# Sealings

## PRODORAL®R 6-1 and PRODORAL®H for internal domestic gas lines and heating systems

TIB CHEMICALS

# Leaders in quality and service

TIB Chemicals originates from the merger of Goldschmidt TIB Germany and Goldschmidt Quimica de México. As manufacturer of specialised Basic Chemicals, innovative Inorganic Specialty Chemicals and Coating Systems, the company supplies to a worldwide market.

The largest production facilities of TIB Chemicals are located in Mannheim (Germany) as well as San Luis Potosi (Mexico). The sales and marketing organisation operates globally, with representations on all continents.

Employing approximately 350 qualified personnel, the TIB Chemicals manufacturing history dates back over 130 years of tradition and know-how. With a yearly production of more than 400.000 tons of chemicals, TIB Chemicals generates revenues of over € 120 million.

The yearly growth of TIB Chemicals' accrual rate is above the average for the industry. High-quality products, custom-made solutions and a flexible distribution and logistics service for our entire customer base are the basis of our success. Customer requirements are met with prompt and individual attention. We thereby focus on our main target, to increase and to enhance the business success of our clients.

Subdivided into three business units, the company operates Basic Chemicals, Inorganic Specialty Chemicals and Coating Systems. Combined they form a strong unit with a solid financial base and with the logistic and organisational structure of a large international enterprise.

*TIB Chemicals successfully passed certification for the standards according to ISO 9001:2000.*

# TIB CHEMICALS

| Basic Chemicals | Inorganic Specialty Chemicals | Coating Systems |
|---|---|---|
| Zinc Chemicals | Metal Finishing Chemicals | Corrosion Protection Systems |
| Acids | Copper Chemicals | Thermal Curing Systems |
| Sulphur Chemicals | Catalysts | Sealings |
| | Construction Chemicals | Bitumen Specialties |

The three business units of TIB Chemicals produce and sell:

:: **Basic Chemicals** such as zinc chemicals, acids or sulphur chemicals, for chemical companies, the metal industry, the hot dip galvanising industry, the electroplating industry, the textile and plastic industries, for water treatment and for the production of food and beverages

:: **Inorganic Specialty Chemicals** based on the elements tin, zinc, copper and bismuth. These special compounds are used as electroplating chemicals in the electronics and metal industries, as copper chemicals in the automotive and chemical industries, as catalysts in the resin and paint industry, and also in chromate reduction for the construction industry

:: **Coating Systems** based on two component liquid polyurethane and epoxy systems, which have been developed as anticorrosion protection for the pipeline industry, for the valve-making industry, as well as for sewage outfall, water treatment and power plants. Thermal curing systems for electroplating, tool manufacturing and the packaging industry. Sealing compounds for gas and heating systems. Furthermore, modification and oxidation of bitumen as well as the production of bitumen-based systems for road surfaces

On the following pages, you will find our **Sealings PRODORAL®R6-1** and **PRODORAL®H**.

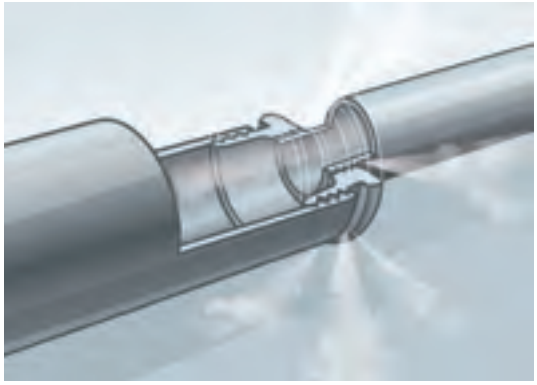
# Reliable sealing for gas and heating

TIB Chemicals is Europe's leading manufacturer of sealing procedures for thread connections in interior gas pipes. We also manufacture sealings for heating systems and under floor heating.

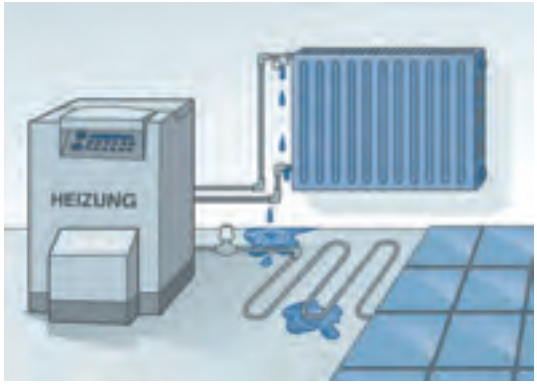
Our trademarks PRODORAL®R 6-1 and PRODORAL®H are of proven quality. PRODORAL®R 6-1 has now been established for 25 years.

With PRODORAL®R 6-1 thread connections in interior gas pipes and with PRODORAL®H heating systems such as under floor heating can be sealed. The sealing is safely carried out, fast, economically and environmentally friendly. In a simple procedure, PRODORAL®R 6-1 and PRODORAL®H are pumped into the pipes and seal automatically: durably and reliably.

We deliver worldwide. Our customers receive not only the product but also the necessary equipment. In addition, we offer on-site training sessions.



