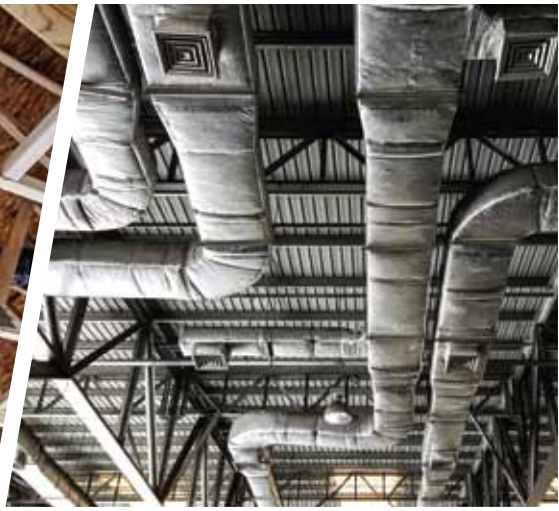
Atul
touching lives...

polygrip®
Synthetic Rubber & PU Adhesives

PREMIUM RANGE OF HVAC ADHESIVES

40 years of expertise



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LEGACY

Founded in 1947 by a legendary Indian, Kasturbhai Lalbhai, Atul Ltd (Atul) is amongst the first companies of independent India. It has the privilege of being the first private sector company of India to be inaugurated by the first Prime Minister of the country, Pandit Jawaharlal Nehru.

PROFILE

The first site of Atul, spread over 1,250 acres of land, houses one of the largest and the greenest chemical complexes of its kind in the world. Starting with just a few textile dyes, the company now manufactures about 1,380 products and formulations. The Company manages complex chemical processes in a responsible way. It has established fruitful and time-tested collaborations with leading multinational companies of the world.

An ISO 9001:2008 and ISO 14000 Certified company, Atul serves customers from diverse industries such as Adhesives, Agriculture, Animal Feed, Automobile, Construction, Cosmetic, Defence, Dyestuff, Electrical and Electronics, Flavour, Food, Footwear, Fragrance, Glass, Home Care, Horticulture, Hospitality, Paint and Coatings, Paper, Personal Care, Pharmaceutical, Plastic, Polymer, Rubber, Soap and Detergent, Sports and Leisure, Textile, Tyre and Wind energy.

POLYMERS BUSINESS

Atul is a pioneer in manufacturing epoxy resins in India. The Company is one of the largest manufacturers of epoxy resins and hardeners in the country. It has a portfolio of over 450 world class products that have a range of applications including bangles, construction chemicals, handicraft, sports goods and stone processing. The products are marketed and sold under the brand name of Lapox®.

Atul strives to create a leading position in the business-to-consumer segment for its epoxy range of products. Lapox® has a presence across India and is readily available at all hardware, paint and sanitary retail outlets. Lapox® has been training several users to build the required skill sets for specialised epoxy system applications.

In 2010, Atul acquired the Polygrip® brand to market synthetic rubber and polyurethane based adhesives in India. Today, it is amidst the top selling adhesive brands with a diverse range of value-added products. Lapox® and Polygrip® products are also readily available in the overseas market, to serve customers globally.




HVAC industry

Heating, ventilation and air conditioning (HVAC) is the technology of indoor environmental comfort and acceptable indoor air quality which controls temperature and air flow in a building. HVAC is an important part of residential structures such as homes, apartment buildings, hotels and medium to large industrial and office buildings such as skyscrapers and hospitals, on-board vessels and in marine environments, where safe and healthy building conditions are regulated with respect to temperature and humidity, using fresh air from outdoors.

Consequently, HVAC system takes a major share of electricity bills that puts tremendous pressure on energy sources, and ultimately impacts the climate. With sustainability becoming a buzz word, companies are giving due emphasis on the selection of the right equipment for HVAC to save energy cost. This has resulted in a need for educating all stakeholders and reducing the carbon footprint of companies. By one estimate, the right selection of insulation materials and bonding adhesives for HVAC ducting ensures 20% reduction in energy bills. Therefore it becomes pertinent to design the HVAC system in a scientific way using standard and quality materials.

