

SILPURAN® SOFT SILICONE ADHESIVES

Perfect Solutions for Fixation on the Skin

Atraumatic removal and sensitive adhesion have been the keys to wound care applications for over 20 years. WACKER is the pioneer in silicone adhesive solutions for Advanced Wound Care. Our silicone adhesives satisfy the highest medical standards and offer unique processing advantages.

As consumer awareness grows, the advantages of silicones are now in demand in many applications that were previously the preserve of strong adhesives such as acrylates or hydrocolloids. These less sensitive systems can cause allergies, often lead to skin irritations and maceration and are usually very painful to remove.

WACKER SILPURAN® gels combine the unique advantage of atraumatic removal with high adhesive strength. Thanks to these benefits, our SILPURAN® adhesives are ideal for applications in which strong and secure fixation is essential.

Ideal Environment for Healing

Modern wound dressings must provide an optimum healing environment while protecting against external influences such as bacteria and moisture. The soft, flexible silicones in the SILPURAN® product line are ideally suited for this application, as they are sterilizable and do not support microbial growth. At the same time, their permeability to water, vapor and gases creates an ideal environment for healing. Our SILPURAN® gels are biocompatible according to ISO 10993 and USP Class VI standards.

Table 1: SILPURAN® Adhesives Portfolio for Skin Attachment

Product	Viscosity A [mPa s]	Viscosity B [mPa s]	Penetration* [1/10mm]	Peel** [N/2,5cm]	Tack** [N]	Pot life 23°C [min]
SILPURAN® 2130	1,100	1,000	220	1.8	55	74
SILPURAN® 2112	11,600	11,500	225	2.6	55	76
SILPURAN® 2100	34,000	35,500	205	2.7	54	73
SILPURAN® 2117	33,000	13,000	210	3.0	63	40
SILPURAN® 2114	12,000	10,000	200	3.5	66	70
SILPURAN® 2124	3000	3000	155	6	46	40

For standard specifications and technical parameters, refer to the technical data sheet. *hollow cone 62.5 g, 60 sec. ** On stainless steel

Comfortable to Wear

40 % of patients who live with a chronic wound describe the pain of changing the dressing as their most unpleasant experience.*

The use of WACKER silicone adhesives makes bandage removal a gentle process. Skin stripping is avoided (Fig.1). Thus, the healing process is not disturbed and patients experience less pain during dressing changes.

Strong and Secure Fixation

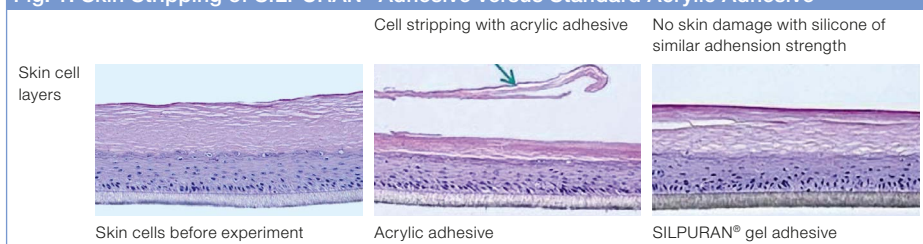
The SILPURAN® product range includes products with very high adhesive strength. This allows our adhesives to be used in even the most challenging applications, such as stoma care, where

secure adhesion is essential to prevent leakage of the device. In addition the gentle removal properties significantly improve the user experience for the ostomates.

Improving Scars and Wrinkles

The use of silicone sheets can improve the appearance of hypertrophic and keloid scars. Our SILPURAN® adhesives provide good fixation to the scar while making the products washable, repositionable and thus reusable. The same properties are beneficial in cosmetic patches for wrinkle reduction, where the soft touch and feel of the silicone guarantees a comfortable wear.

Fig. 1: Skin Stripping of SILPURAN® Adhesive versus Standard Acrylic Adhesive





Fixation of Wearable Devices

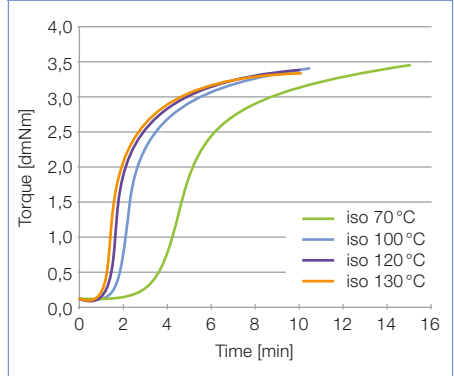
Technical developments in medicine such as portable devices for patient monitoring or administering medication make daily life easier for many people. Thanks to their excellent adhesive strength, SILPURAN® silicone adhesives provide secure fixation, reliably hold such wearable technology in place and can be gently removed and repositioned. This innovative product allows for further advances in medical care.

A Soft, Tacky Silicone Adhesive

The SILPURAN® 21xx grades are room-temperature curing silicone gels (RTV-2). These two-component (A+B), platinum-curing silicone compositions cure to a transparent, soft, tacky silicone adhesive without formation of byproducts.

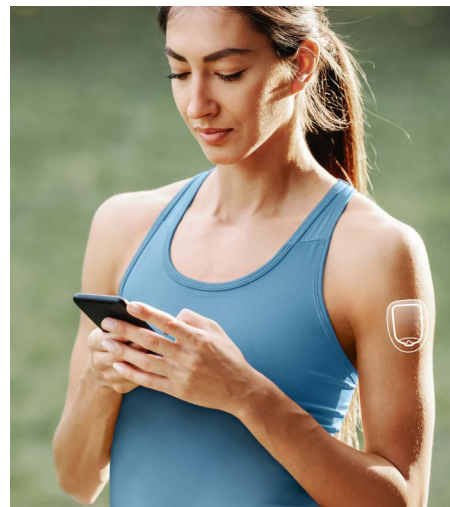
The SILPURAN® adhesives can be applied to various substrates by doctor blade, slot die or similar tools in a coating process without the need for a primer. Curing can be accelerated by heat (120 °C [248 °F]).

Fig. 2: Typical Curing Profile of SILPURAN® Adhesives (e.g. SILPURAN® 2100)



Processing Advantages of SILPURAN® Adhesives

- Efficient curing
- Economical processing
- Excellent bonding properties
- Primerless adhesion to many substrates
- Low coat-weight possible
- Stable from -50 °C to 200 °C
- Long shelf life



SILPURAN® silicone adhesives allow for secure fixation and gentle repositioning of wearable technology.

Benefits of SILPURAN® Adhesives

- Biocompatibility (e.g. ISO 10993; USP Class VI)
- FDA Master Files (MAF)
- Anti-allergenic, soft and comfortable on skin
- Good breathability
- Does not support microbial growth
- Biodurability, low surface tension, thermal and chemical stability
- Good media resistance
- Sterilizable for single or multiple use (ethylene oxide)
- Good UV and aging resistance
- High transparency
- Repositionable

Find out more:

www.wacker.com/silpuran

Health. Care. WACKER.



We care. And that's why we keep researching and developing medical solutions that improve quality of life. In applications such as medical devices, orthopedics, prosthetics and medical silicone adhesives you will feel the difference with our innovative silicones. Our experienced WACKER team knows how to find the right solution for the challenge of your specific product.

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