

# TOQUARTZ Tech Specifications

TOQUARTZ®
Quartz Acid
Cleaning Tank
Product Catalog

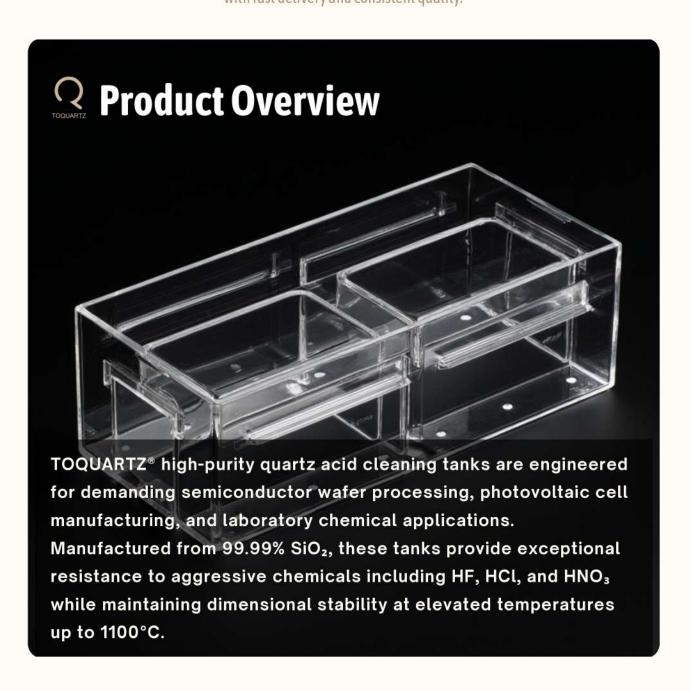
Integrated Engineering & Agile Production

for Demanded Specifications



#### TOQUARTZ® QUARTZ ACID CLEANING TANK

TOQUARTZ® is a specialized manufacturer of high-purity quartz products based in China, serving global B2B clients in laboratory instrumentation, biomedical research, and environmental monitoring. With in-house engineering support and flexible production capabilities, we offer both standard and custom TOQUARTZ® Quartz Acid Cleaning Tank with fast delivery and consistent quality.



#### TOQUARTZ® QUARTZ ACID CLEANING TANK

#### Q

#### **Key Features**

#### **Superior Chemical Resistance**

- Complete resistance to all semiconductor process acids including HF, HCl, HNO₃
- No material degradation even after prolonged chemical exposure
- Prevents process contamination and extends service life

#### **High Thermal Stability**

- Operating temperature range up to 1100°C (long-term) / 1350°C (short-term)
- Low thermal expansion coefficient (5.5×10<sup>-7</sup>/°C)
- Maintains dimensional stability during thermal cycling

#### **Ultra High Purity**

- 99.99% SiO<sub>2</sub> content ensures minimal contamination
- Critical for semiconductor and photovoltaic manufacturing
- Prevents yield loss from impurities

#### **Optical Transparency**

- ≥93% transmission (1mm thickness, 280-780nm)
- Enables process monitoring and visual inspection
- Compatible with optical sensors for process control

#### TOQUARTZ® QUARTZ ACID CLEANING TANK

#### Applications

#### Semiconductor Manufacturing

- Wafer cleaning processes
- · Wet etching operations
- Chemical processing of silicon wafers
- Specialty chemical treatments for advanced node fabrication

#### Photovoltaic Cell Production

- Solar cell surface texturing
- Cleaning and etching processes
- Specialty treatments for efficiency enhancement
- Multi-cell batch processing

#### Laboratory & Research

- Advanced materials research
- Chemical processing for specialty materials
- Sample preparation and processing
- Analytical chemistry applications



## **TECHNICAL SPECIFICATIONS**

#### I Physical Properties

Property	Value
Material Composition	High purity quartz (≥99.99% SiO₂)
Density	2.2 g/cm³
Flexural Strength	48 MPa
Elastic Modulus	72 GPa
Poisson's Ratio	0.14-0.17
Compressive Strength	1100 MPa
Bending Strength	67 MPa
Mohs Hardness	5.5-6.5



### **TECHNICAL SPECIFICATIONS**

#### II Thermal Properties

Maximum Working Temperature (Long-term)	1100°C
Maximum Working Temperature (Short-term)	1350°C
Thermal Conductivity	1.4 W/m⋅K
Thermal Expansion Coefficient	5.5×10 <sup>-7</sup> /°C
Maximum Working Temperature (Long-term)	1100°C



#### TECHNICAL SPECIFICATIONS

#### III Optical & Electrical Properties

Property	Value
Refractive Index	1.4585
Optical Transmission (1mm thickness, 280-780nm)	≥93%



#### **CUSTOMIZATION OPTIONS**

#### **Design Customization**

- Custom dimensions with precision tolerances
- Specialized inlet/outlet configurations
- Internal partitions or chambers
- Reinforced edges or corners
- Custom wall thickness
- Integrated mounting features

#### **Material Specifications**

- Standard high-purity quartz (99.99% SiO<sub>2</sub>)
- Opaque quartz options for light-sensitive applications
- Surface treatments for enhanced chemical resistance
- Precision-polished surfaces for critical sealing applications
- Fire-polished edges for improved mechanical strength

#### **Q** INSTALLATION & MAINTENANCE GUIDELINES

#### **Handling and Installation**

- Handle with care to avoid impacts
- Install on level, stable surfaces
- Use PTFE or compatible gaskets
- Allow clearance for thermal expansion
- Use compatible fittings for connections

#### **Operating Conditions**

- Do not exceed maximum operating temperatures
- Maintain appropriate temperature ramp rates
- Ensure even heating distribution
- Avoid alkaline solutions at high temperatures
- Verify seal integrity for wet processing

#### **Maintenance and Cleaning**

- Rinse thoroughly with deionized water after use
- Use appropriate solvents for persistent contaminants
- Inspect regularly for microcracks
- Store in clean, dust-free environments
- Cover openings for long-term storage



# ABOUTTOQUARTZ®

TOQUARTZ® is a specialized manufacturer of high-quality quartz glass products for industrial, laboratory, and optical applications. Our factorydirect approach eliminates intermediaries, providing cost-effective solutions with responsive technical support. We welcome small batch orders and offer 24-hour shipping for standard items.

#### **Contact Information**

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TOQUARTZ® - Precision Quartz Solutions for Industry and Research

For technical specifications, custom requirements, or pricing information, please contact our sales team.