

## TECHNICAL DATA SHEET

### GLASS 0105

#### GENERAL FEATURES/SHORT DESCRIPTION

This glass is used for the production of glass capillaries for flow restrictors for drugs and gases in the medical technology. The glass is conform with USP Type III

Material No.	0105
Glass type	Soda lime glass
Available as	tubes & capillaries rods & fibres
Certificate for biocompatibility	available

#### TEMPERATURE FEATURES

Transformation temperature	$T_g = 555 \text{ °C}$
Strain point	-
Annealing point	-
Softening point	720 °C at $10^{7.6} \text{ dPa} \cdot \text{s}$
Working point	1050 °C at $10^4 \text{ dPa} \cdot \text{s}$
Expansion limit (°C)	-
Coefficient of expansion	$\alpha_{(20-300 \text{ °C})} = 8.7 \cdot 10^{-6} \cdot \text{K}^{-1}$
Max. operating temperatures	-
Thermal conductivity	-
Thermal capacity	-
Specific heat (20 °C)	-
Max. continuous working temp.	-
Max. short-term working temp.	-

#### MECHANICAL FEATURES

Density	2.48 g/cm <sup>3</sup>
Mohs hardness	-
Modulus of elasticity	-
Bending strength	-
Knoop-hardness	-
Abrasive hardness	-
Vickers hardness	-
Torsion modulus	-
Torsion strength	-
Micro hardness	-
Compressive strength	-
Poisson's ratio	-
Tensile strength	-
Abrasion after 9 h grinding	-
Shear modulus	-

#### OPTICAL FEATURES

Refractive index	-
Abbe number	-
Bubbles, Inclusions (> 0,3 mm)	-
Stress-optical coefficient	-

**TECHNICAL DATA SHEET**  
**GLASS 0105**

**ELECTRICAL FEATURES**

$t_{K100}$	-
log of the electrical volume resistivity	-
Electrical Resistivity (350 °C)	-
Specific Electrical Resistivity	-
Contact resistance	-
Dielectric properties for 1 MHz at 25 °C	-
Dielectric properties for 1 MHz at 20 °C	-
Dielectric constant at 7,5 GHz	-
Dielectric strength	-
Electrical loss factor	-
Loss tangent	-

**CHEMICAL FEATURES**

Hydrolytic resistance, class	3 (DIN 12 111)
Acid resistance, class	1 (DIN 12 116)
Alkali resistance, class	2 (DIN 52 322)
Material conformity	USP Type III glass
Chemical components	SiO <sub>2</sub> (69 %) Na <sub>2</sub> O (16 %) CaO (3%) Al <sub>2</sub> O <sub>3</sub> (7 %) MgO (1%) ZnO (1 %) B <sub>2</sub> O <sub>3</sub> (2 %)
Content of OH	-
Typical Trace Elements	-
Heavy metal content	-
Coefficient of absorption for MoKa- radiation	-
Coefficient of absorption for CuKa- radiation	-
Purity	-