

Sealing, bonding and potting lights & electronic components



Quality creates cohesion



SEALING & BONDING

Quality creates cohesion ...for over 140 years!



Founded in Berlin in 1881 by Hermann Otto as a window putty manufacturer, the company has been producing silicone sealants since the early 1960s. Adhesives based on polyurethanes, silane-terminated polymers (hybrid) and acrylates round off the product range. The sealants and adhesives are developed in OTTO's own laboratories and marketed under the brand names of OTTOCOLL® (sealants), OTTOCOLL® (adhesives) and Novasil® (industrial applications). A broad range of special products facilitates solutions to complex problems.

As a manufacturer, OTTO is synonymous with top expertise in sealing and adhesive technology in industry and trade across all sectors. With its products, most of which are premium, OTTO has done more than just secure market leadership in its sector; it is also considered a driver of innovation in many fields due to its quality and performance.

A close partnership with its customers provides the precondition for OTTO satisfying the needs

of discerning customers. Sales currently occur through more than 40 field staff employees. OTTO is appreciated as a socially committed, reliable employer by its around 490 employees. Modern production plants and an attractive administration building provide the perfect working atmosphere from both a profession and social point of view, and create the best conditions for employees who are both satisfied and motivated.

With the large training rooms, the OTTO training centre offers plenty of room to hold theoretical as well as practical seminars and training sessions on all topics relating to sealants and adhesives.

OTTO is expanding its production capacities by building a new production plant. Following a construction period lasting just 18 months, the first stage of construction's fully automatic production line was commissioned on schedule in late summer 2020.

OTTO – quality creates cohesion

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www.otto-industry.com

The information in the present document corresponds to the status quo on going to print, (refer to the index on the outside back cover).
With a new edition this edition becomes invalid.

Due to the many possible influences during and after application, the customer always has to carry out trials first.
Please observe the respective technical data sheet! This information is available on the Internet at www.otto-chemie.com.
Errors and typographical errors are excepted.

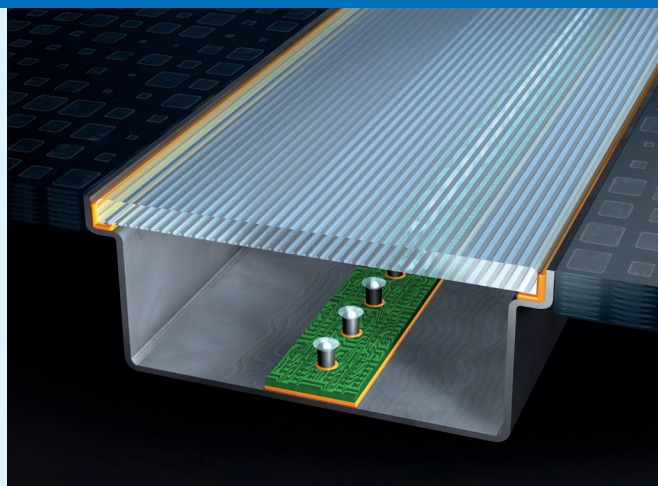
Sealing and bonding lights



Light housings usually consists of plastic, metal and glass. The adhesive used to connect these materials must therefore perfectly bond to all materials, compensate for different physical properties and may not affect the materials themselves.

The OTTO solution

- ✓ Very good bonding to the housing and diffuser panel, even under extreme weather conditions
- ✓ Bonding that compensates for stress to ensure a permanent bond, even with materials that have different expansion behaviour
- ✓ Excellent temperature resistance



Sealing and bonding special lights



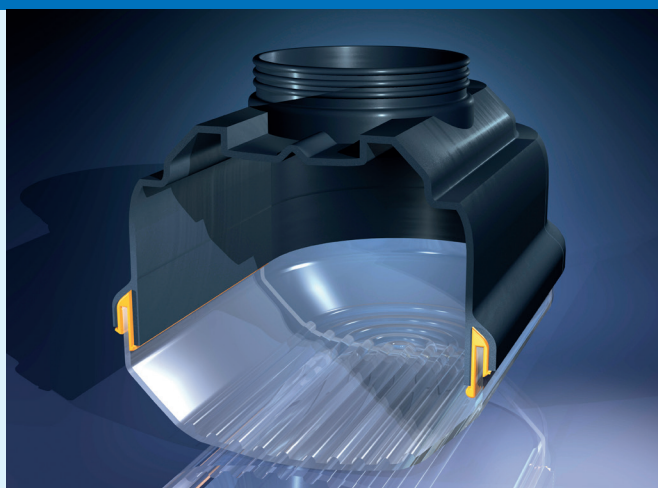
Special lights and therefore also their adhesives must withstand a variety of influences over decades. Weather severe weather, extreme temperature differences or UV exposure, whether salt, acid or cleaning agents, whether vibrations or twisting.

In addition, the highly specialised adhesive should be easy and efficient to apply to the bonded point.

The OTTO solution

OTTO adhesives allow for a reliable and permanent bonding of all kinds of special lights and are excellent for industrial processing.

