NUTZEN DO BRASIL LTDA metalizadoras e tecnologia de vácuo

NTZ 704 Silicone Oil for Diffusion Pumps

shortest downtime

shortest cycle time

highest productivity

lowest production costs

High quality synthetic diffusion pump fluid

The NTZ 704 silicone oil for diffusion pumps is specifically designed for high vacuum applications. The oil is suitable for all types of diffusion pumps. It covers a very large vacuum pressure range. The vapor pressure and the back streaming are so low that the use of traps for most vacuum applications is not required. Ultra-high vacuum up to the 10-10mbar area (untrapped)and 10-11mbar area (trapped) are accessible.

The NTZ 704 silicone oil for diffusion pumps can be alternatively used to the silicone oil DC 704, AN 174, DC 705, AN 175, and others. It is a significant improvement over all mineral diffusion pump oils like Diffelen. The reconditioning of silicone oil after contact with air at high temperatures is much faster compared to mineral oils. Even at high oil temperature and air exposure the oxidation and hydrolysis rate is low.

Diffusion pumps with silicone oil allow 20 to 300 per cent higher pre-vacuum pressures as if using mineral oils. At medium process pressures the pumping capacity can be increased by 20-30% by increasing the heating power.

The **NTZ 704 P** silicone oil is a Pentaphenyltrimethyltrisiloxane. As it contains the highest ratio of phenyl it shows the best temperature stability of all diffusion pump fluids. This single-component silicone oil reaches the maximum pumping speed in significantly less time than a multi-component silicone oil or a mineral oil.

The **NTZ 704 T** silicone oil is a Tetramethyltetraphenyltrisiloxane As it contains a high ratio of phenyl it shows an excellent temperature stability. This single-component silicone oil reaches the maximum pumping speed in significantly less time than a multi-component silicone oil or a mineral oil.

The chemical structure of silicone oil results in a high oxidation resistance and leads to low water absorption at operating temperature. The oil does not react with metals, elastomers, or usual vacuum gases. It is specially designed to evacuate large amounts of oxygen. The chemical stability ensures a long life of the oil even under difficult conditions. Because of the low vapor pressure and low back streaming

the chamber walls are almost oil-free and can easily be cleaned of process contamination. Silicone fluids are even under difficult operating conditions, chemically and thermally stable, this allows longer oil change intervals. Significantly higher productivity resulting in lower operating costs!

Features:

- Extremely wide range of applications
- Chemically inert, high temperature stability
- Pumping speeds increased by 30% compared to mineral oils
- Lowest ultimate pressures
- Shortest time for oil changes and reconditioning
- Longer life, longer service intervals
- Allows higher pressures in the pre-vacuum
- Lowest oil back-flow and lowest contamination of the process chamber

Technical Data:

Product name	**NTZ 704 P**	**NTZ 704 T**
Function		
Type:	Silicone	Silicone
chemically identical:	to DC705 / AN175 / ...	to DC704 / AN174 / ...
MOL:	546	484
Form:	liquid	liquid
Color:	colorless / clear	colorless / clear
Odor:	odorless	odorless
Density (25°C):	1.095 g/cm³	1.07 g/cm³
Ult. Press. (25°C):	6.6 x 10^{-10}mbar	3 x 10^{-8}mbar
Viscosity(25°C):	165 – 185 mm²/s (cSt)	40 mm²/s (cSt)
Pour point:	-35°C	-35°C
Melting point:	-25°C	-25°C
Flash point:	>240°C	>221°C
Boiling point (0.5 torr):	>245°C	>215°C
Compatibility:		
Pumps:	Applied, Balzers, Pfeiffer, Edwards, Leybold, HSR, ~~Varian~~(*), … and many others	Applied, Balzers, Pfeiffer, Edwards, Leybold, HSR, Varian, … and many others
Oils:	replacement for silicone oils DC704, DC705; mineral oils and others	replacement for silicone oils DC702, DC704 mineral oils and others

TABELA DE VOLUMES:

NTZ 704 P **NTZ 704 T**	Packing Unit (PU)		
Package	20 Kg		
Package	5 Kg		
Package	1 KG		

Este produto tem a garantia NUTZEN DO BRASIL LTDA