

SAFETY DATA SHEET

DQ-TOOL® 0500A



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

Product name : DQ-TOOL® 0500A
Use of the substance/mixture : Resin for tooling systems
Supplier : Dongguan Dongquan mould material Co.,Ltd.
No.10 Yihuan Road,Chiling Industria,Dongguan CHINA
Tel.: +86 0769-85878968
Fax: +86 0769-88665083
Emergency telephone number (24h/7day) : +86 0769-05878968
e-mail address of person responsible for this SDS : edmsupply@vip.163.com

Section 2. Hazards identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
AQUATIC TOXICITY (CHRONIC) - Category 2

GHS label elements

Signal word : Warning
Hazard statements : Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves: >8 hours (breakthrough time): butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL), nitrile rubber, neoprene, Polyvinyl Chloride (PVC). Wear eye or face protection. Avoid release to the environment.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Rinse skin with water. Take off contaminated clothing. Wash contaminated clothing before reuse.

Storage : Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol :



Section 2. Hazards identification

Hazardous ingredients : reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <700)

Other hazards which do not result in classification : Not available.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Epoxy resin	30 - 60	38891-59-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : Irritating to mouth, throat and stomach.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

Over-exposure signs/symptoms

- Inhalation** : No specific data.

Section 4. First-aid measures

- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness

Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : Not available.
- Notes to physician** : No specific treatment. Treat symptomatically. Call medical doctor or poison control centre immediately if large quantities have been ingested.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
metal oxide/oxides
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Remark** : Not available.

Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
- Methods and materials for containment and cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Storage hazard class DQ-TOOL® Advanced Materials

: Storage class 10, Environmentally hazardous liquids

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
None.	

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Appropriate engineering controls

: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Material of gloves for long term application (BTT>480min):** : butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL), nitrile rubber, neoprene, Polyvinyl Chloride (PVC)
- Material of gloves for short term/splash application (10min<BTT<480min):** : butyl rubber, Ethyl Vinyl Alcohol Laminate (EVAL), nitrile rubber, neoprene, Polyvinyl Chloride (PVC)
- (BTT = Break Through Time)**
Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers. Additional information can be found for instance at www.gisbau.de.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Paste.
- Colour** : Brown.
- Odour** : Slight
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : >200°C (>392°F)
- Flash point** : Closed cup: >200°C (>392°F) [Data based on tests on similar product]
- Evaporation rate (butyl acetate = 1)** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : Not available.

Section 9. Physical and chemical properties

Solubility : Not available.

Water solubility : Insoluble

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Viscosity : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Other information

Density : 0.5 g/cm³ [25°C (77°F)] No additional information.

Section 10. Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : strong acids, strong bases, strong oxidising agents

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Decomposition products may include the following materials: Burning produces obnoxious and toxic fumes., Carbon oxides

Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation : No known significant effects or critical hazards.

Ingestion : Irritating to mouth, throat and stomach.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

Product/ingredient name	Endpoint	Species	Result	Exposure
-------------------------	----------	---------	--------	----------

Section 11. Toxicological information

reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-
	LC0 Inhalation Vapour	Rat - Male	0.00001 ppm	5 hours

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Mild irritant

Conclusion/Summary

Skin

: reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700): Slightly irritating to the skin.

Eyes

: reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700): Slightly irritating to the eyes.

Sensitisation

Product/ingredient name	Test	Route of exposure	Species	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 429 Skin Sensitisation: Local Lymph Node Assay	skin	Mouse	Sensitising

Conclusion/Summary

Potential chronic health effects

General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Eye contact	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Chronic toxicity

Product/ingredient name	Test	Result type	Result	Target organs
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	NOAEL	Sub-chronic NOAEL Oral	50 mg/kg -
	OECD 411 Subchronic Dermal Toxicity: 90-day Study	NOEL	Sub-chronic NOEL Dermal	10 mg/kg -

Section 11. Toxicological information

OECD 411 Subchronic Dermal Toxicity: 90-day Study NOAEL Sub-chronic NOAEL Dermal 100 mg/kg -

Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Route of exposure	Target organs
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 453 Combined Chronic Toxicity/Carcinogenicity Studies	Rat	2 years; 7 days per week	Negative	Oral	-
	OECD 453 Combined Chronic Toxicity/Carcinogenicity Studies	Rat	2 years; 5 days per week	Negative	Dermal	-
	OECD 453 Combined Chronic Toxicity/Carcinogenicity Studies	Mouse	2 years; 3 days per week	Negative	Dermal	-

IARC Classification

Product/ingredient name	Classification
Bisphenol A epoxy resin	-

Mutagenicity

Product/ingredient name	Test	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 471 Bacterial Reverse Mutation Test	Positive
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Positive
	OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test EPA OPPTS	Negative Negative

Teratogenicity

Product/ingredient name	Test	Species	Result / Result type
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 414 Prenatal Developmental Toxicity Study	Rat - Female	>540 mg/kg NOEL
	EPA CFR	Rabbit - Female	>300 mg/kg NOEL
	OECD 414 Prenatal Developmental Toxicity Study	Rabbit - Female	180 mg/kg NOAEL

Reproductive toxicity

Product/ingredient name	Test	Species	Result / Result type	Target organs
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 416 Two-Generation Reproduction Toxicity Study	Rat	Oral: 540 mg/kg NOEL	-

Section 12. Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities. This material is toxic to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <700)	-	Acute EC50	72 hours Static	Algae	9.4 mg/L
	OECD 202 <i>Daphnia</i> sp. Immobilisation Test	Acute EC50	48 hours Static	Daphnia	1.7 mg/L
	-	Acute IC50	3 hours Static	Bacteria	>100 mg/L
	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hours Static	Fish	1.5 mg/L
	OECD 211 <i>Daphnia</i> Magna Reproduction Test	Chronic NOEC	21 days Semi-static	Daphnia	0.3 mg/L

Biodegradability

Product/ingredient name	Test	Period	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <700)	OECD Derived from OECD 301F (Biodegradation Test)	28 days	5 %

Conclusion/Summary : reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700): Not readily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <700)	Fresh water 4.83 days Fresh water 3.58 days Fresh water 7.1 days	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <700)	3.242	31	low

Mobility : Not available.

Other adverse effects : No known significant effects or critical hazards.




Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

International transport regulations

<p>14.1 UN number</p> <p>ADR/RID UN3082</p> <p>IMDG UN3082</p> <p>IATA UN3082</p>	<p>14.2 UN proper shipping name</p> <p>Environmentally hazardous substance, liquid, n.o.s. BISPHENOL A EPOXY RESIN (Bisphenol A epoxyresin)</p> <p>Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN) (Bisphenol A epoxy resin). Marine pollutant (Bisphenol A epoxy resin)</p> <p>Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN) (Bisphenol A epoxyresin)</p>
---	---

	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards	14.6 Special precautions for user	Additional information
ADR/RID	9 	III	Yes.	Not available.	Hazard identification number 90 Special provisions 274 335 601 Tunnel code E
IMDG	9 	III	Yes.	Not available.	Emergency schedules (EmS) F-A, S-F
IATA	9 	III	Yes.	Not available.	Passenger and Cargo Aircraft Quantity limitation: 450 L Packaging instructions: 964 Cargo Aircraft Only Quantity limitation: 450 L Packaging instructions: 964

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

Section 15. Regulatory information

Hazard symbol or symbols :



Signal word : Warning

Hazard statements : Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves: >8 hours (breakthrough time): butyl rubber, Ethyl Vinyl Alcohol Laminated (EVAL), nitrile rubber, neoprene, Polyvinyl Chloride (PVC). Wear eye or face protection. Avoid release to the environment.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Rinse skin with water. Take off contaminated clothing. Wash contaminated clothing before reuse.

Storage : Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Additional information: EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Hazard symbol or symbols :



Xi, N Irritant, Dangerous for the environment

Risk phrases : R36/38- Irritating to eyes and skin.
R43- May cause sensitisation by skin contact.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases : S24- Avoid contact with skin.
S37- Wear suitable gloves.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Section 16. Other information

History

Date of printing : 24 September 2012

Date of issue/Date of revision : 24 September 2012

Date of previous issue : 24 September 2012

Version : 1.01

MSDS no. : 00074224

Further information

Notice to reader

Section 16. Other information

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.