



DDU 570 filled with dry silica gel (orange)

Silica gel is an amorphous form of silicon oxide, which is synthesized in the form of hard, irregular granules or beads. It is odorless, non-toxic and does not corrode metals.

The water molecules attach themselves to the surface of the silica gel, since it has a lower vapor pressure than the ambient air. When the pressure balance has been reached, the absorption process stops. Silica gel can absorb up to 36% of its own weight in water. The particulate loss for this type of drying is minimal because the particles do not get into contact with the silica gel. It maintains its shape even when it is saturated.

For detecting the degree of saturation, a color indicator is often used. With the Topas Diffusion Dryer DDU 570 the unladen (dry) silica gel is orange. Upon reaching the saturation state it becomes colorless.

### Regenerating the Silica Gel

The water absorbing capacity of the Silica gel decreases with an increasing saturation of water vapour. The saturation state of the Silica gel is shown by means of its colour indicator.

For regenerating the silica gel it must be poured out of the dryer and slowly heated up to a temperature of 130 - 160°C over a period of 4 hours. The dried Silica gel can be recognised by the orange colour. To avoid taking up water from the ambient air the Silica gel must be allowed to cool down in a desiccator.

### Technical Data

Colour	Orange
Smell	Odourless
Bulk density	approx. 800 kg/m <sup>3</sup>
Granular size	Granules / 2 – 5 mm
Surface area	ca. 750 m <sup>2</sup> /g
Water absorbing capacity	min. 25%
Colour change	from orange to colourless at 6 weight percent water absorption
Melting Point	Not applicable
Flash Point	Not applicable



Silica gel

moisture -unladen (orange)



Silica gel

moisture-laden (colorless)

QMS certified to  
DIN EN ISO 9001.



12 100 11908 TMS

For more information please  
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[www.topas-gmbh.de](http://www.topas-gmbh.de)

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