

SAFETY DATA SHEET

QSiI 553 B

Version 1.2	Revision Date: 2024/06/13	Print Date: 2024/06/14	Date of last issue: 2024/06/12 Date of first issue: 2024/06/12
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : QSiI 553 B

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use

Restrictions on use : For industrial use only.

Manufacturer or supplier's details

Manufacturer/Supplier

CHT Germany GmbH
Bismarckstraße 102
72072 Tübingen
Germany
Tel.: +49 7071 154 0
info@cht.com

CHT USA Inc.
805 Wolfe Avenue
Cassopolis, MI 49031
USA
Tel.: +1 269 445 0847
info.usa@cht.com

Importer : -
-
-
-
-
-

Responsible Department : CHT Germany GmbH
CHT USA
Product Safety
sds.usa@cht.com
sds.germany@cht.com



chemical-concepts.com
800.220.1966
410 Pike Road • Huntingdon Valley, PA 19006

Emergency telephone number

Emergency telephone number : (, 24 hours)

2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation : Category 3

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

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Hazard pictograms : None

Signal word : Warning

Hazard statements : H316 Causes mild skin irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Response:
P332 + P317 If skin irritation occurs: Get medical help.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical nature : Silicone elastomer

Components

Chemical name	CAS-No.	Classification according to UN GHS	Concentration (% w/w)
Quartz (SiO ₂)	14808-60-7	STOT RE 1; H372 (Lungs)	>= 50 - < 70
Siloxanes and Silicones, di-Me, hydrogen-terminated	70900-21-9	Skin Corr./Irrit. 2; H315 Eye Dam./Irrit. 2A; H319 STOT SE 3; H335 (Respiratory system)	>= 1 - < 10
octamethylcyclotetrasiloxane (REACH SVHC Candidate List)	556-67-2	Flam. Liq. 3; H226 Repr. 2; H361f Aquatic Chronic 1; H410	>= 0.025 - < 0.1

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

General advice : Take off all contaminated clothing immediately.
Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : In case of skin contact remove mechanically with cloth or pa-

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per.
Wash off immediately with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult a physician.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed : There may be reddening, swelling, overheating and pain on contact.

Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO₂)
Water spray
Dry powder
Foam

Unsuitable extinguishing media : High volume water jet
alkaline powder extinguishing agent

Specific hazards during fire-fighting : Hazardous decomposition products formed under fire conditions.
Can be released in case of fire:
Carbon oxides
Silica

Specific extinguishing methods : Use water spray to cool unopened containers.
In case of fire do not inhale smoke, conflagration gases and steams.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Contaminated surfaces will be extremely slippery.

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.

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If the product contaminates rivers and lakes or drains inform respective authorities.
Pay attention to local or official regulations.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Do not use any basic chemical binders.
Clean contaminated surface thoroughly.
Treat recovered material as described in the section "Disposal considerations".
Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Use only in well-ventilated areas.
Take measures to prevent the build up of electrostatic charge.
Keep away from sources of ignition - No smoking.
The product can release hydrogen.
Use water spray to cool unopened containers.

Advice on safe handling : Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Keep away from any kind of soiling (in particular heavy metal ions and alkalis) because of the risk of decomposition.
Do not keep the container sealed.

Conditions for safe storage : Do always store in containers which correspond to the original ones.
Keep in a dry, cool place.
Protect from humidity and keep away from water.
Do not keep the container sealed.
Only store in vessels with degassing valve.
Suitable material for containers and conduit:
synthetic material
coated steel
Inappropriate material for containers and conduit:
uncoated metals

Materials to avoid : Incompatible with oxidizing agents.
Incompatible with acids and bases.
Keep away from any kind of soiling (in particular heavy metal ions and alkalis) because of the risk of decomposition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Please check whether national workplace exposure limits exist for the dangerous ingredients listed in Section 3.

Engineering measures : Solids with occupational exposure limits in liquid preparations

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do not cause an exposure in the workplace, because they are not present in a respirable form. Exposure can occur in the form of aerosols or after drying of the liquid the solids remain, possibly in a finely dispersed form.
Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Respiratory protection : In case the work place is not ventilated sufficiently and during spray processing, it is necessary to wear respiratory protective equipment.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0.35 mm
Protective index : Class 6

Material : butyl-rubber
Break through time : > 480 min
Glove thickness : > 0.5 mm
Protective index : Class 6

Remarks : Wear chemical resistant impervious gloves. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection : Goggles
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Skin and body protection : Wear suitable protective clothing.
Work uniform or laboratory coat.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Do not breathe vapours, aerosols.
Take off all contaminated clothing immediately.
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

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Colour	:	black
Odour	:	slight
pH	:	Not applicable substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 140 °C Method: closed cup
Evaporation rate	:	Not applicable
Flammability (liquids)	:	Sustains combustion
Self-ignition	:	560 °C Hydrogen
Upper explosion limit / Upper flammability limit	:	74 %(V) Hydrogen
Lower explosion limit / Lower flammability limit	:	4 %(V) Hydrogen
Vapour pressure	:	No data available
Relative vapour density	:	Not applicable
Density	:	1.6 g/cm ³ (20 °C)
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Decomposition temperature	:	> 200 °C
Viscosity Viscosity, dynamic	:	4,500 cPs (20 °C)
Viscosity, kinematic	:	not determined
Oxidizing properties	:	Not applicable

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Conductivity : Not determined

Particle characteristics
Particle Size Distribution : Not applicable

10. STABILITY AND REACTIVITY

Reactivity : No hazardous reactions known if stored and handled properly.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : May generate flammable hydrogen gas. Avoid contact with water, alcohols, acidic, basic, or oxidizing materials.
Potential for exothermic hazard

Conditions to avoid : Keep away from heat and sources of ignition.