- ✓ Excellent adhesion to plastic
- ✓ Fast curing for industrial production
- ✓ Non fogging due to the use of high quality raw materials



Our Novasil® sealants and adhesives for lights & electronic components

Silicones – alkoxy

	S800	S802	S49
Components	1-component	1-component	2-component

Processing properties

Stable	✓	✓	✓
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End state

Medium elasticity – Shore A 25–60	✓	✗	✓
Mild elasticity – Shore A <25	✗	✓	✗

Features

Colour	white/black	transparent	black
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Tests

UL HB 94	✓	✓	✓
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Applications

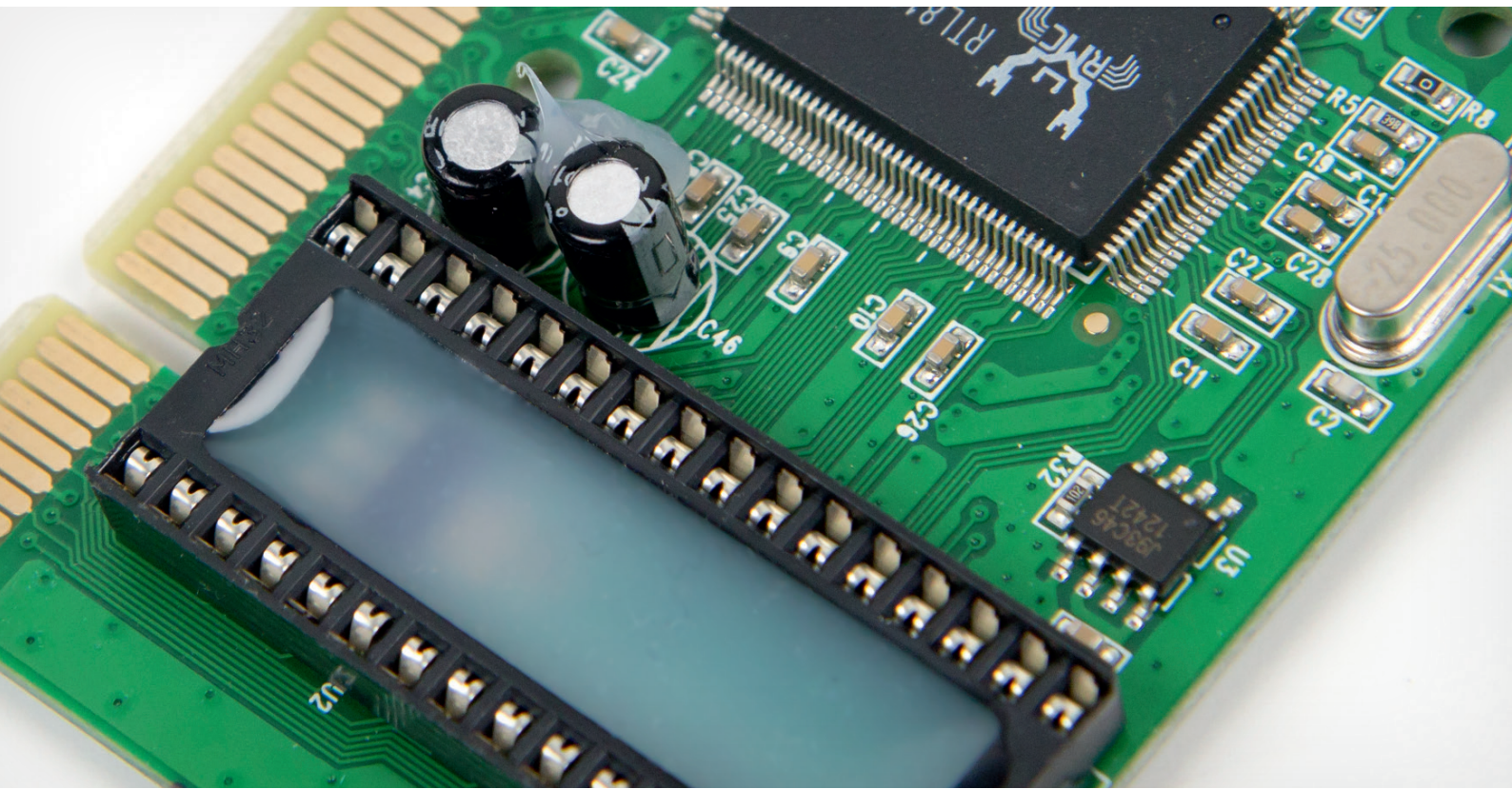
Elastic bonding and sealing of frames and housings	✓	✓	✓
Elastic bonding and sealing of electrical and electronic components	✓	✓	✓
Glass frame bonding	✓	✓	✓
Very good plastic bonding	✓	✓	✓

Characteristics

Excellent weathering, ageing and UV-resistance	✓	✓	✓
Non-corrosive	✓	✓	✓
Good temperature resistance (-40 °C to 180 °C)	✓	✓	✓
High adhesion strength	✓	✓	✓



