



# AXION

## Technical Data Sheet Quartz

**Document Number:** TRD.SIL.63-212.G.ABC.1

**Product Name:** Industrial Quartz

**Revision:** 3.1

**Material Type:** Crystalline Silicon Dioxide (SiO<sub>2</sub>)

**Effective Date:** December 17, 2024

**Classification:** Engineered Mineral

### 1. Product Overview

AXION Quartz is a natural mineral derived from high-quality quartz rock extracted from quarries in Türkiye. The material is produced through drilling, blasting, crushing, washing, screening, optical sorting, drying and grinding processes.

The product offers high purity, high whiteness and high brightness suitable for industrial applications.

### 2. Chemical Composition

IUPAC Name	Formula	Cas-No.	Min. (%)	Max. (%)
<b>Silicon Dioxide</b>	SiO <sub>2</sub>	7631-86-9	99.5	-
<b>Iron (III) Oxide</b>	Fe <sub>2</sub> O <sub>3</sub>	1309-37-1	-	0.02
<b>Aluminium Oxide</b>	Al <sub>2</sub> O <sub>3</sub>	1344-28-1	-	0.3
<b>Titanium Dioxide</b>	TiO <sub>2</sub>	13463-67-7	-	0.02
<b>Calcium Oxide</b>	CaO	1305-78-8	-	0.08
<b>Magnesium Oxide</b>	MgO	1309-48-4	-	0.01
<b>Sodium Oxide</b>	Na <sub>2</sub> O	1313-59-3	-	0.1
<b>Potassium Oxide</b>	K <sub>2</sub> O	12136-45-7	-	0.05
<b>Loss of Ignition</b>	L.O.I	-	-	0.150

### 3. Physical Properties

#### 3.1. Particle Size Distribution

Particle Size Distribution (Malvern MasterSizer 3000E)				
Size (µm)	D10	D50	D90	D97
Min.	60	110	180	220
Max.	80	150	240	290

#### 3.2. Color

Color Measurement (X-Rite CI7500)			
	L	A	B
Min.	85	-	-
Max.	-	1.7	12

#### 3.3. Humidity

Humidity	
	Aquaboy
Min.	-
Max.	60

#### 3.4. Appearance

The advanced optic sorting process yields a product with superior whiteness and brightness, free from discoloration and foreign particulate matter.

### 4. Typical Applications

- Glass & Ceramics
- High-performance engineered stone and composites
- Specialty coatings and paints
- Advanced ceramic formulations
- Filler for epoxy and polymer systems
- Filtration media

### 5. Packaging & Handling

Standard packaging is 1-ton or 1250KG bulk bags. Store in a dry, cool environment. Standard industrial safety precautions for handling fine mineral powders should be observed, including the use of appropriate personal protective equipment (PPE) such as dust masks and eye protection.