



# AXION

## Technical Data Sheet Quartz

**Document Number:** TRD.SIL.45.P

**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  | 99.6     | -        |
| <b>Iron (III) Oxide</b> | Fe <sub>2</sub> O <sub>3</sub> | 1309-37-1  | -        | 0.04     |
| <b>Aluminium Oxide</b>  | Al <sub>2</sub> O <sub>3</sub> | 1344-28-1  | -        | 0.2      |
| <b>Titanium Dioxide</b> | TiO <sub>2</sub>               | 13463-67-7 | -        | 0.01     |
| <b>Calcium Oxide</b>    | CaO                            | 1305-78-8  | -        | 0.02     |
| <b>Magnesium Oxide</b>  | MgO                            | 1309-48-4  | -        | 0.01     |
| <b>Sodium Oxide</b>     | Na <sub>2</sub> O              | 1313-59-3  | -        | 0.05     |
| <b>Potassium Oxide</b>  | K <sub>2</sub> O               | 12136-45-7 | -        | 0.03     |
| <b>Loss of Ignition</b> | L.O.I                          | -          | -        | 0.150    |

### 3. Physical Properties

#### 3.1. Particle Size Distribution

| Particle Size Distribution (weight %) |     |     |     |     |
|---------------------------------------|-----|-----|-----|-----|
| Size (µm)                             | D10 | D50 | D90 | D97 |
| Min.                                  | 2.2 | 11  | 38  | 50  |
| Max.                                  | 7   | 22  | 48  | 62  |

#### 3.2. Color

| Color Measurement (X-Rite CI7500) |      |     |     |
|-----------------------------------|------|-----|-----|
|                                   | L    | A   | B   |
| Min.                              | 93.5 | -   | -   |
| Max.                              | -    | 0.3 | 2.5 |

#### 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

- Advanced ceramic/porcelain formulations
- High-performance engineered stone and composites
- Specialty coatings and paints
- 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.

**AXION** is a brand of Tradege