Polygrip® HVAC adhesive range

As one would agree, a lot goes into designing a structure to cool or heat air, especially creating a duct system. This is where Polygrip® HVAC demonstrates its bonding prowess. With 40 years of expertise in synthetic rubber and PU adhesives, Polygrip®, a brand of Atul Limited has custom designed Polygrip® HVAC adhesive range at its state-of-the-art R&D Lab, for HVAC segment. Polygrip® HVAC adhesive range is a special synthetic adhesive which holds great significance in the following processes.

- A C ducting
- Chilled water piping
- Under deck insulation
- Acoustic insulation

Polygrip® HVAC adhesive range is best suited for duct systems, duct-liners for commercial, industrial and residential insulation systems. Polygrip® HVAC adhesive range comes in three variants - **UNIQUE, CLASSIC and ECCO**. Each excellent in bonding to a variety of substrates like galvanised iron, aluminium, steel, nitrile rubber, glass wool, foam and crosslinked polyethylene.

Application wise product recommendation

HVAC Applications	Elements used	Polygrip® HVAC UNIQUE for High bond strength Excellent heat resistant	Polygrip® HVAC CLASSIC for Excellent coverage	Polygrip® HVAC ECCO for Low VOC
AC ducting	Galvanised iron Aluminium Nitrile rubber Crosslinked polyethylene Glass wool	✓	✓	✓
Chilled water piping	Painted MS Nitrile rubber Crosslinked polyethylene Glass wool	✓	✓	✓
Under deck insulation*	Concrete Painted concrete Nitrile rubber Crosslinked polyethylene Glass wool	✓	✓	NA
Acoustic insulation	Galvanised iron Aluminium Painted Concrete wall	✓	✓	NA
				

* Mechanical fastners are recommended for under deck insulation

40 years of expertise

Method of application

1

Ensure the surface is completely clean, dry and free of oil, grease and foreign particles

2

Stir the adhesive well before use

3

Apply Polygrip® HVAC adhesive range on both the substrates uniformly with the help of a brush or a spreader

4

Leave it for 10-15 minutes to become touch dry so that no air pockets are there

5

Now bond the substrates with firm and uniform pressure

6

Optimum bond strength is developed after 24 hours in ambient condition

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Safety and precautions

- Keep the container tightly closed when it is not in use
- Highly inflammable; keep away from open flame, sparks and welding spots etc.
- Recommended to use safety equipment while using the adhesive
- Do not consume
- Keep away from children
- Use in a well ventilated area
- Store in a cool and dry place in an original sealed container
- Kept away from direct sun light

Shelf life

12 months from the date of manufacturing

Packaging units

5 and 30 litre

Polygrip® HVAC UNIQUE

Description

Polygrip® HVAC UNIQUE is a high strength synthetic rubber based adhesive recommended for various insulation requirements in HVAC and R segment. Polygrip® HVAC UNIQUE has excellent adhesion to a variety of substrates such as galvanised iron, aluminium steel, nitrile rubber, glass wool and crosslinked polyethylene to provide insulation requirements of HVAC and R applications.

Features

- High bond strength
- Long lasting durable bond with excellent water and heat resistance
- Excellent tack and tack retention time
- Excellent adhesion to a variety of substrates
- Ease of application with a good area coverage
- Mild smell
- No added benzene in formulation

Applications

- **AC ducting and Air ventilation system fabrications:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to duct surfaces
- **Chilled water piping:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to painted MS surface
- **Acoustic insulation:** Bonding of nitrile rubber to vertical painted or concrete surfaces and galvanised iron duct inner surface
- **Under deck insulation:** Bonding of nitrile rubber and crosslinked polyethylene to painted concrete surfaces

Typical data

Property	Unit	Test method	Typical range
Appearance	--	Visual	Brown viscous liquid
Density at at 30ºC	g/ml	--	0.83 - 0.89
Viscosity at 30ºC	cPs	ASTM D 2196	1800 - 2600
Temperature resistance	ºC	--	- 20 to + 96
*Coverage	m^2/lit	--	5.2

*Coverage is calculated using spreader under ideal laboratory conditions with single side application on a smooth non absorbent substrate. It may vary with the type of substrate and ambient conditions.

Method of application

Surface preparation

Surface to be bonded must be completely clean, dry and free of oil, grease, and foreign particles.

