

Premium range of HVAC adhesives

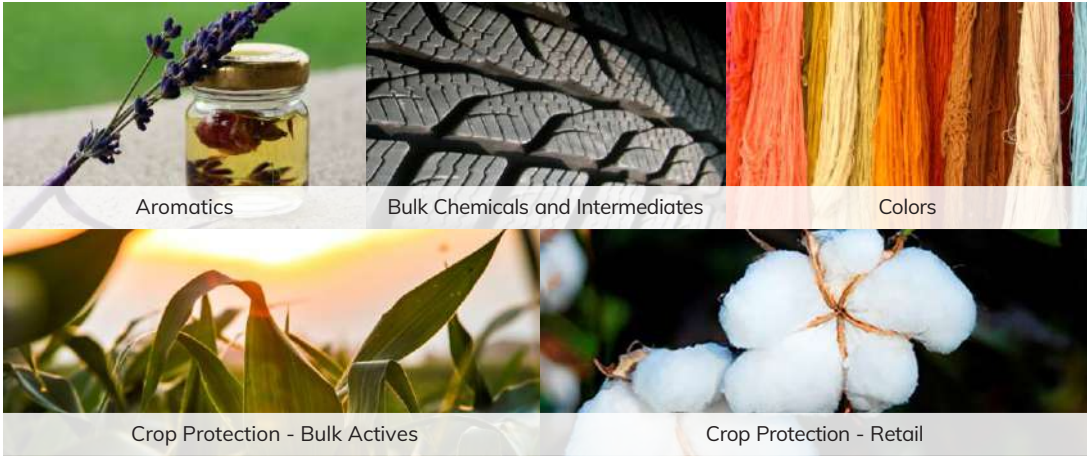




bird's eye view of Atul's first site

Founded by Mr Kasturbhai Lalbhai on September 05, 1947, Atul Ltd (Atul) is one of the largest integrated chemical companies of India. The Company manufactures about 900 products and 400 formulations and owns 140 brands. Atul serves 4,000 customers belonging to over 30 industries in approximately 90 countries and has established subsidiary companies in Brazil, China, Ireland, UAE, UK and USA. The Company offers a wide range of products and applications used in several industries including Agriculture, Adhesives, Animal Feed, Automobile, Composites, Construction, Cosmetic, Defence, Dyestuff, Electrical and Electronics, Footwear, Food, Fragrance and Flavour, Glass, Home Care, Horticulture, Hospitality, Paint and Coatings, Paper, Personal Care, Pharmaceutical, Rubber, Soap and Detergent, Sport and Leisure, Textile, Tyre and Wind Energy.

In India, Atul has its production facilities at Ankleshwar, Atul and Panoli in Gujarat, Ambernath and Tarapur in Maharashtra, and in the UK, at Baltonsborough, Somerset. The first manufacturing site of the Company in Atul, Gujarat is spread over 1,250 acres. Atul's shares are listed on the National Stock Exchange and Bombay Stock Exchange.



Aromatics

Bulk Chemicals and Intermediates

Colors

Crop Protection - Bulk Actives

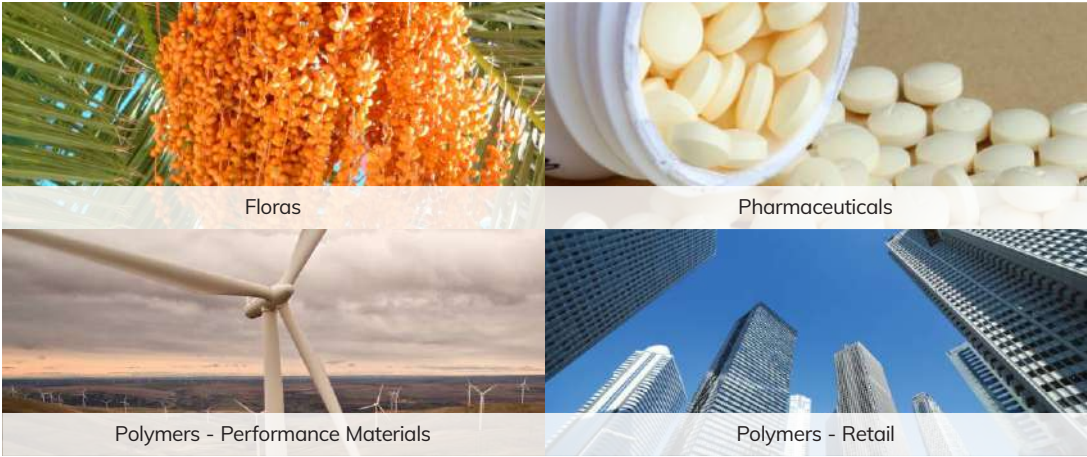
Crop Protection - Retail

Polymers - Retail

A pioneer in manufacturing epoxy resins and hardeners in India, Atul offers a portfolio of world-class products that are used for diverse applications and in a variety of industries including stone processing, construction chemicals, bangles, handicraft, aerospace, defence, high performance paint and sports goods.

