



TOTALSEAL

Providing solutions for
Insulating Glass

POLYURETHANE
POLYSULPHIDE
BUTYL



LE JOINT FRANCAIS





**A top performer in
adhesion, moisture
resistance & durability.**

TOTALSEAL

Polyurethane

**POLYURETHANE BASED SEALANTS
AND ADHESIVES COMBINE HIGH BOND
STRENGTH WITH EXCELLENT DURABILITY.
THEY ARE USED FOR A WIDE VARIETY OF
INDUSTRIAL APPLICATIONS.**

Excellent adhesion

to glass, spacer bar and
corner keys

Very low MVTR

prolongs unit life and performance

Flexible and elastic

over a wide temperature range
to reduce the risk of stress
fractures

Smooth flow

and non-slump for fast and
easy application

Range of grades

to suit specific customer
requirements



The automotive industry pioneered the use of polyurethane sealants for bonding fixed glass into all types of vehicles. In 1980 the first two part polyurethane sealant for insulating glass was launched and set the standard which has continued to the present day. Polyurethane offers many benefits to the sealed unit manufacturer, but the most important are its adhesion, moisture resistance and durability.

TOTALSEAL polyurethane edge sealants give excellent adhesion to all types of glass and spacer, while the very low MVTR helps to ensure long unit life and performance. In addition, their mechanical properties ensure that they can cope with extreme temperature variations and climatic conditions.

The chemistry of Polyurethane means that the products are very versatile, and can be tailor-made to suit different types of application and equipment. Whatever combination of viscosity, pot life and cure time is used for the sealant, the finished unit will provide the same high standard of performance and reliability.





**Excellent adhesion
to glass, steel
and aluminium.**

TOTALSEAL

Polysulphide

IN 1954 LE JOINT FRANCAIS BEGAN MAKING SEALANTS FOR GLAZING IN PRESSURISED AIRCRAFT CABINS. THIS EXPERTISE IN THE HI-TECH AEROSPACE INDUSTRY LED TO THE DEVELOPMENT OF TOTALSEAL TWO PART POLYSULPHIDE EDGE SEALANTS.

Non-slump

smooth flow and non-stringing
for fast and easy application

Low permeability

ideal for use in gas filled units

No volatile solvents

for improved desiccant
performance.

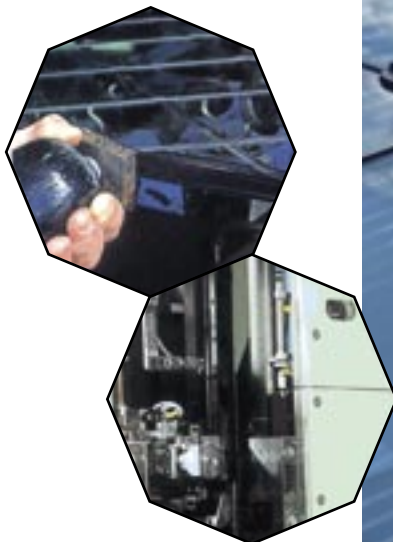
No need to match

batches of parts A & B



The first generation of two-part edge sealants had been based on epoxy, which gave excellent adhesion but were very hard. Polysulphide synthetic rubber was added to reduce the level of hardness. This new combination not only produced a pliable sealant but also provided moisture resistance and mechanical properties familiar today.

The TOTALSEAL range of polysulphide edge sealants are designed to meet the demands of the insulating glass industry, whatever the conditions in the unit manufacture and service. They are used in the cold, dry climate of Scandinavia and the heat and humidity of India and the Far East, from the simplest hand application to fully automated unit production lines.





TOTALSEAL Butyl

**Compatible
with all types
of edge sealant.**

**A VERSATILE SYNTHETIC RUBBER WITH
EXCELLENT MOISTURE RESISTANCE
WHICH FORMS THE BASIS FOR SEVERAL
DIFFERENT TYPES OF INSULATING GLASS
SEALANT.**

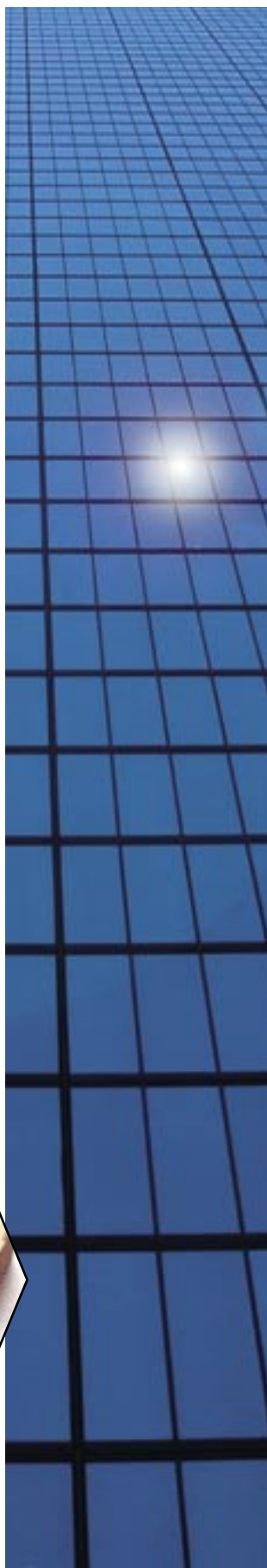
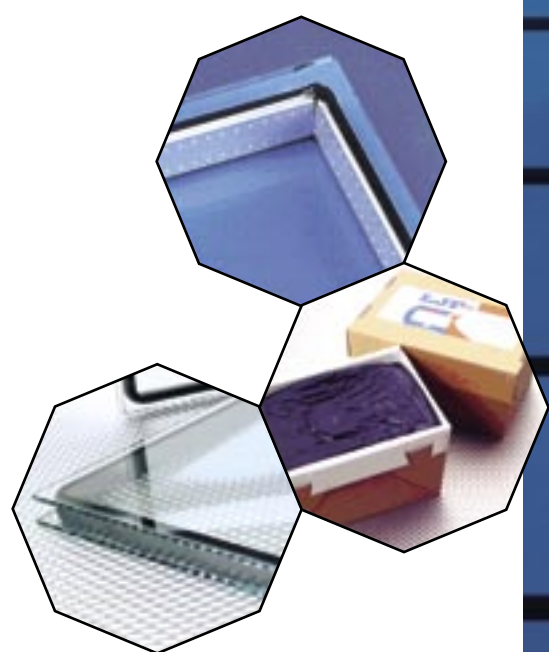
Excellent adhesion
to glass and spacer bar

