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SAFETY DATA SHEET (SDS)

Blue Agate Precious Stone Slabs

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Prepared by: Ultra Stones LLC
Website: Luxury Granite, Marble & Quartz Countertops - Ultra Stones

1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Blue Agate Slabs
Distributor Name: Ultra Stones LLC
Product Recommended Use: Countertops, wall cladding, vanities, interior decorative surfaces.

Company Information:

Company Name: ULTRA STONES LLC
Address:
New York Showroom: 55 Central Drive, Farmingdale, NY 11735
Contact: 631-873-4747 / 631-873-4748
Pennsylvania Showroom: 3907 Nebraska St, Levittown, PA 19056
Contact: 215-647-3972 / 215-647-3974

Restrictions on Use: Not intended for applications involving uncontrolled airborne dust generation without proper industrial controls.

Product Description

Blue Agate Slabs are semi-precious natural stone slabs composed primarily of crystalline silica in the form of chalcedony (microcrystalline quartz) bonded together using a polymer resin system (typically epoxy or polyester). The material is processed into slabs through cutting, resin infusion, and surface polishing to achieve a durable and decorative finish suitable for interior applications.

The finished slab is:

- Odorless
- Non-flammable (stone component; resin may degrade under extreme heat)
- Insoluble in water
- Chemically stable under normal conditions
- Structurally rigid and brittle (may fracture under excessive mechanical stress)

Under normal handling, fabrication with proper controls, and installed use conditions, the product does not release hazardous substances and does not pose a health risk to end users.

Uses Advised Against

Improper mechanical processing methods such as:

- Dry cutting
- Dry grinding
- Dry drilling
- Sanding or polishing without dust suppression

These activities may generate respirable crystalline silica (SiO_2) dust, which poses serious inhalation hazards, including silicosis and lung disease.

2. HAZARD(S) IDENTIFICATION

Important Note

The finished Blue Agate slab is a solid, resin-bonded natural stone product that is odorless, chemically stable, non-hazardous, and non-combustible under normal conditions of use. It does not present an immediate health hazard during handling, transport, or installed use.

However, fabrication or processing activities such as cutting, grinding, drilling, or polishing may generate respirable crystalline silica (SiO_2) dust, which can exceed permissible exposure limits and pose serious health risks.

Emergency Overview

DANGER!

Lung Injury and Cancer Hazard (from respirable crystalline silica dust)

Prolonged or repeated inhalation of respirable crystalline silica dust may cause:

- Silicosis (irreversible lung disease)
- Lung cancer
- Chronic respiratory impairment
- Chronic Obstructive Pulmonary Disease (COPD)
- Tuberculosis (TB)
- Bronchitis
- Kidney disease
- Autoimmune disorders

Global Harmonized System (GHS) Classification:

(Applicable to dust generated during fabrication or installation – not the intact slab)

Carcinogenicity – Category 1A (H350): May cause cancer by inhalation

Specific Target Organ Toxicity – Single Exposure, Category 3 (H335): May cause respiratory irritation

Specific Target Organ Toxicity – Repeated Exposure, Category 1 (H372): Causes damage to lungs through prolonged or repeated exposure

GHS Label Elements:

Not applicable to intact, finished slabs under normal use

Hazard applies only when dust is generated during fabrication or processing

Safe Work Practices:

Use wet cutting and polishing methods to minimize dust generation

Avoid dry cutting, dry grinding, or uncontrolled mechanical processing
Ensure adequate ventilation and dust extraction systems

GHS Hazard Pictograms:

GHS07 GHS08

Signal Word:

DANGER

GHS Hazard Statements:

H350: May cause cancer by inhalation
H335: May cause respiratory irritation
H372: Causes damage to lungs through prolonged or repeated inhalation exposure

GHS Precautionary Statements

Prevention:

P203: Obtain, read, and follow all safety instructions before use
P260/P261: Do not breathe dust; avoid generating airborne particles
P264: Wash hands and exposed skin thoroughly after handling
P270: Do not eat, drink, or smoke when handling or processing
P271: Use only outdoors or in well-ventilated areas
P280: Wear appropriate PPE including gloves, eye protection, and NIOSH-approved respirator when required

Other Hazards

The product contains a high percentage of crystalline silica (65–85%), which becomes hazardous only when inhaled as respirable dust.
The slab is brittle and heavy, posing risks of cuts, impact injury, or breakage during handling.
Resin components may release minor fumes only under extreme heat or combustion conditions.

