



Advance Polyurethane Systems, Adhesives, Binders, Precision Catalysts and Silicones for Rigid and Flexible Polyurethane Systems.



WHO WE ARE

5B Chem is an export- centre established in 2022 in Ajman, United Arab Emirates, to address the rapidly growing demand for advanced chemical solutions across the UAE and the wider MENA region. The facility was developed to serve industries requiring high-performance advance polyurethane systems, adhesives, binders, precision catalysts, and silicones for rigid and flexible polyurethane systems.

Our export centre in Ajman enables us to deliver customized, reliable, and technologically advanced solutions to a diverse client base. We proudly serve government entities, hospitality sector, construction sector, shoe manufacturers, foam producers, and numerous allied industries across multiple countries. With a strong manufacturing presence in Pakistan, where we operate an additional production facility, 5B Chem benefits from an integrated supply chain, technical expertise, and scalable manufacturing capabilities. This dual-region presence allows us to ensure consistent quality, competitive pricing, and timely delivery, reinforcing our commitment to innovation, performance, and long-term partnerships.



OUR PRODUCTS



FEATURES AND BENEFITS

5B CHEM RIGID POLYURETHANE FOAM INSULATION

5B Chem rigid polyurethane foam offers the specifier a versatile material with a compelling combination of physical strengths and mechanical properties. These qualities allow it to be used in many multifunctional building products where the need for insulation is combined with load bearing, impact resistance, sealing, weight & space saving.

LOW THERMAL CONDUCTIVITY

Energy Care rigid polyurethane foam is widely known for its excellent thermal conductivity rating, which is among the lowest of any insulating material. This ensures efficient heat retention or alternatively consistent temperature control of refrigerated or frozen environments. About half the energy used in the life of a building is for heating and cooling, so effective insulations are major priority.

STRENGTH

Energy Care polyurethane spray foam insulation provides structural support to a roof, increasing stability for older weakened roofs. Insulation can grant additional strength and the life to your old existing roof.

PROCESS ABILITY

Energy Care rigid polyurethane foam is the only insulant that can be processed under continuous block or batch factory production or by on-site mixing for spray and injection application.

ADHESION

Energy Care rigid polyurethane foam is highly adhesive allowing it to bond with many building facing materials. Bond strength is often higher than the tensile or shear strength.

DURABILITY

Energy Care rigid polyurethane foam has a useful life of 25 years and more, and maintains its very low conductivity over time due to its closed cell structure and ability to withstand external impacts such as moisture ingress or air movement.

FIRE PERFORMANCE

Like all organic building materials such as wood, paper, plastics and paints, Energy Care rigid polyurethane insulation foam is combustible, although its ignitability and rate of burn depend largely on the fire resistance properties of the material used. The most effective fire resistance can be obtained using a fire rated Energy Care rigid polyurethane insulation. By carefully blending the Energy Care polyurethane with certain additives, it is possible to formulate Energy Care rigid polyurethane systems that achieve the fire standards required by national regulations.



PU SPRAY FOAM (POLYURETHANE)

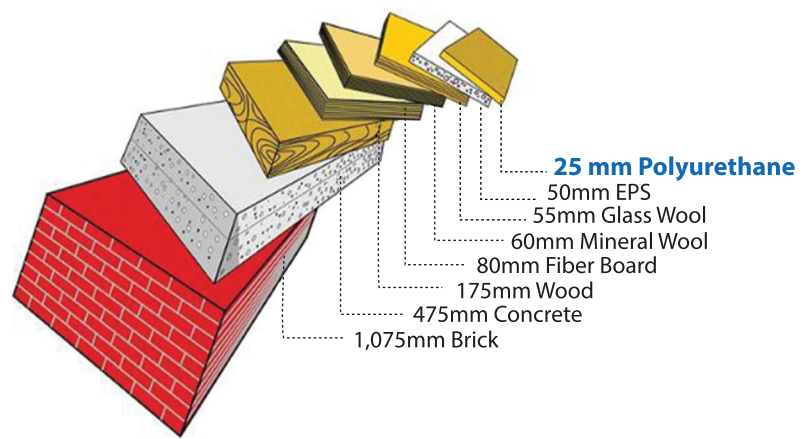


VERSATILE APPLICATIONS

The versatility of 5B CHEM Insulation PU Spray Foam means it is used in many roofing and cavity wall applications. Typical examples include:

- ❖ **FLAT ROOFS**
An industry standard for use beneath partially bonded built-up felt on flat roof.
- ❖ **PITCHED ROOFS**
Highly effective insulation beneath tiled or slated pitch roofs, creating an average 15% more usable roof space.
- ❖ **CAVITY WALLS**
Widely specified insulation for partial fill cavity walls, providing high strength.
- ❖ **FLOORING INSULATION**
Energy Care PU Board is an excellent insulant against heat loss from a ground floor.
- ❖ **LIGHT WEIGHT**

Comparison of PU with Other Materials



COMPARISONS AND PROPERTIES OF DIFFERENT INSULATION MATERIALS AVAILABLE IN PAKISTAN

Materials Thickness is 25 mm	Compressive Strength Kpa	Thermal Conductivity w/mk	Density kg/m ³	Monolithic (Bonded with Surface)	Seamless (without joint)
POLYURETHANE	100-160	0.016	32-35	YES	YES
POLYSTYRENE FOAM	70-80	0.040	32-35	NO	NO
POLYETHYLENE FOAM	55-65	0.037	32-32	NO	NO

POLYUREA SPRAY COATING

1- PRODUCT DESCRIPTION

It is a hot polyurea system that can be applied with a special spray machine. It is a special product developed for a seamless waterproofing, protection and sealing, ideal for surfaces such as concrete, wood, asphalt, fabric and sheet metal. It is a two component, solvent free, UV resistant, 100% pure product. As a result of the reaction, a membrane with mechanical and chemical resistance properties is formed on the applied surface. It can be easily used on all kinds of surfaces for waterproofing and coating purposes.

2- FEATURES

Fast reactivity and fast return to service

Seamless coating

100% solid, VOC free, no solvents

Provides a smooth surface

Reach 4-5 times its own volume

Possibility of application in desired thickness

Can be used on horizontal and vertical surfaces

Water vapor permeability

Excellent resistance to weather conditions

3- APPLICATION AREAS

Pitched roofs, terraces, balconies and ledges

Retaining walls, foundation and shear concrete

Where shock absorbing capacity is needed

Can be used on uneven surfaces or any curved area

Coating on ship decks and maritime installations

Ideal for surfaces such as Concrete, Wood, Asphalt, fabric and sheet metal.

It should not be applied on frozen/melting surfaces or on surfaces where rain is expected within 6-8 hours.

4- SURFACE PREPARATION

- ❖ The application surface must be clean and dry, and the elements that will prevent adhesion must be removed from the surface.
- ❖ When necessary, the weak concrete on the concrete surface should be removed.
- ❖ Sanding and polishing should be done according to the standards for corrosive.

5- FINISHED PRODUCT FEATURES

TEST NAME	UNIT	METHOD	RESULTS
Final Product Structure	-	-	Solid Elastomeric Membrane
Tensile Strength	MPa	ASTM D 638	≥ 2
Elongation	%	ASTM D 638	≥ 400
Hardness	Shore A	ASTM D 2240	45
Adhesion Strength	N/mm ²	ASTM D 4541	Concrete: ≥ 2 Steel: ≥ 6
UV Resistance Test	-	ASTM G53	No cracking and swelling

OUR ESTEEMED CLIENTS



Pearl-Continental



PAKISTAN TOBACCO
COMPANY



Allied Bank



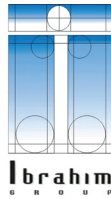
Packages Group



NISHAT



Sapphire



Ibrahim
GROUP



INTERLOOP



DIN GROUP



PRIME MINISTER'S OFFICE
ISLAMIC REPUBLIC OF PAKISTAN



SITARA
CHEMICAL INDUSTRIES LTD



INDIGO TOWER



IZHAR
GROUP OF COMPANIES

Get In Touch



Office: 5B CHEM F.Z.C,
E10 - E11, Ajman, United Arab Emirates.

+971 50443 3404

www.5bchemicals.com

khawar.sheikh@5bchem.ae