1. Stir the adhesive well before use
2. Uniformly apply Polygrip® HVAC UNIQUE on both the substrates to be bonded in a thin layer by a spreader or a brush
3. Allow solvents to evaporate for 10-15 minutes at ambient temperature to develop tack
4. Once the tack is just developed, assemble both the substrates with uniform contact pressure to achieve intimate contact without any air pockets. Apply firm and uniform pressure on the whole assembly to be bonded
5. Immediately after bonding the substrates, apply adequate pressure on the assembly in order to achieve stronger adhesion
6. Optimum bond strength is developed after 24 hours at ambient conditions

Precautions

- Keep container tightly closed when not in use
- Highly volatile constituents are released during application and processing
- Use appropriate protective measures to avoid skin and eye contact of the adhesive
- Ensure that the adhesive is not contaminated with oil, grease and water during application. It will adversely affect performance of the adhesive

Standard packing

5 and 30 litre

Storage and handling

Polygrip® HVAC UNIQUE has a shelf life of 1 year from the date of manufacturing, if stored in its original sealed container. It must be stored in a cool and dry place away from moisture, heat and direct sunlight. It contains highly volatile solvents, which are released during application, processing and use. These volatile solvents are highly flammable, care should be taken to keep the adhesive away from heat, sparks and necked flame. Adequate protective measures such as safety goggles, hand gloves and respiratory device should be adopted while using this adhesive. Proper ventilation must be provided on the shop floor where the adhesive is being used. Keep containers out of reach of children. For detailed safety instructions, kindly refer the material safety data sheet.

Polygrip® HVAC CLASSIC

Description

Polygrip® HVAC CLASSIC is a high strength synthetic rubber based adhesive specially developed for various insulation requirements in HVAC and R segment. Polygrip® HVAC CLASSIC has excellent adhesion to a variety of substrates such as galvanised iron, aluminium, steel, nitrile rubber, glass wool and cross linked polyethylene to provide durable insulation requirements of HVAC and R applications.

Features

- Excellent coverage
- Long lasting durable bond with excellent water resistance
- Excellent tack and tack retention time
- Excellent spreadability and ease of application
- Excellent adhesion to a variety of substrates
- Mild smell
- No added benzene formulation

Applications

- **AC ducting and air ventilation system fabrications:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to duct surfaces
- **Chilled water piping:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to painted MS surface
- **Acoustic insulation:** Bonding of nitrile rubber, crosslinked polyethylene to painted concrete surfaces / galvanised iron duct Inner surface
- **Under deck insulation:** Bonding of nitrile rubber and crosslinked polyethylene to painted concrete surfaces

Typical data

Property	Unit	Test method	Typical range
Appearance	--	Visual	Yellow viscous liquid
Density at 30°C	g/ml	--	0.82 - 0.86
Viscosity at 30°C	cPs	ASTM D 2196	1050 - 1500
Temperature resistance	°C	--	- 20 to + 85
*Coverage	m^2/lit	--	6

*Coverage is caculated using spreader under ideal laboratory conditions with single side application on a smooth non absorbent substrate. It may vary with the type of substrate and ambient conditions.

Method of application

Surface preparation

Surfaces to be bonded completely clean, dry and free of oil, grease, and foreign particles.

1. Stir the adhesive well before use
2. Uniformly apply Polygrip® HVAC CLASSIC on both the substrates to be bonded uniformly in a thin layer by a spreader or a brush
3. Allow solvents to evaporate for 10-15 minutes at ambient temperature to develop the tack
4. Once the tack is just developed, assemble both the substrates with uniform contact pressure to achieve intimate contact without air pockets. Apply firm and uniform pressure on the whole assembly to be bonded
5. Immediately after bonding the substrates, apply adequate pressure on the assembly in order to achieve stronger adhesion
6. Optimum bond strength is developed after 24 hours at ambient conditions

Precautions

- Keep container tightly closed when not in use
- Highly volatile constituents are released during application and processing of the adhesive
- Use appropriate protective measures to avoid skin and eye contact
- Ensure that the adhesive is not contaminated with oil, grease, water during application. It will adversely affect performance of the adhesive

Standard packing

5 and 30 litre

Storage and handling

Polygrip® HVAC CLASSIC has a shelf life of 1 year from the date of manufacturing, if stored in its original sealed container. It must be stored in a cool and dry place away from moisture, heat and direct sunlight. It contains highly volatile solvents, which are released during application, processing and use. These volatile solvents are highly flammable, care should be taken to keep the adhesive away from heat, sparks and necked flame. Adequate protective measures such as safety goggles, hand gloves and respiratory device should be adopted while using this adhesive. Proper ventilation must be provided on the shop floor where the adhesive is being used. Keep containers out of reach of children. For detailed safety instructions, kindly refer the material safety data sheet.