3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Natural Stone (Blue Agate – Chalcedony / Microcrystalline Quartz)

Component	CAS Number	Estimated % by Wt/Wt
Crystalline Silica (SiO_2) (primarily in the form of chalcedony)	14808-60-7	65–85
Iron Oxide (Fe_2O_3)	1309-37-1	<3
Trace Minerals	—	<2

Polymeric Resin System (Tenax Adhesive/Resin Blend)

Component	CAS No.	%
Epoxy / Polyester Resin	Proprietary	10–30%
Styrene Monomer (if applicable)	100-42-5	<10%
Amine/Peroxide Hardeners	Various	<2%
Fillers & Pigments	Various	<5%

4. FIRST AID MEASURES

These measures apply only if dust is generated during processing.

Inhalation

If dust is inhaled:

- Move the affected individual to fresh air immediately.
- Loosen tight clothing.
- Seek medical attention if coughing, wheezing, or breathing difficulty persists.
- In severe cases, administer oxygen if trained to do so.

Eye Contact

If dust enters eyes:

- Rinse cautiously with clean running water for at least 15 minutes.
- Remove contact lenses if present and easy to do.
- Seek medical attention if irritation continues.

Skin Contact

- Wash exposed skin with soap and water.
- Treat cuts from broken tile appropriately.
- Seek medical care if irritation develops.

5: FIRE-FIGHTING MEASURES

Flammability

Blue Agate slabs are not flammable under normal conditions.

Suitable Extinguishing Media

Dry chemical, foam, CO_2

Special Hazards

Burning resin releases toxic fumes (CO, CO_2, VOCs)

Protective Equipment: Self-contained breathing apparatus (SCBA)

6. ACCIDENTAL RELEASE MEASURES

For Broken Slabs

- Collect mechanically: Gather broken or fragmented slabs using mechanical means such as shovels, brooms, or appropriate lifting equipment. Avoid direct hand contact with sharp edges whenever possible. Wear cut-resistant gloves to reduce the risk of lacerations during cleanup.
- Avoid dropping from height to prevent further fragmentation: Handle broken pieces carefully and avoid dropping them from elevated surfaces, as impact may cause additional breakage and generate dust. Lower the materials in a controlled manner to minimize the release of fine particulates and reduce secondary hazards.

For Dust Release

- Avoid dry sweeping: Do not use dry brooms or compressed air to clean dust, as these methods can disperse respirable crystalline silica into the air and significantly increase inhalation risk.
- Use HEPA-filter vacuum systems: Clean dust using industrial vacuum systems equipped with High-Efficiency Particulate Air (HEPA) filters to effectively capture fine respirable particles and prevent re-aerosolization.
- Use wet sweeping methods to minimize airborne particles: Lightly mist dust with water prior to cleanup and use wet sweeping or damp cloth methods to reduce airborne dispersion. Avoid excessive water runoff that could create slip hazards.
- Personnel should wear appropriate respiratory protection if exposure exceeds limits: If airborne dust concentrations may exceed OSHA Permissible Exposure Limits (PEL), workers must wear properly fitted, NIOSH-approved respiratory protection in accordance with an established respiratory protection program (29 CFR 1910.134).

7. HANDLING AND STORAGE

Handling

- Wet cutting methods or the score-and-snap technique are strongly recommended during installation to minimize the generation of respirable crystalline silica dust.
- Improper installation practices, including uncontrolled cutting, grinding, or drilling, may result in airborne silica exposure.
- Do not dry cut or dry grind the product using power tools without effective dust control systems. Dry cutting can significantly increase airborne dust concentrations and may pose a risk of acute and chronic respiratory injury.
- If adequate natural or mechanical ventilation cannot be maintained, use appropriate respiratory protection, such as a properly fitted NIOSH-approved respirator.
- Clean accumulated dust using a HEPA-filtered vacuum system or damp sweeping methods. Avoid dry sweeping or the use of compressed air.
- Refer to Section 8 of this Safety Data Sheet for detailed personal protection recommendations during handling and cleanup operations.

Conditions for Safe Storage, Including Incompatibilities

- Store slabs in a dry, stable environment to prevent physical damage or breakage.
- Do not store near strong acids or acidic substances. Contact with certain acids may cause surface etching, discoloration, or deterioration of the resin binders.
- Protect packaging from moisture and impact during storage.
- Shelf life is improved when stored under normal warehouse conditions.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Composition	Fraction	OSHA PEL	OSHA AL	NIOSH REL	ACGIH TLV
Crystalline Silica (Quartz)	Respirable	50 µg/m^3	25 µg/m^3	0.05 mg/m^3	0.025 mg/m^3
Iron Oxide (Fe_2O_3)	Respirable Fraction	10 mg/m^3	N.E.	5 mg/m^3	5 mg/m^3

Legend

- PEL – Permissible Exposure Limit (OSHA)
- AL – Action Level (OSHA)
- REL – Recommended Exposure Limit (NIOSH)
- TLV – Threshold Limit Value (ACGIH)
- N.E. – Not Established
- Respirable Fraction – Airborne particles small enough to penetrate deep into the lungs

