



LION
GROUP

NATURAL RESOURCES
REAL OPPORTUNITIES
A STRONGER TOMORROW

SILIX MINERAÇÃO

HIGH-PURITY QUARTZ | BAHIA, BRAZIL

An operating Brazilian high-purity quartz platform combining naturally high-purity feedstock, established processing infrastructure and a demonstrated pathway toward advanced HPQ products.

BRAZILIAN
HIGH-PURITY
QUARTZ
FOR A MORE
SUSTAINABLE
TOMORROW

~30 ktpa

Current
production capacity

~15,000 t

Existing stockpile of
approximately 99.9%
SiO₂ material

99.991–99.993%

SiO₂ achieved in
advanced processing
tests

<1 ppm

B and Li in
advanced test
results

MASCOTE, BAHIA, BRAZIL

Located in southern Bahia with access to established logistics infrastructure and Atlantic export routes via Ilhéus and Salvador.



BRAZIL → UNITED STATES | EUROPE | ASIA



OUR OPERATION
IN MASCOTE, BAHIA

OPERATING ASSET

Silix Mineração operates a quartz mining and processing operation in Mascote, Bahia, Brazil, with a focus on high-purity silica for industrial and advanced applications.

MINING → DRYING → SCREENING → MAGNETIC SEPARATION → FLUIDIZED-BED FURNACE → AEROCLASSIFICATION
COMMISSIONING

The upgraded circuit is designed to improve purity, particle-size control, product consistency and year-round production stability.

Thereza Mello
Strategic Partnerships Advisor

+55 21 98159-7161
thereza.mello@lionmining.com.br

Silix Mineração
A Lion Group Company



LION
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CRITICAL MINERALS
REAL SOLUTIONS

From High-Purity Silica to Advanced HPQ

A progressive product platform supported by physical and thermal upgrading.

NATURAL PURITY
NATURAL POTENTIAL
REAL APPLICATIONS

PRODUCT DEVELOPMENT PATHWAY

99.90% SiO₂

EXISTING PRODUCTION PLATFORM

Existing production and available inventory for selected industrial applications and further upgrading.



99.95% SiO₂

HIGHER-PURITY PRODUCT

Enhanced physical and magnetic processing supporting tighter chemistry and particle-size specifications.



99.99%+ SiO₂

ADVANCED HPQ PATHWAY

Advanced processing tests have demonstrated 99.991–99.993% SiO₂. Commissioning of thermal and classification equipment is intended to support consistent production at increasingly higher purity levels.

PROCESSING FLOW



QUARTZ
RESOURCE



DRYING &
SCREENING



MAGNETIC
SEPARATION



FLUIDIZED-BED
FURNACE



AEROCLASSIFICATION



CONTROLLED
HIGH-PURITY
PRODUCT

COMMISSIONING

A pathway to higher purity without reliance on a conventional chemical purification route.

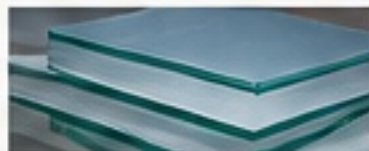
PRODUCT CONTROL

The upgraded classification circuit is designed to deliver tighter and more consistent particle-size distribution. Representative sizing work covers fractions between approximately 125 – 600 µm. Final commercial PSD specifications will be established following commissioning and customer qualification.

INTERNATIONAL PRODUCT DEVELOPMENT

Silix material has previously undergone technical evaluation in Japan and China. Those evaluations involved specially prepared material that is not representative of the current commercial production route. Current development is focused on material from the upgraded circuit.

POTENTIAL APPLICATIONS



SPECIALTY GLASS

High-quality glass and specialty industrial applications



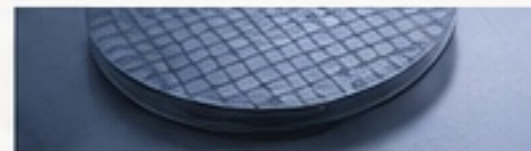
ADVANCED MATERIALS

High-temperature and high-purity industrial applications



SOLAR / PV

Potential applications within the photovoltaic quartz value chain, subject to specification and qualification



ADVANCED HPQ

Higher-value applications requiring increasingly stringent impurity control and customer qualification. Potential semiconductor-related applications subject to further processing and end-user qualification.



A BRAZILIAN PLATFORM
FOR HIGH-PURITY QUARTZ

~30 ktpa

Current capacity

99.991–99.993%

SiO₂ demonstrated
in advanced processing

<1 ppm

B and Li in tests

4N

Technical
pathway demonstrated

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www.liongroupminerals.com