Excellent resistance
to UV light

Very low MVTR
prolongs unit life

One-part
thermoplastic sealant

Packaging range
to suit all equipment



PRIMARY SEAL (PIB)

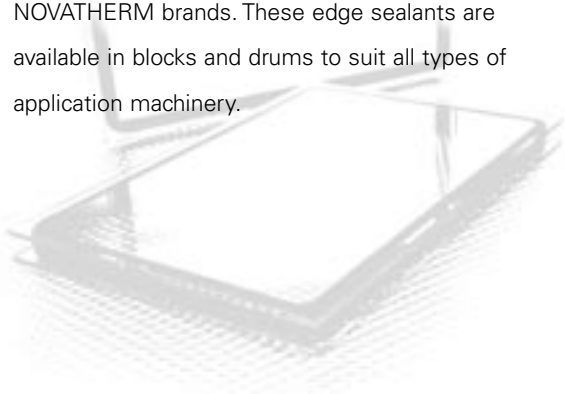
Although a polysulphide or polyurethane sealant provides good resistance to moisture penetration, the use of a TOTALSEAL or NOVATHERM primary seal helps to ensure that the units meet the most demanding performance specifications. In addition, it is a practical help in holding the glass and spacer assembly together during the secondary sealing operation.

THERMOPLASTIC SPACER (TPS)

TPS is a formed-in-place spacer which is made by incorporating a molecular sieve into a hot applied butyl compound. TOTALSEAL 4000 is suitable for use in all types of application equipment available from major machinery manufacturers.

HOT MELT BUTYL

Le Joint Francais manufactures a range of hot melt butyl sealants under the TOTALSEAL and NOVATHERM brands. These edge sealants are available in blocks and drums to suit all types of application machinery.





TOTALSEAL

For over fifty years Le Joint Francais, part of the Hutchinson division of the TOTAL group,

continues to be one of the world's largest manufacturers of adhesives and sealants for the insulating glass, automotive and aerospace industries.

IT TAKES MORE THAN JUST A GREAT PRODUCT TO BE A WORLD LEADER

From two manufacturing plants in France, Le Joint Francais products are distributed through its sales and marketing companies in Europe and to a network of appointed agents around the world.

The company has research and development laboratories in France and Germany to meet industry's growing demand for innovative solutions. They work in collaboration with other laboratories in the Hutchinson group to assess future requirements and to develop the technologies to meet them.



The quality system of the sealants, adhesives and coatings division of Le Joint Francais is ISO 9001 approved, and also has many customer accreditations. In-plant quality laboratories ensure consistent production to the company's high quality standards. Le Joint Francais works in partnership with its customers, from the initial concept through to final production, with ongoing technical support always available.

Research, Development & Quality Assurance NO COMPROMISE ON QUALITY - OUR MOST VALUABLE ASSET.

The TOTAL group provides state-of-the-art technology and cutting edge skills. Our research facilities are involved in study fields such as rheology, physical characterisation of materials, analytical chemistry, computing and mechanics to ensure that our sealant and adhesive systems meet and exceed every aspect of our customers' requirements.



Quality Assurance System certified to: ISO 9001/2000 ISO/TS 16949/2002
Environmental System certified to: ISO 14001

Every endeavour has been made to ensure that the information given herein is true and reliable, but it is given only for the guidance of our customers. The Company cannot accept any responsibility for loss or damage that may result from the use of the information, due to the possibility of variations of processing or working conditions and of workmanship outside our control. Users are advised to confirm the suitability of this product by their own tests. The word Totalseal is a trade mark registered in the United Kingdom and many other countries.

The LJF seal of approval guarantees Quality, Service, Reliability and Versatility

Member of BASA & GGF

Quality Assurance
ISO 9001/2000
ISO/TS 16949/2002

Environmental System
ISO 14001



Global Manufacturing

In conjunction with the European companies below, a further network of appointed distributors provide a comprehensive service worldwide.

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Le Joint Francais is part of TOTAL, one of the world's largest oil companies and chemical manufacturers.

From two factories in France, located in Bezons and Maizières, the company supplies high performance adhesives and sealants to customers worldwide.



Maizières

Bezons

LE JOINT FRANCAIS



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