

CARE FOR THE ENVIRONMENT WITH RESPONSIBILITY FOR THE PEOPLE

Obtaining a dynamic role, VIOPOL takes essential part in actions targeted to promote eco-friendly product management. Our expert know-how and social corporate responsibility guarantee the design and development of contemporary products that respect and safeguard environmental balance.

Aiming at reducing our environmental footprint, we work closely with our clients and other partners. Through awareness raising actions, at VIOPOL we wish to prove that the magnitude of a modern industry is also substantiated by its environmental sensitivity and the effort to make our world a better place.



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VIOPOL

POLYURETHANE
SYSTEMS

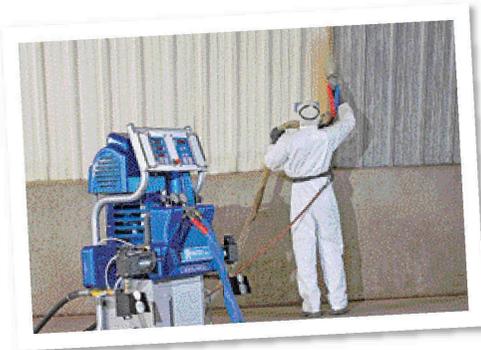
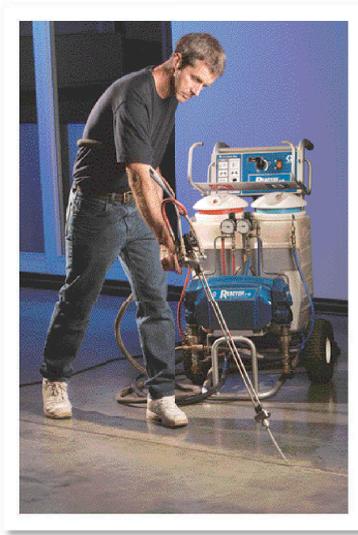
POLYURETHANE SYSTEMS



APPLICATION MACHINES AND EQUIPMENT

Looking for best practices also in the application of our products, we have established a 30-year partnership between **VIOPOL** and **GRACO**, the leading American corporation in application units. Being long term committed to offering total support to our customers, at **VIOPOL** we provide the entire range of products and services associated to application equipment.

- A complete line of high pressure machines
- Technical support
- Spare parts
- Training
- Service

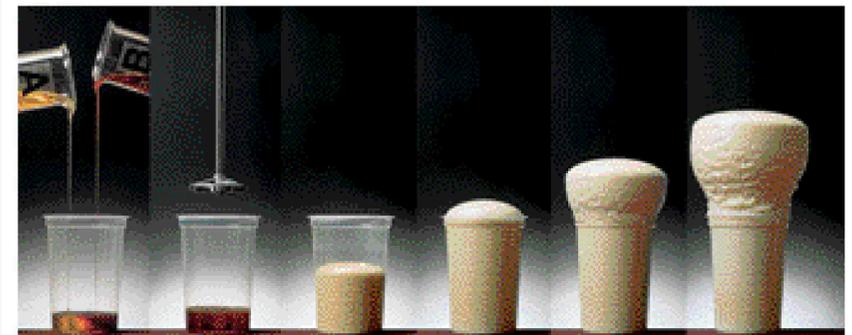


Established in 1974, **VIOPOL** is today one of the most dynamic and fast growing Greek-based companies in the production and marketing of polyurethane systems. Experience, continuous research for innovative solutions and long standing collaborations with international corporations are the pillars of our expertise & know-how. This makes it possible for us to meet the highest and most complex market demands.

At the heart of our philosophy lay support and close partnership with our clients in assessing their needs and meeting their requirements. Our highly skilled and talented people turn **great ideas into advanced solutions** for any polyurethane system application. Our polyurethane systems stand out for their excellent quality and performance. Every product bearing **VIOPOL's** logo offers our clients a world of advantages, supporting the end-result of their work and actively contributing to their success.