Incompatible materials : Oxidizing agents
Alcohols
Aldehydes
Acids and bases
Keep away from any kind of soiling (in particular heavy metal ions and alkalis) because of the risk of decomposition.

Hazardous decomposition products : Hydrogen

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50(Rat): > 5,000 mg/kg
Remarks: Argument by analogy

Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Acute oral toxicity : LD50 Oral (Rat, male): 4,800 mg/kg
Method: OECD Test Guideline 401
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : LC50 (Rat, male and female): 36 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2,375 mg/kg
Method: OECD Test Guideline 402
Remarks: No mortality observed at this dose.

Skin corrosion/irritation

Product:

Remarks : Causes mild skin irritation.

Components:

Siloxanes and Silicones, di-Me, hydrogen-terminated:

Result : Causes skin irritation.

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Species : Rat
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Remarks : Contact with eyes may cause irritation.

Components:

Siloxanes and Silicones, di-Me, hydrogen-terminated:

Assessment : Causes serious eye irritation.

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Product:

Remarks : No known sensitising effect.

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

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Germ cell mutagenicity

Product:

Germ cell mutagenicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: The product is liquid, there are no dust particles in respirable form.

Carcinogenicity

Product:

Carcinogenicity - Assessment : If the product is used properly, no carcinogenic components of the product can be released, i.e. any danger to persons through exposure in the case of handling in accordance with the intended use is assumed to be unlikely.
Remarks: The product is liquid, there are no dust particles in respirable form.

Components:

Quartz (SiO₂):

Carcinogenicity - Assessment : There is numerous evidence that an increased risk of lung cancer is limited to people who already have silicosis.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: The product is liquid, there are no dust particles in respirable form.

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Reproductive toxicity - Assessment : Suspected of damaging fertility., toxic effect on reproduction, category 2

STOT - single exposure

Product:

Remarks : Based on available data, the classification criteria are not met.

Components:

Siloxanes and Silicones, di-Me, hydrogen-terminated:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Product:

Exposure routes : Inhalation
Target Organs : Lungs
Assessment : The substance or mixture is not classified as specific target

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Remarks : organ toxicant, repeated exposure.
: The product is liquid, there are no dust particles in respirable form.

Components:

Quartz (SiO₂):

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Lungs
Assessment : Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Product:

Based on available data, the classification criteria are not met.

Experience with human exposure

Components:

Quartz (SiO₂):

Inhalation : Remarks: Product can cause silicosis when high concentrations of dust are inhaled over a long time. Silicosis symptoms can be long-lasting cough attacks and shortness of breath. Work done in surroundings containing silica dust has to stay under observation.
There is numerous evidence that an increased risk of lung cancer is limited to people who already have silicosis.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data is available on the product itself.

Toxicity to daphnia and other :
aquatic invertebrates Remarks: No data is available on the product itself.

Toxicity to algae/aquatic :
plants Remarks: No data is available on the product itself.

Toxicity to microorganisms : Remarks: No data is available on the product itself.

Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.015 mg/l
Exposure time: 48 h
Test Type: flow-through test
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (algae)): >= 0.022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

EC50 (Pseudokirchneriella subcapitata (algae)): > 0.022 mg/l
Exposure time: 96 h
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
Exposure time: 3 h
Test Type: static test
Method: ISO 8192

Toxicity to fish (Chronic toxicity) : NOEC: >= 0.0044 mg/l
Exposure time: 93 d
Species: Oncorhynchus mykiss (rainbow trout)
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.0015 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test

M-Factor (Chronic aquatic toxicity) : 10

Persistence and degradability

Product:

Biodegradability : Remarks: No data is available on the product itself.

Physico-chemical removability : Remarks: The product is insoluble and floats on water. May be separated mechanically in waste water plants. The product can be eliminated from water by abiotic processes, e.g. adsorption on activated sludge.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not bioaccumulate.

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Components:

octamethylcyclotetrasiloxane (REACH SVHC Candidate List):

Partition coefficient: n-octanol/water : log Pow: 6.98 (21.7 °C)

Mobility in soil

Product:

Mobility : Remarks: After release, adsorbs onto soil.

Other adverse effects

Product:

Additional ecological information : The product is insoluble in water, therefore the ecological data such as, e.g. biodegradability, COD, BOD5 values cannot be determined analytically.
According to our knowledge, the product does not contain heavy metals and other compounds of EC directive 2000/60 EC.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Product that cannot be reused, reclaimed or recycled should be disposed of at an authorised facility in accordance with national, state and local regulations.

Contaminated packaging : Packaging must be completely emptied. Dispose of non-recyclable/recyclable packaging in accordance with local regulations.

14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not permitted for transport

IMDG-Code

Not regulated as a dangerous good

Segregation group : -

Transport in bulk according to IMO instruments

Not applicable

Special precautions for user

Remarks : see chapter 6 - 8, By reason of the possible risk of formation of hydrogen under certain circumstances, CHT recommends transport over land or sea.
Packagings with venting are not permitted for air transport.

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15. REGULATORY INFORMATION

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

National and local regulations must be observed.

16. OTHER INFORMATION

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Further information

Training advice : Based on the information in the safety data sheet and the workplace conditions, employees must be regularly trained in the safe handling of the product. National rules for training employees in handling hazardous substances must be observed.

Other information : The classification for dangerous physico-chemical properties, health and environmental hazards has been derived from a combination of computational methods and, if available, test data.

Sources of key data used to compile the Safety Data Sheet : Information from our suppliers, as well as data from the "Registered substances database" of the European Chemicals Agency (ECHA) has been used to compile this safety data sheet.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships;

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n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.