

## **Ultraseal International**

### **Ultraseal PC504/66 Sealant**

## **Product Data Sheet**

Ultraseal PC504/66 is a high performance sealant with excellent temperature and chemical resistance properties. Ultraseal PC504/66 has gained global approval from most of the major automotive OEMs and many of their first and second tier suppliers. It has also gained extensive approval within the aerospace industry. Ultraseal PC504/66 has achieved Qualified Product status for the internationally accepted US Military Specification MIL-I-17563C.

#### **GENERAL:**

Appearance:	Clear pale straw liquid	Odor:	Mild methacrylate
Viscosity 20℃ Seta Zahn No 1	32 - 34 seconds	<b>S.G.</b> 20℃	1.005 – 1.015
Flash point Twin Pack (uncatalysed)	96℃	Gel time (0.8% DB42, degassed)	80 sec – 180 sec
Contamination tolerance:	Good	Washability	Good
Pot life: Under normal operating conditions	Indefinite	Shelf life: Under normal storage conditions	12 months (twin pack) 6 months (single pack)
Temperature range: Cured phase	-76 / +200℃	US MIL-I-17563C Approved	Yes

#### **CHEMICAL RESISTANCE**

US MIL-I-17563C Test Conditions, Impregnated US MIL Test Rings, Test pressure 50 p.s.i.

Environment	Time	Temperature	Result
Water	14 days	100°C	No leak
Oil	14 days	99°C	No leak
Hydrocarbon Fluid	14 days	23°C	No leak
Carbon Removal Fluid	30 minutes	23°C	No leak
Lubricating Oil	48 Hours	121°C	No leak
Turbine Fuel	48 Hours	23°C	No leak
Ethylene Glycol	14 days	149°C	No leak
Hydraulic Fluid	14 days	99°C	No leak
Fuel	48 Hours	23°C	No leak
Diester Grease	48 Hours	23°C	No leak
Sulphuric Acid (18%)	2 Hours	23°C	No leak
Stoddard Solvent	48 Hours	23°C	No leak
Ethyl Alcohol	14 days	23°C	No leak

Ultraseal International Test Conditions, Impregnated US MIL Test Rings, Test pressure 50 p.s.i.

Environment	Time	Temperature	Result
Engine Oil	14 days	150°C	No leak
Brake Fluid	14 days	150°C	No leak
Ethylene Glycol	14 days	150°C	No leak
Hydraulic Fluid	14 days	150°C	No leak
Unleaded Petrol	14 days	25°C	No leak
Water	14 days	100°C	No leak

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#### THERMAL TEST DATA

- 1. Impregnated sintered aluminum rings (20% porosity) exposed to a temperature of 200°C over the standard test time of 24 hours remain pressure tight (no leaks) at 50p.s.i. After extended testing (21 days) at this temperature the rings remained pressure tight.
- 2. Impregnated sintered iron and aluminum rings (20% porosity), exposed to the following thermal cycling conditions, remained pressure tight (no leaks) at 50p.s.i.
  - a. One thermal cycle = 1 hour  $-30^{\circ}$ C, 1 hour ambient, 1 hour  $160^{\circ}$ C, 1 hour ambient. Total number of cycles = 250
  - b. One thermal cycle = 1 hour  $-76^{\circ}$ C (in methanol), 5 minutes immersed in boiling water, 3 hours  $160^{\circ}$ C, 1 hour  $-76^{\circ}$ C (in methanol), 5 minutes  $60^{\circ}$ C. Total number of cycles = 30
  - c. One thermal cycle = 1 hour -76°C (in toluene), 5 minutes immersed in boiling water, 3 hours 160°C, 1 hour -76°C (in toluene), 5 minutes 60°C.

    Total number of cycles = 30