

PRODUCT DATA SHEET

Orange Cobalt Silica Gel Desiccant



Description

Lubrigard's orange silica gel desiccant is a premium moisture control solution designed for demanding industrial applications. Engineered for high adsorption capacity and visible color change, it helps protect critical equipment, instruments, and packaged goods from moisture damage.

Applications

- Air compressor dryers and pneumatic systems
- Electronics and instrument enclosures
- Packaging for moisture-sensitive goods
- Transformer and switchgear breather elements
- Storage of powders, chemicals, and pharmaceuticals
- Oil and fuel storage tanks.

Product specifications

Composition:

- Bead size: 3–5 mm
- Moisture capacity: 35–40% at 25°C, 40% Relative Humidity (RH)
- Indicator colour change: orange (dry) to green/yellow (saturated)
- Bulk density: 600–700 kg/m³
- Shelf life: 2 years (unopened, stored in airtight container)

Refill product codes

	Series 300	Series 600	Series 1000
Breather series	Series 300	Series 600	Series 1000
Replacement part #	LBG-SG-300	LBG-SG-600	LBG-SG-1000
Amount of desiccant	230g	460g	770g

Regulation Compliance: Complies with OSHA Hazard Communication Standard (29 CFR 1910.1200)



Feature	Blue silica gel	Orange silica gel
Orange Silica Gel	Silica beads impregnated with cobalt(II) chloride, turning pink when saturated	Silica beads with organic indicator dye, transitioning from orange to green/yellow when saturated
Toxicity	Contains cobalt, a regulated heavy metal	Non-toxic, environmentally friendly
Regeneration	Requires high-temperature bake; toxic byproducts	Easy regeneration at moderate temperatures, no hazardous fumes
Safety	Classified as potentially hazardous	Safe for use in food, pharmaceutical, and electronics contexts

Key benefits

High moisture capacity:

- Adsorbs up to 40% of its own weight in water, ensuring extended protection.

Clear visual indicator:

- Sharp colour change from orange to green clearly signals when replacement or regeneration is needed.

Safe and non-toxic:

- Free from cobalt; compliant with RoHS and food-contact standards.

Easy regeneration:

- Restores performance with simple heating (120– 150°C for 2–3 hours) without hazardous byproducts.

Wide operating range:

- Effective from –20°C to +100°C, suitable for diverse environments.

Handling and storage

Handling:

- Avoid creating dust. Use appropriate protective equipment to avoid inhalation and skin contact.

Storage:

- Store in a cool, dry area. Keep containers tightly closed to avoid moisture exposure. Avoid storage with incompatible materials like strong acids or oxidising agents.

Hazards identification

Emergency overview:

Physical state:

- Granular solid

Color:

- Orange (dry), Green (when saturated with moisture)

Odour:

- Odourless



Potential health effects

Inhalation:

- Prolonged or repeated exposure to dust from silica gel may cause irritation to respiratory tract.

Skin contact:

- Prolonged contact may cause dryness or irritation.

Eye contact:

- Dust from the product may cause irritation to the eyes.

Ingestion:

- Non-toxic, but ingestion of large quantities may cause discomfort.

Chronic health hazards:

- Prolonged exposure to cobalt chloride (used in the indicator) has been linked to respiratory and skin sensitivity in some cases

Fire fighting measures

Flammability:

- Non-flammable.

Suitable extinguishing media:

- Use any standard extinguishing media: water spray, dry chemical, foam, or CO₂.

Special protective equipment for firefighters:

- Wear self-contained breathing apparatus (SCBA) and full protective gear.

Hazardous combustion products:

- In a fire, toxic fumes of carbon monoxide, carbon dioxide, or silicon oxides may be produced.

First aid measures

Inhalation:

- Prolonged or repeated exposure to dust from silica gel may cause irritation to respiratory tract.

Skin contact:

- Prolonged contact may cause dryness or irritation.

Eye contact:

- Dust from the product may cause irritation to the eyes.

Ingestion:

- Non-toxic, but ingestion of large quantities may cause discomfort.

Chronic Health Hazards:

- Prolonged exposure to cobalt chloride (used in the indicator) has been linked to respiratory and skin sensitivity in some cases.

Stability and reactivity

Stability:

- Stable under normal conditions.

Conditions to avoid:

- Avoid moisture exposure for prolonged periods (increases product saturation). Avoid extreme temperatures.

Incompatible materials:

- Strong acids, strong bases, oxidizing agents.

Hazardous decomposition products:

- None under normal conditions of use.

Physical and chemical properties

Appearance: orange when dry, green when saturated

Physical state: solid, granular

Odour: odourless

Melting point: n/a

Boiling point: n/a

Flash point: non-flammable

Solubility in water: insoluble (Zeolite), slightly soluble (Silica gel)

Specific gravity: ~2.0