Polygrip® HVAC ECCO

Description

Polygrip® HVAC ECCO is a synthetic rubber based adhesive having low VOC and it is specially developed for various insulation requirements in HVAC and R segment. Polygrip® HVAC ECCO provides excellent adhesion to a variety of substrates such as galvanised iron, aluminium, steel, nitrile rubber, glass wool and crosslinked polyethylene.

Features

- Mild smell
- No added benzene in formulation
- Excellent spreadability and ease of application
- Faster drying
- Good tack quality
- Excellent adhesion to a variety of substrates
- Excellent bond strength
- Long lasting durable bond with excellent water resistance

Applications

- **Acoustic insulation:** Bonding of nitrile rubber to vertical painted or concrete surfaces or galvanised iron duct inner surface
- **Under deck insulation:** Bonding of nitrile rubber and crosslinked polyethylene to painted concrete surfaces
- **Chilled water piping:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to painted MS surface
- **AC ducting and air ventilation system fabrications:** Bonding of nitrile rubber, crosslinked polyethylene and glass wool to duct surfaces

Typical data

Property	Unit	Test method	Typical range
Appearance	--	Visual	Light yellow
Density at 30ºC	g/ml	--	0.80 - 0.85
Viscosity at 30ºC	cPs	ASTM D 2196	1200 - 1400
Temperature resistance	ºC	--	- 20 to + 85
*Coverage	m^2/lit	--	4.70

*Coverage is calculated using spreader under ideal laboratory conditions with single side application on a smooth non absorbent substrate. It may vary with the type of substrate and ambient conditions.

Method of application

Surface preparation

Surface to be bonded must be completely clean, dry and free of oil, grease and foreign particles.

1. Stir the adhesive well before use
2. Uniformly apply Polygrip® HVAC ECCO on both the substrates to be bonded in a thin layer by a spreader or a brush
3. Allow solvents to evaporate for 3 - 7 minutes at ambient temperature to develop tack
4. Once the tack is just developed, assemble both the substrates with uniform contact pressure to achieve intimate contact without any air pockets. Apply firm and uniform pressure on the whole assembly to be bonded
5. Immediately after bonding the substrates, apply adequate pressure on the assembly to achieve stronger adhesion
6. Optimum bond strength is developed after 24 hours at ambient conditions

Precautions

- Keep container tightly closed when not in use
- Highly volatile constituents are released during application
- Use appropriate protective measures to avoid skin and eye contact
- Ensure that the adhesive is not contaminated with oil, grease, water during application. It will adversely affect performance of the adhesive

Standard packing

5 and 30 litre

Storage and handling

Polygrip® ECCO has a shelf life of 1 year from the date of manufacturing, if stored in its original sealed container. It must be stored in a cool and dry place away from moisture, heat and direct sunlight. It contains highly volatile solvents, which are released during application, processing and use. These volatile solvents are highly flammable, care should be taken to keep the adhesive away from heat, sparks and necked flame. Adequate protective measures such as safety goggles, hand gloves and respiratory device should be adopted while using the adhesive. Proper ventilation must be provided on the shop floor where adhesive is being used. Keep containers out of reach of children. For detailed safety instructions, kindly refer the material safety data sheet.

Contact us

Head office

Atul 396 020, Valsad

Gujarat, India

Telephone: (+91 2632) 230000

Mumbai

310-B, Veer Savarkar Marg, Dadar (West),

Mumbai 400 028, Maharashtra, India

Telephone: (+91 22) 39876000

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For any queries or suggestions, contact Customer Support on (+91) 6193 73700 or e-mail us at support_polymers@atul.co.in | www.atul.co.in