

Synthetic Magnesium Silicate Adsorbent

Description

Polyoxyalkylene ether polyols, hereinafter for convenience called polyols, are commonly used in the production of urethane polymers. These polyols are reacted with polyisocyanate in the presence of added catalyst and other materials to produce urethane polymers which may be in the form of rubber-like elastomers, flexible or rigid foams and the like. In order that urethane polymers of desired properties and characteristics be produced, it is important that the polyols to be reacted with the polyisocyanate are essentially free of impurities which may function as undesirable catalysts or otherwise in the urethane polymer reaction. It has been discovered that the process of catalyst removal from polyols can be improved by adding a critical amount of water, 1.0 to 5.0 percent by weight, based on the weight of polyol to the mixture of polyols and adsorbent prior to heating and filtration.

Synthetic Magnesium Silicate Adsorbent is white fine powder, amorphous, with vesicular structure and huge specific area, it is an amphoteric compound capable of adsorbing either acid or alkali metal catalyst. It is an efficient refining and purifying agent in the production of polyols for its excellent depicking, eodorizing, potassium ion adsorbing effects and function as filter medium.

Technical Information

- ☞ Chemical Name: Synthetic Magnesium Silicate
- ☞ Molecular Formula: $MgO \cdot xSiO_2 \cdot nH_2O$
- ☞ CAS Number: 1343-88-0

Product Properties Standard Specifications

Product Properties	Standard Specifications
SiO ₂ , %	62-68
MgO, %	13-15
Loss on Drying (105 °C, 2h), %	6-8
Particle Size (250mm-125mm)	Min.90
pH Value	9-11
Specific Area, m ² /g	Min.500
Pore Volume, ml/g	Min.0.6
Activity, mgKOH/g	220-241
Filtration Time (s)	50-120
SO ₄ ²⁻ , %	Max.0.50
Cl ⁻ , %	Max.0.50
Appearance	White powder with good fluidity
Packing	20kgs in kraft paper bag

Applications

The crude polyols, after being blended with about 5%wt of water at 80~90°C for 15 minutes, are reacted with H₃PO₄ (a little more than the crude polyols in amount) for 1 hour, with the pH

value of the neutralization solution controlled between 5.0~5.5. At this stage, 1%wt of synthetic magnesium silicate adsorbent is added into and blended with the solution while heating the temperature to 105°C~115°C. Then dehydrate the solution at the speed from slow to quick in order to make the KH_2PO_4 crystals well-proportionally formed. The dehydration process ends when the moisture reaches to minimum amount e.g. 0.05%wt. The filtering circulation follows and continues for 1 hour at the temperature of 105°C~115°C, pressure at 2~4Kpa. Analyze the content of $\text{K}^+(\text{Na}^+)$. Filtration begins when the content of $\text{K}^+(\text{Na}^+)$ is less than 3ppm. The filtered liquor is the finished product.

Handling and Storage

Storage

- Store in a cool, well ventilated area away from all source of ignition and out of direct sunlight. Store in a dry location away from heat. Store at room temperatures.
- Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Never return unused product to storage container.
- Protect from moisture. Keep containers well sealed.

Handling

- Avoid contact with eyes, skin, and clothing. Use with adequate ventilation.
- Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area.
- Prevent contact with combustible or organic materials.
- Label containers and keep them tightly closed when not in use.
- Wash thoroughly after handling.

First-aid Measures

- Inhalation- Remove affected person to fresh air. Do not use mouth-to mouth resuscitation.
- Seek medical attention if effects persist.
- Eye contact-Flush eyes with running water for at least 15 minutes with eyelids held open.
- Seek specialist advice.
- Skin contact-Wash affected skin with soap and mild detergent and large amounts of water.
- Ingestion- Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation. Seek medical service immediately.

Shipping Information

- Proper Shipping Name: Synthetic Magnesium Silicate
- UN Number: Not applicable
- Hazard Class: Not regulated
- Labels: No information available
- Packing Group: Not regulated

Please read the MSDS for this chemical before using