material Safety data sheet

(Contd. of page 6)

· 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 and stored according to specifications.
At approx. 200°C polymerization, CO₂-separation.*
- **10.3 Possibility of hazardous reactions**
Exothermic reaction with amines and alcohols; with water CO₂-development, in closed container developing of pressure, bursting danger.
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:**
*Carbon monoxide
Nitrogen oxides (NO_x)
Cyan hydrogen (HCN)
Possible in traces.*

SECTION 11: Toxicological information

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

· LD/LC50 values relevant for classification:

32055-14-4 formaldehyde, oligomeric reaction product with aniline and phosgene (oligomeric MDI)		
Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
Inhalative	LC50/4 h Aerosole	310 mg/l (Rat)
53862-89-8 aromatic polyisocyanate-prepolymer		
Oral	LD50	>5,000 mg/kg (Rat)

- **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.*
- **Additional toxicological information:** *sensitizing*
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*

(Contd. on page 8)

GB

Material Safety data sheet

(Contd. of page 7)

- **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:**

32055-14-4 formaldehyde, oligomeric reaction product with aniline and phosgene (oligomeric MDI)	
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LC50 (96 h)	>1,000 mg/l (Acute fish toxicity)
EC/LC 50 (72 h)	>1,640 mg/l (<i>Scenedesmus subspicatus</i>)
EC 50 (24 h)	>1,000 mg/l (<i>daphnia magna</i>)

- **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) (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.
- **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**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste disposal key:**
The Waste-Key-Numbers have to be given from the waste-producer depending on the respective trade. Therefore no information can be stated from the manufacturer.

- **European waste catalogue**

HP 4	Irritant - skin irritation and eye damage
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 7	Carcinogenic

(Contd. on page 9)

GB

Material Safety data sheet

(Contd. of page 8)

HP 13 Sensitising

- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
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. |
| · Transport/Additional information: | |
| · IATA
· Remarks: | No dangerous good according to ADR |
| · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3**
- **National regulations:**
- **VOC (EC) 0.00 %**

Class	Share in %
I	100.0

- **Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**

(Contd. on page 10)

GB

Material Safety data sheet

(Contd. of page 9)

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

No substances of very high concern contained resp. below the limit.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

- **Relevant phrases**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

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.

- **Department issuing SDS:** Product Safety

- **Abbreviations and acronyms:**

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

Annex: Exposure scenario

- **Short title of the exposure scenario**

- **Sector of Use**

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

- **Product category** PC32 Polymer preparations and compounds

- **Process category**

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC10 Roller application or brushing

PROC13 Treatment of articles by dipping and pouring

(Contd. on page 11)

GB

Material Safety data sheet



(Contd. of page 10)

PROC14 Tableting, compression, extrusion, pelletisation, granulation

PROC21 Low energy manipulation and handling of substances bound in/on materials or articles

- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use** Usage only according to applications stated in the technical data sheets.
- **Duration and frequency** 5 workdays/week.
- **Worker** 8hrs (full working shift).
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** The substance is main component.
- **Used amount per time or activity** Smaller than 100 g per application.
- **Other operational conditions**
Observe the general safety regulations when handling chemicals.
- **Other operational conditions affecting environmental exposure**
No special measures required.
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
Avoid long-term or repeated skin contact.
Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure**
No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
These measures are for all contributing scenarios at product temperatures BELOW 40 °C for pure MDI or BELOW 45 °C for other MDI based substances.
Any contamination of the skin with the substance should be immediately washed off and resulting skin -/ eye problems should be reported.
- **Organisational protective measures**
Provide Internal Plant Instruction.
The workmen are instructed accordingly and wear adequate protective clothing within these periods of time when very limited (unintentional) contact is possible. Production systems have to be controlled appropriately.
Provide emergency eye wash station and mark its location clearly.
- **Technical protective measures**
A good general ventilation should be secured (not less than 3 to 5 air changes per hour).
In case of emission a exhaust device should be used.
Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles

(Contd. on page 12)

GB

Material Safety data sheet

(Contd. of page 11)

In case of exceeding the limit value.

Filter A2/P2

Protective gloves

For the permanent contact gloves made of Nitrilkautschuk with a layer thickness of at least 0.33 mm are suitable. The penetration time of this glove material is > 480 minutes.

The glove material has to be according the requirement of EU-guideline 89/686/EWG and the resulting norm EN374, for example KCL Camatril,0731. The above mentioned penetration times are based on laboratory measurements of KCL according to EN 374.

This recommendation is only valid for the product, which is delivered from us and only for the intended mentioned application. Regarding dissolution or mixing with other substances please contact suppliers of CE-approved gloves. (For example KCL GmbH, D-36124 Eichenzell, internet: www.kcl.de)

DQ gives this recommendation in good faith, without liability for any claims arising from the recommendation or the use of the suggested protection gloves.

- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.
- **Water** Do not allow to reach ground water, water bodies or sewage system.
- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Worker (inhalation)**
Contributory scenario: PROC4
Method of evaluation: Measured value
Specific conditions: LEV: included in measured data
Evaluation type: short-term, inhalative
exposure grade: 0.012 mg/m³
risk ratio (exposure value/DNEL): 0.116
Contributory scenario: PROC4 Verbundwerkstoffe
Method of evaluation: Measured value
Specific conditons: LEV: included in measured data.
Type of evaluation: short-term, inhalative
Grade of exposure: 0.023 mg/m³
Risk ratio (value of exposure/DNEL):0.227
Contributory scenario: PROC4
Method of evaluation: Measured value
Specific conditons: LEV: included in measured data.
Type of evaluation: long-term, inhalative
Grade of exposure: 0.006 mg/m³
Risk ratio (value of exposure/DNEL):0.116.
Contributory scenario: PROC4 Verbundwerkstoffe
Method of evaluation: Measured value
Specific conditons: LEV: included in measured data.
Type of evaluation: long-term, inhalative

(Contd. on page 13)

GB

Material Safety data sheet

<p style="text-align: right;">(Contd. of page 12)</p> <p>Grade of exposure: 0.011 mg/m³ Risk ratio (value of exposure/DNEL):0.227.</p> <ul style="list-style-type: none">· Consumer Not relevant for this Exposure Scenario.· Guidance for downstream users No further relevant information available.

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