

## Bulk Desiccants

Desiccare sells a full line of bulk desiccant materials including Clay, Silica Gel, Indicating Silica Gel, Molecular Sieve and Activated Carbon. These raw materials are available in an assortment of grades and mesh sizes. Other non-standard desiccants materials are also available upon request.

1 Gallon Can	5 Gallon Pail	10 Gallon Drum	30 Gallon Drum	55 Gallon Drum	Super Sacks
6 lbs	35 lbs	70 lbs	200 lbs	300 lbs	1000/2000 lbs



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### Three major types of desiccants:

- **Montmorillonite Clay**

Montmorillonite Clay is a natural occurring adsorbent. This clay will successfully regenerate for repeated use at very low temperatures without substantial deterioration or swelling. Clay is inexpensive and highly effective within normal temperature and relative humidity ranges.

- **Silica Gel**

Silica Gel is a form of silica manufactured from sodium silicate and sulfuric acid. Like Clay, Silica Gel is non-hazardous and is capable of adsorbing 40% of its weight in water vapor at 100% humidity. Silica gel has a porous molecular structure that closely resembles a sponge, and has the highest capacity of any commercial desiccant for moisture adsorption.

- **Indicating Silica Gel**

Indicating Silica Gel has the same adsorbing capacities of regular silica gel. However, Indicating Silica Gel changes color to alert the user that the desiccant is reaching its adsorption capacity.

- **Molecular Sieve**

A manufactured crystalline version of Zeolite containing a network of uniform pores and empty cavities. Molecular Sieve is derived from sodium potassium or calcium alumina silicate. Molecular Sieve is the most aggressive and expensive of the primary desiccants

- **Carbon**

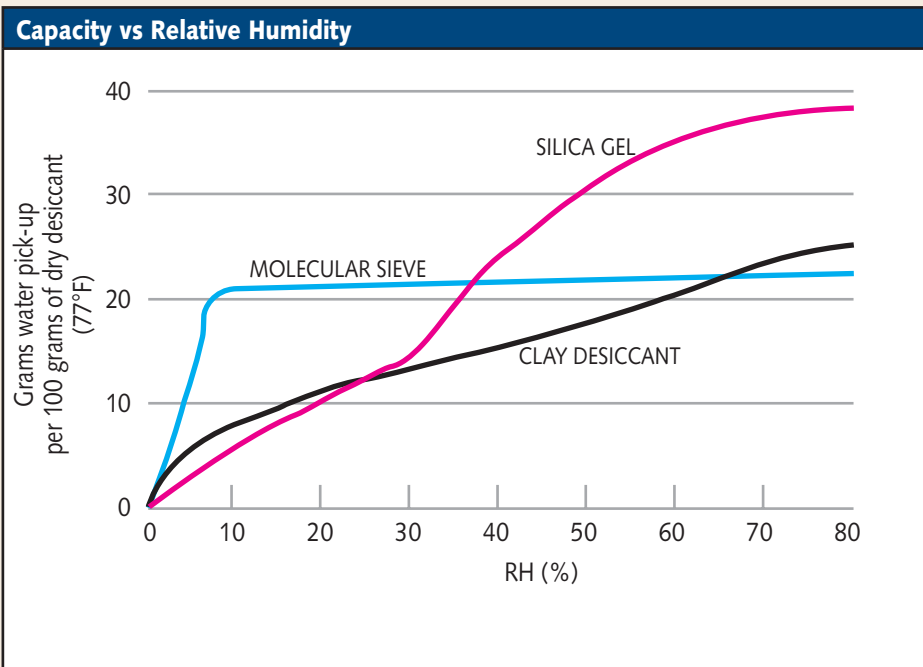
Although carbon does not absorb moisture, it is commonly packaged for use as an odor remover. Carbon can be blended with desiccants to provide protection against odor and moisture in the same package.

## Desiccant Materials

Desiccant is a dehydrating agent which attracts moisture from the atmosphere. It absorbs and holds particles of water to itself.

Desiccants are:

- Chemically inert, non toxic, odorless and non-corrosive.
- Used to prevent rust, corrosion and the formation of mold and mildew.



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## How are Desiccants Best Utilized?

To be most effective desiccants should be used within a closed / sealed moisture barrier or a rigid, sealed container. This allows the desiccant to absorb the trapped moisture vapor inside of the package. Products should be packaged in a manner that does not allow additional water vapor in the enclosed environment. Often a Humidity Control Card is placed inside the package to show humidity levels and indicate when the desiccant needs to be replaced.

## Determining Types and Quantities of Required Desiccant

1. Identify the type of container or bag the product is packaged in
2. Calculate the volume or area of the container
3. Determine the amount of desiccant required using the "Desiccant Requirement Chart" (see chart on the opposite page)
4. Select the type of desiccant to fit the application based on one of the following:
  - Amount of moisture to be absorbed
  - Permeability of packaged material
  - Temperature and humidity
  - Rate of absorption required
  - Requires container shelf life
  - Shipping and storage conditions
  - Cost

Often customers will use more desiccant than is required as a safety measure. Desiccants provide low cost insurance.

## Comparison Chart

Material	Absorption Rate	Absorption Capacity by weight	Cost
Clay	Moderate	28%	Low
Silica Gel	Moderate	38%	Medium
Molecular Sieve	Fast	20%	High

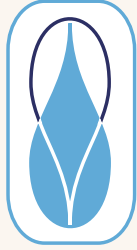
## Applications

### Key Markets:

Electronic Components  
Packaging, Machine Parts,  
Military Instruments &  
Armaments, Motors,  
Pharmaceutical, Circuit Boards,  
Relays & Communication  
Devices, Oceanographic Devices,  
Instruments, Optical Devices,  
Photographic Equipment, Film,  
Batteries, Safes, Vitamins,  
Diagnostics, Medical Equipment,  
Foodstuffs, Clothing, Consumer  
Products, Powders, Diagnostic  
Test Kits, Automobile Parts,  
Computers, Aerospace, Rolled  
Steel, Steel Parts, Motorcycles,  
Crates



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**WEST COAST**

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**EAST COAST**

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