

# NatraSorb<sup>®</sup>

## Bulk Silica Gel

### Advantages

- High Capacity Adsorption
- Chemically Inert, Non-corrosive, and Non-toxic
- Meets USP/NF Standards and EU Regulations
- Available with a Color Change Indicator

### Applications

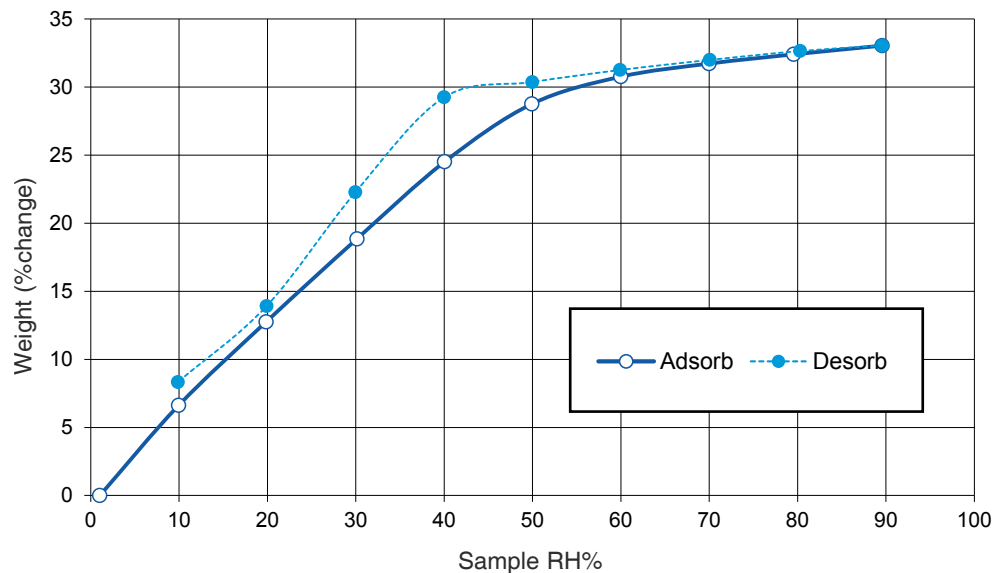
- Cryogenic Purification
- Dynamic Drying of Refrigerants
- High Pressure Gas Drying Cartridges
- Hydrocarbon Recovery Units
- Insulated Windows / Glass
- Liquid Petroleum Gas Dryers
- Natural Gas Dehydration
- Organic Liquid Drying
- Packaged Gas & Liquid Dehydrators
- Flower Drying
- Telephone Cable Splicing

NatraSorb Bulk Silica Gel is synthetically manufactured from sodium silicate. Through close control of the manufacturing processes, such as washing and drying, physical characteristics (e.g., pore size and surface area) of the silica gel can be managed. The resulting silica gel is an amorphous, highly porous material with a strong affinity for water, which is readily adsorbed via multilayer, physical adsorption, and capillary condensation. NatraSorb<sup>®</sup> Silica Gel is also effectively used for adsorbing alcohols, hydrocarbons, and other chemicals. NatraSorb Silica Gel is chemically inert, non-corrosive, and non-toxic.

### Highly Efficient

NatraSorb Silica Gel has a large surface area due to its network of microscopic pores, making it a highly efficient adsorbent capable of adsorbing greater than 30 percent of its weight in moisture at a relative humidity (RH) of 60 percent or above.

### Typical Adsorption / Desorption Isotherm (25° C)\*



One pound of NatraSorb Silica Gel has a surface area of more than 3,000,000 ft<sup>2</sup> (265,000 m<sup>2</sup>), giving it the ability to adsorb substantial quantities of vapor from air or gas environments, even at very low temperatures.

### Average Physical Properties and Specifications\*

|                              |                           |
|------------------------------|---------------------------|
| <b>Average Pore Diameter</b> | 20-30Å                    |
| <b>Specific Surface Area</b> | 650-800 m <sup>2</sup> /g |
| <b>Pore Volume</b>           | 0.35-0.45 ml/g            |
| <b>Bulk Density</b>          | 43 lb/ft <sup>3</sup>     |
| <b>Moisture Content</b>      | <2%                       |

\*Type A silica gel



# NatraSorb® Bulk Silica Gel

## Regulatory Compliance

Non-indicating NatraSorb Silica Gel complies with the following standards and regulations:

- United States Pharmacopeia / National Formulary (USP/NF) Monograph for Silicon Dioxide
- United States 21 CFR 172 food additives permitted for direct addition to food for human consumption
- Heavy metal requirements under European Directive 94/62/EC and its amendments on packaging and packaging waste
- Hazardous substance requirements under European Regulation (EC) 1272/2008 on classifications, labeling, and packaging of substances and mixtures (REACH)
- European Regulation (EC) 1935/2004 and its amendments on materials and articles intended to come into contact with food
- European Regulation (EC) 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food
- European Directive 76/768/EEC and its amendments (listed as coloring agent 77004 in Annex IV Part 1), allowing for use in cosmetic products with no restrictions

In addition, NatraSorb® silica gel is sulfite free.

## Specifications

NatraSorb Silica Gel is available in a variety of particle sizes and packaging configurations.

NatraSorb®  
Silica Gel



### NatraSorb Silica Gel - Standard Sizes

| Multisorb Grade | Particle Size | Color        | Geometry |
|-----------------|---------------|--------------|----------|
| 2400x2500       | 5-6 µm        | White        | Granular |
| 30x60           | 0.25-0.60 mm  | White        | Granular |
| 30x200          | 0.07-0.60 mm  | White        | Granular |
| 14x30           | 0.60-1.40 mm  | White, Blue* | Granular |
| 8x20            | 0.85-2.38 mm  | White        | Granular |
| 6x16            | 1.20-3.35 mm  | White, Blue* | Granular |
| 6x12            | 1.68-3.35 mm  | White        | Granular |
| 4x25            | 0.71-4.75 mm  | White        | Granular |
| 4x6             | 3.35-4.75 mm  | Blue*        | Beaded   |
| 3x8             | 2.38-6.73 mm  | White        | Granular |
| 3x8             | 2.38-6.73 mm  | Orange*      | Beaded   |

### Standard Packaging Configurations

| Configuration | Container Volume | Weight              |
|---------------|------------------|---------------------|
| Super Sacks   | N/A              | 2,240 lb (1,016 kg) |
|               | N/A              | 2,000 lb (907 kg)   |
|               | N/A              | 1,000 lb (454 kg)   |
| Steel Drum    | 55 gallon        | 300 lb (136 kg)     |
| Fiber Drum    | 51 gallon        | 300 lb (136 kg)     |
|               | 38 gallon        | 200 lb (91 kg)      |
|               | 30 gallon        | 150 lb (68 kg)      |
| Can           | 5 gallon         | 25 lb (11 kg)       |
|               | 1 gallon         | 5 lb (2.3 kg)       |
|               | 1 quart          | 1.5 lb (680 g)      |
|               | 1 pint           | 5.6 oz (160 g)      |

\* Indicating silica gel

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