

## 1. Advantages of **Plast 2000**<sup>®</sup>

The absolutely faultless sealing of cable fitting on cables with longitudinal welded metallic cable outer conductor causes considerable difficulties when using the usual gaskets or profile sealing part. If the place to be sealed is not absolutely smooth or evenly polished (especially at the welded seams or longitudinal grooves caused by drawing the cable jacket during manufacture), leakages – particularly long term – cannot be prevented. In addition, during manufacture, variations occur e.g. in the corrugated outer conductor. This leads to the profiled rubber gaskets no longer fitting correctly.

All disadvantages of the former sealing procedures are eliminated with **Plast 2000**<sup>®</sup>. The connectors are designed in such a way that the mechanical fixing of the cable is independent of the sealing. For indoor use the sealing with **Plast 2000**<sup>®</sup> can be omitted without causing any problems.

**Plast 2000**<sup>®</sup> completely fills the space between the outer jacket of the cable and the connector and has an extremely good adhesion to metal. Once the vulcanization is finished the **Plast 2000**<sup>®</sup> material can only be removed from copper or silver plated brass by mechanical means.



There is another advantage: If **Plast 2000**<sup>®</sup> is used, the deformation of the corrugated outer conductor by improper pressing of the profiled rubber parts - is excluded meaning there is no increase in the VSWR that used to occur.

The application of **Plast 2000**<sup>®</sup> is so simple and reliable that even inexperienced mechanics will be able to carry out safe and reliable sealing. Attention: Do not use permanent elastic silicone based compounds which are sold separately and used in installations and building as most of these will cause corrosion.

**Plast 2000**<sup>®</sup> has been developed for use in high frequency components and rules out any faults.

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## 2. Characteristics of **Plast 2000**<sup>®</sup>

**Plast 2000**<sup>®</sup> is a one component sealing compound of the silicone rubber type. It is temperature resistant from -60°C to 180°C, resistant to ageing and is acid and alkali proof. Depending on the relative humidity and temperature of the ambient air the through hardening takes 14 days for approximately 10 mm.

The expansion of the material is 300%, the shore-A hardness is approximately 30. The shrinkage during hardening is smaller than 1%, the notch impact strength is approximately 65 Ncm. Corrosion will not be caused on silver, copper, nickel and aluminium surface.

### 3. Handling of **Plast 2000<sup>®</sup>**

As far as connectors (e.g. for corrugated air dielectric and corrugated foam dielectric coaxial cables or for elliptical waveguides) are concerned **Plast 2000<sup>®</sup>** is injected directly from the 20 cm<sup>3</sup> tube, as its thread is M9 and screwed directly into the cable inlet, into the gap between the cable inlet and the cable outer conductor.

When using the 70 cm<sup>3</sup> tube an injection gun is required.

Should a large gap between the PE jacket of the cable and the cable inlet allow the **Plast 2000<sup>®</sup>** to flow out unimpeded it is recommended to cover this area with adhesive tape such a PE-Coroplast.

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### 4. Shelf-life of **Plast2000<sup>®</sup>**

The EXP (expiration date) mentioned on the **Plast2000<sup>®</sup>** tube is an BBD (best before date), which must be printed for legal reasons.

As with all silicone sealants, our manufacturer also guarantees an BBD of 12 months.

In our experience, however, the actual shelf-life or usability of **Plast2000<sup>®</sup>** in an unopened tube is significantly longer.

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### 5. Environmental conditions for the use of **Plast 2000<sup>®</sup>**

The hardened **Plast 2000<sup>®</sup>** can be used at the operational temperature of -40°C to 85°C.

It is however recommended handling it at temperatures above 5°C because the hardening period will be considerably shorter. High relative air humidity accelerates the hardening without any negative effects.

The storage temperature range is 5°C to 25°C.

Storage period of sealed tube is unlimited. After 5 years of storage a test of the usage properties is recommended. For information purpose the date of production is printed on each **Plast 2000<sup>®</sup>** tube.

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### 6. Test of the usage properties of **Plast 2000<sup>®</sup>**

We recommend the following method for testing whether older, unopened tube of **Plast 2000<sup>®</sup>** (undamaged membranes) are suitable for use: open the tube and press a small amount of **Plast 2000<sup>®</sup>** onto a piece of cable (copper outer conductor). This should come out evenly as a soft paste and should not contain any lumps.

The colour should be an even grey and must not contain any streaks or separations.

**Plast 2000<sup>®</sup>** immediately disperses slightly. After a few minutes **Plast 2000<sup>®</sup>** starts to harden and it forms a skin.

Air humidity accelerates the hardening process.

Independent of the date of production **Plast 2000<sup>®</sup>** can be used without hesitation in case it meets the criteria of this test.