IN BOTH CONSTRUCTION AND INDUSTRY, VIOPOL IS THE POWER OF DEVELOPMENT AND EXPERTISE, YOUR STRATEGIC PARTNER IN EXCELLENCE



INTERNATIONAL KNOW-HOW WITH THE SUPPORT OF STRATEGIC PARTNERSHIPS

Having by our side the biggest **international PU corporations**, defines the quality of our products and the refinement of our know-how. **VIOPOL** holds powerful, strategic partnerships with top international corporations, for the development of new products and solutions and the joint implementation of major projects.

Through these resourceful partnerships, at **VIOPOL** we have unlimited access and involvement in **international research & development**, regarding PU systems applications and innovations. Sharing the vast experience of our international partners, we grant our clients successfully tested solutions in any PU systems application, bringing unique benefits in local Industry and Construction.



VIOPOL's strategic partnerships include the following corporations:

BASF

Worldwide leader in chemicals, with more than 95,000 employees globally.

ELASTOGRAN

Pioneer in polyurethane and elastomeric products and applications. Member of **BASF Group**.

HONEYWELL

The international power in special material innovation, with a 120-year history.

GRACO

Worldwide specialist in fluid handling. Offers integrated solutions in application units since 1926.



VIOPOL PU SYSTEMS ARE YOUR PASSPORT TO INTERNATIONAL QUALITY AND KNOW-HOW, IN A NEW ERA OF SOLUTIONS AND BENEFITS

STATE OF THE ART SOLUTIONS FOR ANY APPLICATION

Thanks to the expertise of our people and our global partners and having invested heavily on on-going research and development, at **VIOPOL** we fully cover the wide spectrum of PU applications. We provide an endless range of products and specially designed solutions, tailored to even the strictest of our clients' demands.

INSULATION SYSTEMS

VIOPOL offers reliable and effective solutions in the construction industry, for comfortable and **energy efficient buildings**, both in hot and cold weather conditions, that can be easily adapted to a variety of mechanical and architectural requirements. In co-operation with **Elastogran - BASF Group**, **VIOPOL** offers **V-Por**, rigid foam PU systems that have been specifically designed and certified for thermal insulation and sealing of buildings and other constructions.

V-Por

V-Por PU systems have been successfully applied for more than **40 years** on all types of buildings. **V-Por** significantly reduce heating, cooling and application costs, enhancing the building's mechanical and thermal resistance. It is a fact that, compared to all other thermal insulation materials, **V-Por** systems produce the best thermal conductivity value **λ**, enhancing drastically the building's overall energy efficiency.

Benefits:

- Thermal insulation and sealing is a single operation
- Fast and easy application
- Seals in 30 seconds
- Minimum requirements with regard to the application personnel
- 100% adhesion to the application surface
- Low weight - this means no static problems
- Adaptable to uniquely shaped structures
- Easily applied on vertical surfaces
- Reduces the chance of leaks and contractor call-backs due to the lack of joints during application
- Long life cycle
- Zero maintenance
- No thermal bridges
- Fire resistant (B2 class, DIN 4102, Part 2)
- Heat - frost and temperature resistant from -50 °C up to 120 °C
- Resistant to adverse weather conditions*



Environment / Safety

V-Por polyurethane systems stand out for their environmentally and user-friendly characteristics:

- Maximizes energy saving
- Reduces CO₂ emissions
- Zero ozone depleting potential
- **V-Por** polyurethane systems do not emit harmful or hazardous substances and have been certified as a construction material suitable for indoor use **



* NIST Technical Note 1476 - Performance of Physical Structures in Hurricane Katrina and Hurricane Rita: A Reconnaissance Report - June 2006

** Certified by the AgBB organization (Committee For Health - Related Evaluation of Building Products)

WATERPROOFING, SEALING AND PROTECTION SYSTEMS

At **VIOPOL** we create innovative solutions in waterproofing, sealing and protection applications. We offer liquid applied PU systems that meet the highest construction standards. Easily applied and flexible, these systems enable choice and customization of the end result, through the multiple combinations of **V-Pol**, **V-Coat** and **V-Seal** to meet the specifications of modern constructions.

