HUNTER BAY SILICA

Hunter Bay Silica Powders
CHEMICAL AND ANALYTICAL DATA SHEET

Hunter Bay Silica powders are produced from chemically treated and water washed high purity quartz. The milling process ensures minimal contamination, resulting in ultra-fine crystalline silica particles with a SiO_2 content of greater than 99.97%. The silica powder is tested and controlled to rigorous standards which ensure consistent chemical and physical properties resulting in predictable and repeatable performance.

The basic characteristics of the silica powder are as follows:

- High purity, fewer ionic impurities and low alpha ray emission; and
- Particle size adjustable to customer requirements.

Hunter Bay Silica's comprehensive particle size range of silica powder is used in a wide range of industrial applications. Typical uses for these powders include the following:

- Filler in EMC in semiconductors.
- Filler in CCL to improve the CTE, thermal resistance and reliability of CCL.
- The printing ink of PCB. The ultra-fine crystalline silica powder can bring ideal resistance to scratching and wiping, low thermal expansion coefficient, chemical resistance and long-term reliability for the circuit board.
- Paints and coating. Ultrafine crystalline silica powder can bring excellent performances, such as resistance to scratching and wiping, levelling property, transparency and weather resistance, to the coating, including the decorative coating, carpentry paint, powder coating, anticorrosive paint and floor coating.
- Other applications including adhesives, electrical insulation for electrical insulation parts and cosmetics.

The following typical properties may help you to determine the suitability of the product to best suit your application.

CHEMICAL AND ANALYTICAL DATA

Typical Values. These Do Not Represent A Specification

HBS Micro Range (7 µm – 75 µm)

(ppm) Typical Values	Al	Fe	Na	K	Ca	Mg	U (ppb)	Mg	Mn	Cr	SiO_2 (%)
	< 50	<15	< 20	< 20	< 15	< 5	< 0.5	< 1	< 0.1	< 0.1	≥ 99.97%

Note: SiO_2 calculated by 100% - Total impurities (oxide)

Cl^- (ppm)	Na^+ (ppm)	Fe^{2+} (ppm)	pH	EC (µS/cm)
< 1	< 1	< 0.1	5 ± 1	~ 3

ORDERING INFORMATION

Shipping Point: Townsville, Queensland

Availability: 1 tonne Bulk Bags

Disclaimer: This Technical Information Sheet is provided for general information purposes only. Ranges and values of trial sample testing or on a Technical Information Sheet are typical or expected ranges and are not guaranteed ranges. Hunter Bay Silica Pty Ltd makes no warranties express or implied, including as to suitability, fitness for purpose or merchantability and, to the extent permitted by law, accepts no liability for loss or damage arising out of use or reliance on this information.

HAZARD WARNING: Prolonged inhalation can cause delayed lung injury including silicosis, a progressive, disabling and sometimes fatal lung disease. In accordance with the National Occupational Health and Safety Commission's "Approved Criteria for Classifying Hazardous Substances", Free Crystalline Silica (Quartz) has been classified as a Hazardous Substance. This product contains Free Crystalline Silica (Quartz). The International Agency for Research on Cancer has determined that Free Crystalline Silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure. The risk of lung disease is increased if smoking is combined with silica respiration.

Avoid creating dust when handling, using or storing the product. Use only with adequate ventilation to keep exposure low. Do not use as a dry abrasive blasting agent. Undertake health and safety risk assessments on safe methods of handling and use appropriate to your workplace. To prevent inhalation of airborne dust, wear respiratory protection in accordance with Australian Standard AS1715 and AS1716. To prevent potential irritation to eyes, wear eye protection in accordance with Australian Standard AS1337. Please refer to the relevant Hunter Bay Silica Material Safety Data Sheet (MSDS) for health hazard.