



## Single Component Foams

# ADO International Building Better Buildings

The last 50 years have seen the introduction of many new devices and systems aimed at saving labour, providing entertainment and comfort, and enhancing productivity and communication: From dishwashers to satellite TV; from central heating to factory automation; and from personal computers to smart phones.

Useful and enjoyable as these developments are, they have led to a rapidly increasing demand for energy in our homes, offices and factories. Innovation in construction technology is helping to balance energy consumption and ecology. Double glazing, better insulation, smart control systems and improved construction methods and materials all help to reduce consumption of energy, thus building a sustainable future. Generally speaking one can characterize Polyurethane Foam as a stable chemical structure with a low specific gravity and strong cohesion. We will here discuss mainly one component PU Foams that are available in aerosol cans.

The initial steps in Polyurethane Chemistry started more than 80 years ago. The single component foams however, were invented in 1969 by ICI. During the 1970's development of the product continued and since the early 1980's PU Foams have established an ever more important role in the building industry and later in the DIY trade.

The slow development of this product can be explained by the fact that the implementation of PU Foam requires changes in building techniques. Nowadays in many countries, it is inconceivable to find a building site where no PU Foam is used.

PU Foam has versatile applications because of its following properties:

- Excellent adhesion on many substrates, except: PP, PE, Teflon, Silicone, Wax
- Excellent acoustical and thermal insulation characteristics
- Large filling capacities
- Excellent bonding capacities
- Very simple application
- Can be painted

PU Foams are generally used for bonding, filling, gluing and insulating of many different substrates:

Insulation of water pipes, HVAC ducting (Heating, Ventilation & Air-Conditioning), bath tubs, tubes, etc.

- Sealing and filling of gaps, holes, cavities and wall breakthroughs
- Installing and sealing air-conditioning units
- Installation of door and window frames
- Gluing of corrugated sheets and roof tiles
- Bonding and sealing jobs on roofs and walls
- Bonding of insulation panels and plaster boards
- Sealing around the windows against draughts
- Insulating against heat loss
- Acoustic insulation
- Fill joints between walls and wall panels
- Installation of electrical wiring

One-component ADO QUILOSA PU Foams play an important role in this context by improving energy efficiency and helping create a more pleasant environment. It brings significant benefits to window and door installation tasks. It provides thermal and acoustic insulation and renders airtight joints, while still allowing water vapour to migrate. Quick and easy to use, they are typically supplied in convenient pressurized containers and used for on-site application(s). The application takes a matter of minutes and they usually cure in little over an hour compared to the traditional method.

Professionals, Craftsmen & DIY users prefer ADO QUILOSA PU Foam due to its versatile nature. They have been able to solve their challenges in practical situations by using it. ADO QUILOSA PU Foam, because of its expandable nature, can be used in sealing, bonding, filling, assembly, model making, protecting, fixing, insulating and many more purposes. It saves on installation and application time, reducing costs and save energy as well as CO<sub>2</sub> load on the environment.

ADO QUILOSA PU Foams are used everywhere in the construction sector, such as mounting of door & window frames, backfilling of a wall breakthrough, insulation, be it thermal, acoustic or electrical, fixing of dry panels, sandwich board, bricklaying and many more. The big advantage of ADO QUILOSA Foam is energy saving and resource conservation.

So we can confidently conclude that ADO QUILOSA PU Foam is an all-rounder in the construction sector.

ADO QUILOSA is having a wide range of PU Foams for various applications:

### Standard Foams:

- ADO QUILOSA ORBAFOAM Multipurpose
- ADO QUILOSA ORBAFOAM High Yield
- ADO QUILOSA ORBAFOAM low expansion
- ADO QUILOSA ORBAFOAM Sanit
- ADO QUILOSA ORBAFOAM Roof



The standard PU Foams are used for mounting doors and windows. Filling cavities, using between brick & concrete, HVAC etc.

### Fire Retardent Foams:

- ADO QUILOSA FIRE STOP
- ADO QUILOSA FIRE BLOCK

The Fire Retardant foams are used for installations of fire door & windows, sealing of ducts and cavities, etc. ADO QUILOSA B1 or FIRE BLOCK Foams have a 4 hrs fire rating.



### Adhesive Foams:

- ADO QUILOSA STYRENE ADHESIVE FOAM
- ADO QUILOSA STYRENE ADHESIVE FOR DRY WALL
- ADO QUILOSA STYRENE ADHESIVE FOR SUBFLOOR



The adhesive foams are used for fixing dry wall, sandwich panels and any lightweight panels, etc. onto the walls.

### Mortar Foam:

- ADO QUILOSA THIN BED MORTAR



The Thin Bed Mortar is based on polyurethane foamed mass which cures in the presence of moisture in the atmosphere. The product is designed for bonding construction materials in bricklaying. It can be used for bricklaying perimeter walls as well as partition walls.

ADO QUILOSA Thin Bed Mortar is designed for calibrated cellular concrete (TLMB class) and calibrated ceramic bricks (TM deviation category). It has a very high adhesion strength (up to 210 kPa), high resistance to all weather conditions and excellent thermal insulation. One can of 750 ml of Thin Bed mortar gives a yield equivalent to 25 kg cement of traditional mortar.

Also the speed of construction reduces the cost of investment. It's a single component ready to use and does not require preparations, less cost in transportation and storage, thus making this system cost wise beneficial and increases the speed of construction.

Originally used for automobile industry, now-a-days foams are finding new uses in construction projects of all types. Its light weight with very good insulation property (thermal, acoustic and electrical) makes it a preferred choice of professionals in the construction industry.



### Siddhartha Chaudhury

Business Head - ADO International  
Ado Additives Mfg Pvt. Ltd.

Email: [atplkolkata@gmail.com](mailto:atplkolkata@gmail.com)

Website: [www.atplgroup.in](http://www.atplgroup.in)