V-Pol

V-Pol range of products has a long and successful track record in waterproofing new or existing constructions.

V-Pol creates a uniform, permanently elastic and durable membrane, suitable for waterproofing:

- Exterior surfaces → **V-Pol**
- Interiors surfaces → **V-Pol 2K**, odorless, low VOCs
- Vertical surfaces → **V-Pol T**
- Enhanced resistance → **V-Pol** with geotextile reinforcement
- Additional protection and UV stability → **V-Pol Protect**



Benefits:

- Easy application with a brush, roller or airless spray gun
- No joints
- Excellent adhesion to all types of surfaces
- Long life cycle
- 100% adhesion to the substrate
- UV resistant
- Temperature and weather resistant
- Bridges cracks
- Low cost with minimal maintenance
- Water vapor permeability

Applications:

- Rigid polyurethane foam protection
- Waterproofing of roofs, terraces, balconies and other exterior spaces
- Tanks, plant stands, bathrooms, etc.



V-Coat

V-Coat is a hybrid technology spray-applied, elastomeric, waterproofing and protective coating that offers excellent technical specifications and outstanding performance, especially when used for sealing large surfaces.

Its fast curing time and the fact that the same application equipment with

V-Por polyurethane systems is used, reduces installation time and application cost.

Benefits:

- Fast application
- Seals in 8 seconds
- No-VOCs
- Specified thickness applied quickly
- Excellent mechanical properties
- Odorless
- Seamless

Applications:

- Waterproofing and protection of constructions with strict specifications



V-Seal

V-Seal is a one component elastic, thixotropic polyurethane mastic, used for joint sealing and bonding different parts in the construction. **V-Seal** is cured to form an elastic, cohesive mass which has excellent adhesion and mechanical properties.



Benefits:

- Excellent adhesion
- Permanent elasticity
- Resistant to temperature
- Easy application
- Can be painted over

Applications:

- Filling of various types of expansion joints in buildings
- Filling of cracks or fissures
- Filling of joints in industrial floors

FLOORING SYSTEMS

VIOPOL's **V-Floor** covering systems offer protection and functionality to spaces with high chemical and mechanical resistance requirements. Easily applied with brush, roller or spatula.

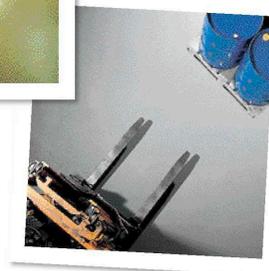
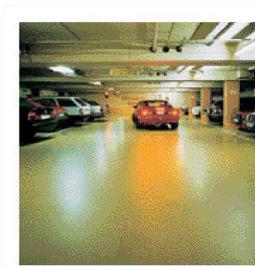
V-Floor

Benefits:

- Scratch resistance
- High chemical resistance
- Excellent mechanical resistance
- Joint-free application
- Adjustable conductivity
- Cleans easily
- Food industry suitability
- Can be painted over
- Anti-slip solutions possible

Applications:

- Industrial floors
- Warehouses
- Food industry floors
- Parking lots and garages
- Mass gathering spaces (exhibition centers, convention centers, recreation halls, sports complexes, etc.)



BONDING SYSTEMS

VIOPOL's **V-Bond** systems are PU-based cold or hot melt bonding systems. They are tailored to the needs and requirements of industry and construction. Ideally suited for bonding metallic (metal sheets, aluminum, etc.) or plastic surfaces (PVC, ABS, etc.) to polystyrene, polyurethane, mineral wool, gypsum and wood fiber boards.