Potting electronic components



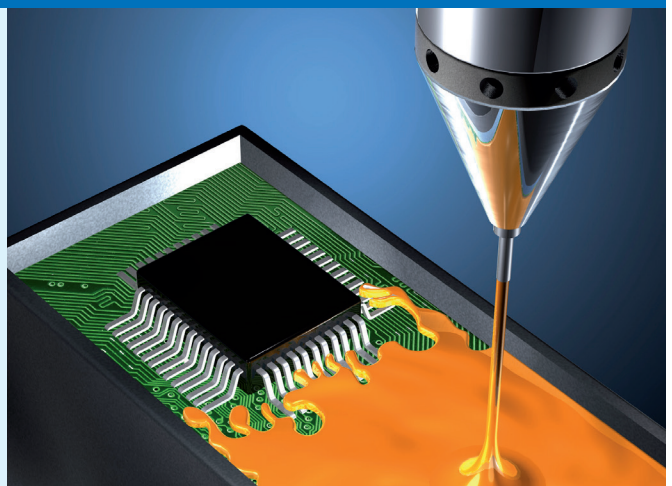
Increasing requirements on the quality and resilience of electronic components require materials that support their functionality.

The dissipation of heat at high power densities, the protection of components and possible undercuts, the high temperature resistance, the compensation of stresses, and much more require the highest standards for a permanently stable potting compound.

The OTTO solution

Potting compounds from OTTO protect highly sensitive electrical and electronic components from moisture, short circuits and jolts. Among other things, they offer the following advantages:

- ✓ Excellent plastic adhesion
- ✓ Quick curing, even with thick layers for fast industrial production
- ✓ Low viscosity for filling cavities without air bubbles



Our Novasil® potting compounds for lights & electronic components

Silicones – alkoxy	S803	S822	S824	S151	S651	S804
Components	1-component	2-component	2-component	2-component	2-component	1-component

Processing properties

Very flowable < 10,000 mPas	✗	☑	☑	✗	☑	✗
Flowable > 10,000 mPas	☑	✗	✗	☑	✗	☑

End state

Hard – Shore A > 60	✗	✗	✗	☑	✗	✗
Medium elasticity – Shore A 25–60	✗	✗	✗	✗	☑	✗
Mild elasticity – Shore A < 25	☑	☑	☑	✗	✗	☑

Features

Heat conductive	✗	✗	✗	☑	☑	✗
High temperature > 200 °C	✗	✗	✗	✗	✗	☑
UV indicator	☑	✗	✗	✗	✗	✗
Colour	transparent	transparent	transparent/ black	white	black	red-brown

Tests

UL V0	✗	✗	✗	☑	☑	✗
UL HB 94	☑	☑	☑	✗	✗	☑

Applications

Potting electronic components	☑	☑	☑	☑	☑	☑
Bonding and sealing of components stressed by high temperatures	✗	✗	✗	✗	✗	☑
Dissipation of heat	✗	✗	✗	☑	☑	✗

Characteristics

Non-corrosive	☑	☑	☑	☑	☑	☑
Flame resistant	✗	✗	✗	☑	☑	✗

Benefit from knowledge and experience

High quality and highly specialised sealants and adhesives make OTTO an important partner for many industries.

For the lights and electronics industry, we already offer a wide range of products that should cover most of your projects. Our offer is completed by our customer-oriented services.

Not only can you expect always consistently high product quality and quick and reliable delivery from OTTO, but also the greatest possible flexibility, many years of experience and extensive expert knowledge when it comes to developing tailor-made solutions.

The earlier you contact us, the better we can meet your needs. From the first product design to setting up production, we are at your side to help and advise.



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Application consultation

Which sealant and adhesive suits your task best? Our application consultation defines a profile of requirements together with you, helping you to find exactly the right product from our product range.

Prototype consultation

Are you planning a new product? The earlier you speak with us, the better we can grasp your ideas. And perhaps even your optimise your product idea when it comes to the design and costs. We are also happy to give you sample sealants and adhesives to use for prototype tests.

Individual product solutions

If we do not have the sealant or adhesive to meet your ideas, then we will work on implementing one. We will first clarify together with you the exact requirements, such as the physical and chemical loads, the materials used, the specific properties of the point of bonding, aesthetic requirements and production sequences. Then we will develop exactly the solution that suits your product. Also in a small series.

Process consultation

The integration of sealants and adhesives into the production process is another focus of our range of consultation. No matter whether semi-automatic or fully automatic, we are happy to advise you in choosing the processing machines and optimise the processing times to ensure a fluid production process.

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The OTTO360° service package

MORE THAN SEALANTS AND ADHESIVES

As an OTTO customer, you get more than premium quality sealants and adhesives. You also benefit from a comprehensive service package that supports you in your daily work and makes it noticeably easier.

Whether it's advice, ordering and delivery or equipping our retailers on site, with our OTTO360° service package we always try to offer our customers the best possible support in all areas – from professionals for professionals.



Flexible production



Prototype consultation |
Industry testing



Process consultation for new
systems & production automation



Development of product solutions
together with the customer



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