Exposure Controls

- Wet Cutting Systems: Use wet cutting methods whenever feasible to suppress dust at the source. Continuous water feed systems significantly reduce the generation of respirable crystalline silica by preventing dust from becoming airborne during cutting, grinding, or drilling operations.
- Local Exhaust Ventilation (LEV): Provide local exhaust ventilation equipped with appropriate dust collection systems at points where dust may be generated. Ventilation systems should be designed to capture airborne particulates at or near the source and discharge them safely in accordance with applicable regulations.
- Enclosed Cutting Stations: Utilize enclosed or partially enclosed cutting booths to contain dust within a controlled area. Enclosures should be used in combination with ventilation and filtration systems to further reduce worker exposure.
- HEPA Vacuum Systems: Use industrial vacuum systems equipped with High-Efficiency Particulate Air (HEPA) filters for cleanup and dust collection. HEPA systems effectively capture fine respirable particles and help prevent re-dispersion into the workplace atmosphere.

Engineering controls should be the primary means of exposure reduction. Respiratory protection should be used when engineering controls alone are insufficient to maintain airborne concentrations below occupational exposure limits.

Respiratory Protection

- If airborne dust concentrations exceed applicable OSHA Permissible Exposure Limits (PEL), wear a properly fitted, NIOSH-approved respirator rated N95 or higher, depending on measured exposure levels.
- Respirator selection must be based on workplace hazard assessment and exposure monitoring results.
- Fit testing, medical evaluation, and participation in a written respiratory protection program are required in accordance with OSHA 29 CFR 1910.134.

Eye Protection

- Wear safety glasses with side shields or chemical splash goggles during cutting, grinding, drilling, or handling operations where dust or flying particles may be generated.
- Avoid wearing contact lenses in dusty environments, as dust particles may become trapped and cause irritation.

Hand Protection

- Wear durable cotton, leather, or cut-resistant gloves when handling tiles, slabs, or broken pieces to reduce the risk of cuts, abrasions, and skin contact with dust.
- Select gloves appropriate for the task and inspect them regularly for damage.

Hygiene Measures

- Wash hands and exposed skin thoroughly with soap and water after handling materials and before eating, drinking, or using restroom facilities.

- Do not eat, drink, or smoke in areas where dust may be present.
- Remove dust-contaminated clothing promptly and launder before reuse to prevent secondary exposure.
- Maintain good housekeeping practices to prevent accumulation of dust in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid, dense, resin-bonded natural stone slab composed of Blue Agate stones; polished surface; brittle; typically purple with natural crystalline variations.
Odor: Odorless (solid form)
Odor Threshold: Not applicable
pH: Not applicable (solid article)
Melting Point: 1700°C (> 3092°F) (based on quartz component; resin decomposes at lower temperatures)
Freezing Point: Not applicable
Boiling Point: Not applicable (solid material)
Flash Point: Not applicable for stone; resin component may have a flash point if isolated
Evaporation Rate (Ethyl Ether = 1): Not applicable
Flammability (Solid, Gas): Non-flammable solid; resin component may be combustible under high heat
Upper/Lower Flammability or Explosive Limits: Not applicable
Vapor Pressure: Not applicable
Vapor Density: Not applicable
Relative Density (Specific Gravity): Approximately 2.5 – 2.7 (may vary depending on resin content and crystal composition)
Solubility in Water: Insoluble
Partition Coefficient (n-octanol/water): Not applicable
Auto-ignition Temperature: Not applicable for finished product
Decomposition Temperature: Resin component may begin to thermally degrade at elevated temperatures (>200–300°C), releasing fumes; quartz remains stable
Viscosity: Not applicable (solid material)

10: STABILITY AND REACTIVITY

- Reactivity: Not reactive under normal conditions
- Chemical Stability: Stable
- Conditions to Avoid: Heat, sparks, dust generation
- Hazardous Decomposition: CO, CO_2, organic vapors

11: TOXICOLOGICAL INFORMATION

Primary Routes of Exposure:

- No exposure is expected from intact slabs under normal handling and use conditions.
- Potential exposure may occur through inhalation of respirable dust generated during mechanical processing activities such as cutting, grinding, drilling, crushing, or demolition.

Acute Effects:

No acute health effects are expected from exposure to intact slabs under normal handling and use. However, handling broken or cut slabs may result in lacerations to the hands or other exposed areas. Eye irritation may occur if dust is generated during high-dust activities such as dry cutting, drilling, grinding, or surface removal.

In rare instances, acute silicosis — a rapidly developing and severe form of nodular pulmonary fibrosis — may occur following short-term exposure to extremely high concentrations of respirable crystalline silica dust generated in poorly controlled environments. Symptoms may include shortness of breath, persistent coughing, and early fatigue. These symptoms are not specific and may also be associated with other respiratory conditions.