**PRODORAL®R 6-1**
for leaky thread connections in interior gas pipes




**PRODORAL®H**
the ideal sealant for heating systems

*One-way plastic container, 20 kg (l)*

# PRODORAL®R 6-1 – the safe and economical sealant for thread connections in interior gas pipes

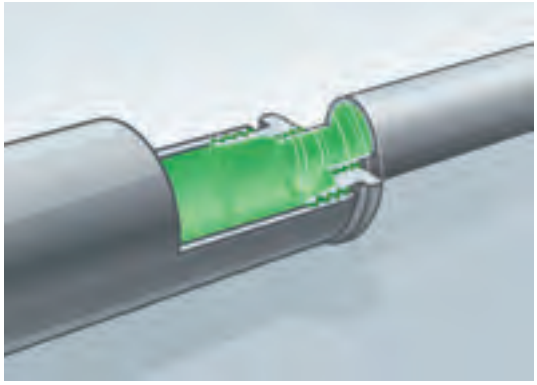
PRODORAL®R 6-1, a dispersion, is certified by the "Deutsche Vereinigung des Gas- und Wasserfaches e.V. (DVGW)" for thread connections in interior gas pipes, which can be sealed after construction or repair. PRODORAL®R 6-1 is used for leakage rates of maximally 5 l/h and at a maximum operating pressure of 100 mbar.

**PRODORAL®R 6-1 offers many advantages**

**Safe**
PRODORAL®R 6-1 is resistant to vibrations and aging processes. Furthermore, it withstands any media that may occur in domestic gas lines.

**Economical**
PRODORAL®R 6-1 is easy to apply and therefore economical. Under pressure, it is pumped into the gas lines and seals the leakages. No costly wall breaks are required.

**Fast to apply**
With PRODORAL®R 6-1 the pipe is sealed within a few hours.



**PRODORAL®R 6-1**
the proven procedure for sealing thread connections in interior gas pipes according to DIN DVGW NG-5153 AR 0634

*The complete equipment of PRODORAL® R 6-1*

**Economical in consumption**
The required quantity of the sealant depends on the pipe volume. Due to the high dispersion ability, only a small quantity is necessary for 100 % sealing efficiency. PRODORAL® R 6-1 penetrates under pressure into the leaky threads and durably seals the leakage. After draining, the recovered material may be reused several times.

**Supplied in practical containers**
We supply PRODORAL® R 6-1 in practical 20 kg (l) one-way plastic containers.

**Environmentally friendly**
PRODORAL® R 6-1 is a water-based plastic dispersion. It is solvent free; no dangerous vapours occur. It can be harmlessly disposed of and is inflammable.

**Approved according to DIN-DVGW NG-5153 AR 0634**
PRODORAL® R 6-1 fulfils all requirements according to DIN EN 13090 in one-pass application.

**Complete service**
We do not only supply the material but also the necessary equipment, for example diaphragm pumps and hoses. Our qualified technical advisors coach your specialists on-site in correct application. After the training session, we confirm with a certificate the special knowledge according to DVGW worksheet G 624 "Technical rules for resealing of gas pipework".

*Filling the gas line with PRODORAL® R 6-1*

# PRODORAL®R 6-1 – ease of application: simple and fast

PRODORAL®R 6-1 seals leakages of gas lines from the main valve to the gas meter or to the gas outlets. The sealing procedure is easy and fast. Under pressure, PRODORAL®R 6-1 penetrates into the leaking thread connections. Sealing is carried out within a few hours.

**1 preparing**

**2 filling**

**3 bleeding**

**4 evacuating**

**5 drying**

**6 soundness testing**

**1** Screw the bleed valves onto every gas outlet. Put in the connecting valve to the lowest part of the main pipe. Blow out the dust from the pipe through all bleed valves, working from top to bottom.

**2** Fill the pipe with PRODORAL®R 6-1 by using the diaphragm pump. The pump may be operated either by nitrogen gas or by pressurised air supplied from a compressor.

**3** After filling of the pipes, bleed the valves installed at the gas outlets. Afterwards, allow the filled pipe to remain for 30 min under pressure.

**4** The surplus material is removed from the pipe by blowing out with nitrogen or pressurised air. Afterwards, foam sponges (pigs) are inserted into the pipe at the gas outlets and pressed through, by nitrogen or pressurised air.

**5** The pipe is dried with the PRODORAL®R 6-1 blower by blowing ambient air from the bottom to the top. The drying time depends on the size of the pipe.

**6** After equalisation of the temperatures according to DVGW-TRGI'86, § 7.1.3, the test for soundness is carried out for 10 min at 110 mbar. The gas pipe can now be put into operation.

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*concept and production: WCP, Mannheim | pictures: TIB Chemicals, fotolia, SXC, Luftbild Hauck*

*Plastic container, 5 l*

# PRODORAL®H – the perfect sealant for heating systems

The sealant PRODORAL®H reliably seals leakages in under floor heating systems, boilers and heating elements. PRODORAL®H is suitable for usage in metal and plastic pipes.

**PRODORAL®H convinces**

**Safe**
Sealings carried out with PRODORAL®H are durably resistant to pressure as well as variations in temperature. PRODORAL®H remains in the heating installation and may eliminate future leakages.

**Economical**
PRODORAL®H may be filled into the heating system using an ordinary hand pump for interior sealing of the leakage, without any need to break open the flooring.

**Easy to apply**
PRODORAL®H is filled into the heating system with an ordinary hand pump, during the ongoing heating process, by connecting the pump to the filling valve of the heating system and filling in the sealant. Afterwards, all circulation pumps are bleeded and the heating system is allowed to operate for at least 12 hours with all radiator valves open. During circulation of the heating water, the sealant is spread within the system and penetrates into all the leaks. Sealing occurs within a few days.

**Economical in consumption**
PRODORAL®H can be economically used and exactly dosed

- for leakage rates up to 50 l/24 h, mixing ratio of approximately 1:200
- for leakage rates between 50 l/24 h and 400 l/24 h, mixing ratio of approximately 1:100

**Practical containers**
We supply PRODORAL®H in commercial 5 l plastic cans.

**Harmless**
PRODORAL®H develops no dangerous vapours and is inflammable.

TIB CHEMICALS

WCP, Mannheim 09