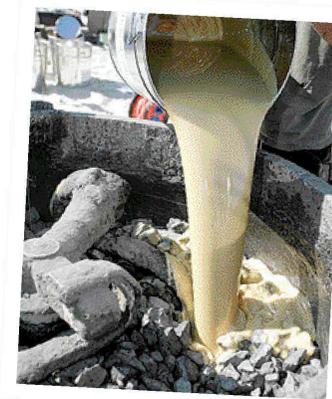
V-Bond

Benefits:

- Outstanding bonding properties
- Moisture resistant
- High mechanical resistance
- High temperature resistance

Applications:

- Metal facing panels manufacturing for use in construction
- Doors manufacturing
- General sandwich-type elements
- Retention of aggregate materials (ports, coastal protection, rubber granules, etc.)



POURING SYSTEMS

V-Pur polyurethane systems from **VIOPOL** are designed to offer industrial solutions that increase productivity. **VIOPOL** holds a **leading position** in the Greek market, with **V-Pur** systems being technically and actively supported by **ELASTOGRAN - BASF Group**.

V-Pur

V-Pur systems are rigid PU foam solutions for applications, where excellent thermal insulation and mechanical resistance enhancement is required. Due to their unique flow properties, **V-Pur** systems can be successfully used even with the most complex design.

Benefits:

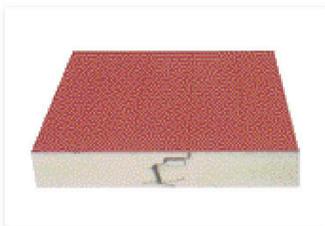
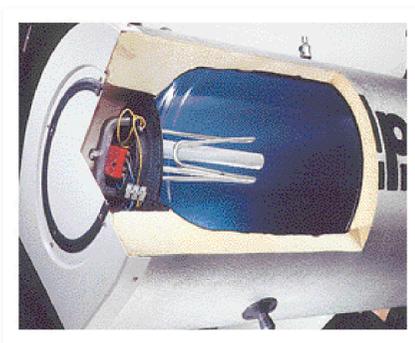
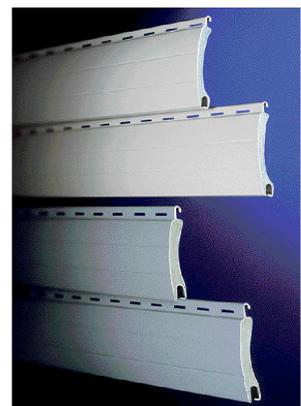
- Perfect filling
- Enhances the construction's solidity
- Low thermal conductivity coefficient value λ

Applications:

- Polyurethane sandwich panels
- Boilers & sun collectors
- Aluminum roll shutters
- Refrigerators & freezers
- Garage doors

Environment:

- Energy saving
- Zero ozone depleting potential
- RoHS compliant (EC DIRECTIVE 2002/95/EC)



V-Lit

With a vast range of applications, **V-Lit** is a value-for-money alternative to traditional construction materials, such as wood and metal, as well as to engineering thermoplastics.

FLEXIBLE SYSTEMS

V-Flex are flexible PU foam systems that adjust to our clients needs and specifications. They are applicable in furniture manufacture, orthopedic products or even soundproofing. **VIOPOL's V-Flex** systems are eco-friendly offering solutions of high quality and comfort.

V-Flex

V-Flex offers the manufacturer different hardness possibilities using the same PU system. This makes **V-Flex the best practice system** in the production of ergonomic seats.

V-Flex also cover special applications with **visco-elastic** systems, whose outstanding property is body shaping, as well as applications with **high fire resistance** products.

Applications:

- Office chairs
- Sofas
- Mattresses
- Movie seats, theater seats, bus / train / boat seats
- Orthopedic products
- Armrests



AUXILIARY PRODUCTS

Providing the market with a complete range of PU systems, at **VIOPOL** we also offer a number of auxiliary products. These include primers (**V-Primer**), thinners (**V-Thinner**), release agents (**V-Release**) and catalysts (**V-Cat**), complementing the main line of **VIOPOL's** products.