Chronic Effects:

No chronic health effects are anticipated from exposure to intact slabs.

Prolonged or repeated inhalation of respirable crystalline silica at or above established occupational exposure limits may lead to the development of chronic silicosis, a progressive and potentially disabling form of nodular pulmonary fibrosis (NPF). Chronic silicosis has been associated with an increased risk of pulmonary tuberculosis, chronic bronchitis, emphysema, and other obstructive airway diseases.

Long-term exposure to elevated silica dust concentrations has also been linked in some studies to autoimmune disorders, chronic kidney disease, and other systemic health effects.

Epidemiological evidence indicates that workers with sustained high exposure to respirable crystalline silica are at significantly increased risk of developing chronic silicosis.

Symptoms such as shortness of breath, reduced lung capacity, and persistent fatigue may indicate the presence of silicosis; however, these symptoms are not exclusive to silica-related disease and may occur in other medical conditions.

Carcinogenicity Status

Respirable crystalline silica (quartz), which may be generated during cutting, grinding, drilling, or other mechanical processing of Blue Agate slabs, has been classified as follows:

- The International Agency for Research on Cancer (IARC) classifies respirable crystalline silica as Group 1 – Carcinogenic to Humans.
- The National Toxicology Program (NTP) lists respirable crystalline silica as “Known to be a Human Carcinogen.”
- The Occupational Safety and Health Administration (OSHA) includes crystalline silica on its Hazard Communication Standard carcinogen list (29 CFR 1910.1200).

These classifications apply to respirable crystalline silica dust and not to intact, finished slabs under normal conditions of use.

12. ECOLOGICAL INFORMATION

- Effects on Aquatic Life: No additional relevant data are available. In its solid, inert form, the product is not expected to present a hazard to aquatic organisms.
- Environmental Stability and Breakdown: The product is environmentally stable and inert under normal conditions. The quartz component does not degrade, while the resin binder may slowly degrade under prolonged environmental exposure. No hazardous substances are released under normal use conditions.
- Potential for Bioaccumulation: No additional relevant data are available. Being an inorganic and insoluble solid, the product is not expected to accumulate in living organisms.
- Migration in Soil: No additional relevant data are available. Due to its solid and insoluble properties, the material is expected to exhibit negligible mobility in soil.

13. DISPOSAL CONSIDERATIONS

- Dispose according to federal, state, and local regulations.
- Do not release dust into environment.
- Resin waste must follow chemical disposal guidelines.

14. TRANSPORT INFORMATION

- Not classified as hazardous for transport.
- Handle as fragile material.

15: REGULATORY INFORMATION

U.S. Federal Regulations

The components of Blue Agate Precious Stone Slabs (natural quartz-based stone and polymer resin binder) have been previously introduced into U.S. commerce and are either listed on or exempt from the Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

This product, in its intact solid form, is classified as an article and is not subject to reporting requirements under TSCA when used as intended.

OSHA Hazard Communication Standard (29 CFR 1910.1200)

Under normal conditions of handling and use, intact Blue Agate slabs do not meet the hazard classification criteria defined by OSHA's Hazard Communication Standard.

However, when mechanically processed (e.g., cutting, grinding, drilling, polishing), respirable crystalline silica dust may be generated. In dust form, the product may meet the following hazard classifications:

- Health Hazard – Carcinogenicity (Crystalline Silica, Respirable Fraction)
- Specific Target Organ Toxicity – Repeated Exposure (Lungs)

Physical Hazard Classification (Finished Product)

The finished Blue Agate slab is:

- Not flammable (stone component; resin may be combustible under extreme heat)
- Not explosive
- Not oxidizing
- Not pyrophoric
- Not water reactive
- Not an organic peroxide
- Not a compressed gas

State Right-to-Know Regulations

Respirable crystalline silica (quartz), which may be generated during fabrication or processing, is listed as a hazardous substance under certain state right-to-know laws, including but not limited to:

- Massachusetts
- New Jersey
- Pennsylvania

Users should consult applicable state and local regulations for specific compliance requirements.

California Proposition 65

WARNING: This product can expose you to respirable crystalline silica, which is known to the State of California to cause cancer.

16. OTHER INFORMATION

The information contained herein is provided in good faith and is believed to be accurate as of the date of preparation. The information is intended to comply with the requirements of OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

This Safety Data Sheet is intended to provide guidance regarding the safe handling, use, processing, storage, transportation, and disposal of Blue Agate slabs. It does not constitute a warranty, expressed or implied, regarding product performance or suitability for a particular application.

Ultra Stones assumes no responsibility for injury to persons or damage to property resulting from misuse of the product, failure to follow recommended safety practices, or failure to comply with applicable laws and regulations.

Contact at: **info@ultrastones.com** if you have any queries.