Epoxy and allied products are marketed through the brand, Lapox. To cater to growing demand in the automobile and industrial maintenance market, a range of maintenance products are offered through the brand, Lacare.

In 2010, Atul acquired Polygrip to market synthetic rubber and polyurethane-based adhesives. Polygrip serves a number of industries with a wide range of value-added products that find application in footwear, foam and furnishing, furniture, flooring, HVAC and automobiles.



Floras

Pharmaceuticals

Polymers - Performance Materials

Polymers - Retail



HVAC

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. An essential component of homes, apartment buildings, hotels, hospitals, large industrial and office buildings, HVAC also plays an important role in marine environments and onboard vessels where safe and healthy building conditions (with respect to temperature and humidity) are regulated using fresh air from outdoors.

By one estimate, the optimum selection of insulation materials and bonding adhesives ensures 20% reduction in energy bills; therefore, it becomes pertinent to design a HVAC system scientifically using standard, safe and quality materials.



With more than 45 years of expertise in synthetic rubber and PU adhesives, Polygrip, a brand of Atul Ltd, offers its HVAC adhesive range for AC ducting, over-deck and under-deck insulation, chilled water piping and acoustic insulation with the ability to effectively bond a variety of substrates including galvanised iron, aluminium, steel, nitrile rubber, glass wool, foam and cross-linked polyethylene.

Application and insulation-wise product recommendations

AC ducting chilled water piping							
Insulation	HVAC Classic	HVAC Unique	HVAC Lite	Hotbond	909 Plus	S 709	MP 609
Nitrile rubber	✓	✓	✓	✓	✓	✓	✓
XLPE	✓	✓	✓	✓	✓	✓	✗
Glass wool	✓	✓	✓	✓	✓	✓	✗
Rock wool	✓	✓	✓	✓	✓	✓	✗
PUF	✓	✓	✓	✓	✓	✓	✗
EPDM	✓	✓	✓	✓	✓	✓	✓

Over-deck under-deck acoustic							
Insulation	HVAC Classic	HVAC Unique	HVAC Lite	Hotbond	909 Plus	S 709	MP 609
Nitrile rubber	✓	✓	✓	✓	✓	✓	✓
XLPE	✓	✓	✗	✓	✓	✓	✗
Glass wool	✓	✓	✗	✓	✓	✓	✗
Rock wool	✓	✓	✗	✓	✓	✓	✗
PUF	✓	✓	✗	✓	✓	✓	✗
EPDM	✓	✓	✓	✓	✓	✓	✓

VOC: Volatile organic compound
PUF: Polyurethane foam
MS: Mild steel

XLPE: Crosslinked polyethylene
EPDM: Ethylene propylene diene monomer



*mechanical fastners are recommended for under-deck insulation

polygrip®

HVAC Classic



Polygrip HVAC Classic is a high strength, synthetic rubber-based adhesive especially developed to bond a variety of insulations used in HVAC and refrigeration. This adhesive is suitable for ducts, chilled water pipelines, over-deck | under-deck and acoustic insulation applications.

Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to duct substrates
- chilled water piping - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to pipelines
- acoustic insulation - bonding nitrile rubber | glass wool | rock wool | PUF | EPDM to smooth, concrete walls and vertical substrates
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to smooth, concrete wall (mechanical fasteners are recommended for under-deck insulation)

Features

- excellent tack with better retention time
- good adhesion to a variety of substrates
- excellent coverage and spreadability
- easy to apply
- durable bond with excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

Typical technical data

Properties	Typical range
Appearance	Light yellow, viscous liquid
Density at 30 °C	0.82 - 0.86 g/ml
Viscosity at 30 °C ±1 °C	1,050 - 1,500 cPs
Temperature resistance	-20 °C - 85 °C
VOC	< 700 g/litre
Coverage by spreader	6 - 7 m ² /litre (for bonded areas)

Pack size

5 L | 30 L



HVAC Unique

Polygrip HVAC Unique is a high strength, synthetic rubber-based adhesive recommended for various insulation requirements in HVAC and refrigeration. It provides excellent adhesion to a variety of substrates such as galvanised iron, aluminium sheets, nitrile rubber, glass wool, cross-linked polyethylene, PUF and EPDM.



Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to duct substrates
- chilled water piping - bonding nitrile rubber | PUF | EPDM | XLPE | glass wool | rock wool to pipelines
- acoustic insulation - bonding nitrile rubber | XLPE | glass wool | rock wool | PUF | EPDM to smooth, concrete walls, vertical surfaces and duct lining
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to smooth, concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- excellent tack with better retention time
- good adhesion to a variety of substrates
- excellent coverage and spreadability
- easy to apply
- durable bond with excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

Typical technical data

Properties	Typical range
Appearance	Brown, viscous liquid
Density at 30 °C	0.83 - 0.89 g/ml
Viscosity at 30 °C ±1 °C	1,800 - 2,600 cPs
Temperature resistance	-20 °C - 85 °C
VOC	< 700 g/litre
Coverage by spreader	4 - 5 m ² /litre (for bonded areas)

Pack size

5 L | 30 L



HVAC Lite

Polygrip HVAC Lite is a synthetic rubber-based adhesive. It has low VOC and is especially developed for various insulation requirements in HVAC and refrigeration. It provides good adhesion to a variety of substrates such as galvanised iron, aluminium, steel, nitrile rubber, glass wool, cross-linked polyethylene, PUF and EPDM. It is recommended for use below 20 mm thickness of insulation.



Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to duct substrates
- chilled water piping - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to pipelines
- acoustic insulation - bonding nitrile rubber | EPDM to smooth, concrete walls and vertical substrates
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM to smooth, concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- excellent bond strength
- good adhesion to a variety of substrates
- superb spreadability and easy application
- quick drying
- good tack quality
- durable bond with excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

Typical technical data

Properties	Typical range
Appearance	Light yellow, viscous liquid
Density at 30 °C	0.78 - 0.83 g/ml
Viscosity at 30 °C ±1 °C	800 - 1,000 cPs
Temperature resistance	-20 °C - 80 °C
VOC	< 480 g/litre
Coverage by spreader	7 - 8 m ² /litre (for bonded areas)

Pack size

5 L | 30 L



Hotbond

Polygrip Hotbond is a synthetic, rubber-based adhesive ideal for applications which need high temperature resistance (up to 170 °C) and strong spring back resistance. It is used for bonding various insulation materials on curved surfaces and for over-deck | under-deck applications.



Recommended application areas

- bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to the exposed metallic roofs, thermal storage and hot water tanks
- HVAC ducting - bonding nitrile rubber, EPDM | XLPE | glass wool | rock wool | PUF to duct surfaces
- chilled water piping - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to pipelines
- acoustic insulation - bonding XLPE | nitrile rubber | XLPE | glass wool | rock wool | PUF to smooth, concrete walls, wood, metal surfaces and ducts
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to smooth, concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- high bond strength
- good adhesion to a variety of substrates
- quick bonding leading to faster completion of work and improved productivity
- can be applied in any direction
- low wastage
- mild odour

Typical technical data

Properties	Typical range
Appearance	Yellow, viscous liquid
Density at 30 °C	0.88 - 0.93 g/ml
Viscosity at 30 °C ±1 °C	2,500 - 3,000 cPs
Temperature resistance	-20 °C - 170 °C
VOC	< 680 g/litre
Coverage by spreader	4 - 5 m ² /litre (for bonded areas)

Pack size

100 mL | 200mL | 500 mL | 1 L | 2 L | 5 L | 30 L



909 Plus

Polygrip 909 Plus is a multi-purpose, synthetic rubber-based contact adhesive used for bonding a variety of insulation materials used in HVAC and refrigeration. This adhesive is suitable for ducts, chilled water pipelines, over-deck | under-deck and acoustic insulation applications.



Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to duct substrates
- chilled water piping - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to pipelines
- acoustic insulation - bonding nitrile rubber | XLPE | glass wool | rock wool | PUF | EPDM to smooth, concrete walls, vertical substrates and duct linings
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to smooth concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- excellent tack with better retention time
- good adhesion to a variety of substrates
- excellent coverage and spreadability
- easy to apply
- durable bond with excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

Typical technical data

Properties	Typical range
Appearance	Brownish yellow, viscous liquid
Density at 30 °C	0.83 - 0.89 g/ml
Viscosity at 30 °C ±1 °C	1,800 - 2,600 cPs
Temperature resistance	-20 °C - 85 °C
VOC	< 700 g/litre
Coverage by spreader	4 - 5 m ² /litre (for bonded areas)

Pack size

1 L | 5 L | 30 L

polygrip® S 709

Polygrip S 709 is a synthetic rubber-based contact adhesive. It is a multi-purpose adhesive used for bonding a variety of insulation materials used in HVAC and refrigeration. This adhesive is suitable for ducts, chilled water pipelines, over-deck | under-deck and acoustic insulation applications. It is recommended for use below 20 mm thickness of insulation.



Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to duct substrates
- chilled water piping - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool to pipelines
- acoustic insulation - bonding nitrile rubber | XLPE | glass wool | rock wool | PUF | EPDM to smooth concrete walls and vertical substrates
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM | XLPE | glass wool | rock wool | PUF to smooth concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- easy to apply
- good coverage
- excellent tack and bond strength
- durable bond
- excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

Typical technical data

Properties	Typical range
Appearance	Brown, viscous liquid
Density at 30 °C	0.80 - 0.84 g/ml
Viscosity at 30 °C ±1 °C	1,000 - 1,500 cPs
Temperature resistance	-20 °C - 80 °C
VOC	< 680 g/litre
Coverage by spreader	6 - 7 m ² /litre (for bonded areas)

Pack size

100 mL | 200mL | 500 mL | 1 L | 5 L | 30 L

polygrip® MP 609

Polygrip MP 609 is a synthetic rubber-based contact adhesive suitable for ducts, chilled water pipelines, over-deck | under-deck and acoustic insulation applications. It is recommended for use below 20 mm thickness of insulation.



Recommended application areas

- HVAC ducting - bonding nitrile rubber | EPDM to duct surfaces
- acoustic insulation - bonding nitrile rubber | EPDM to smooth, concrete walls and vertical substrates
- over-deck | under-deck insulation - bonding nitrile rubber | EPDM to smooth, concrete walls (mechanical fasteners are recommended for under-deck insulation)

Features

- excellent tack with better retention time
- good adhesion to a variety of substrates
- excellent coverage and spreadability
- easy to apply
- good tack quality
- durable bond with excellent water resistance
- mild odour
- free of harmful benzene
- low VOC as per IGBC norms

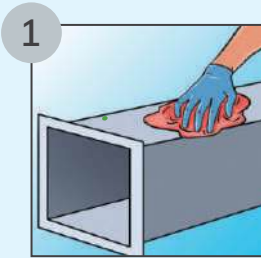
Typical technical data

Properties	Typical range
Appearance	Brown, viscous liquid
Density at 30 °C	0.78 - 0.82 g/ml
Viscosity at 30 °C ±1 °C	400 - 800 cPs
Temperature resistance	-20 °C - 80 °C
VOC	< 620 g/litre
Coverage by spreader	7 - 8 m ² /litre (for bonded areas)

Pack size

500 mL | 1 L | 5 L | 30 L

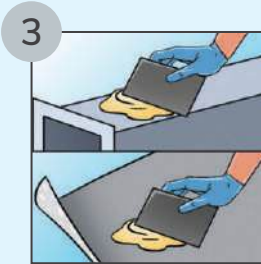
Method of application



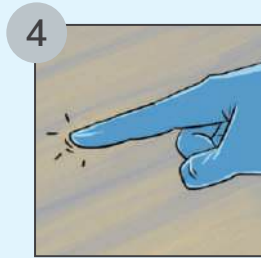
Ensure the surface is completely clean, dry and free of oil, grease and foreign particles.



Stir the adhesive well before use.



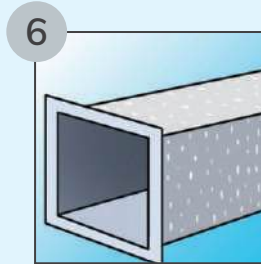
Uniformly apply Polygrip HVAC adhesive on both the substrates with a spreader | brush.



Leave the substrates to become touch dry so that there are no air pockets.



Bond the substrates with firm and uniform pressure.



Optimum bond strength is developed after 24 hours in ambient conditions.

Note: all application tools should be cleaned with a solvent such as acetone before the adhesive cures permanently on them.

Safety precautions

- stir the adhesive well before use
- do not dilute as this may distort product performance
- wear personal protective equipment (PPE)
- avoid contact with eyes and skin; in case of direct contact and irritation, wash immediately with plenty of warm water and soap
- ensure proper ventilation where the adhesive is being used
- keep the container closed when it is not in use
- avoid breathing vapour, mist or gas
- please refer to the SDS for detailed safety instructions

Shelf life and storage

- Polygrip HVAC products have a shelf life of 12 months from the date of manufacture when stored in a dry and cool place in the original, unopened container (recommended storage temperature is 2 °C to 40 °C).
- Products should be stored in a cool and dry place away from moisture, heat and direct sunlight. They contain highly volatile solvents which are released during application, processing and use. These volatile solvents are flammable and hence it is advised to ensure that the adhesive does not come in direct contact with heat, sparks and open flames.

Spills and disposal

- In case of spills, sweep up and shovel the spilled material. Keep the spilled material in suitable, closed containers for disposal. Soak up with an absorbent such as clay, sand or other suitable materials. Flush the area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in accordance with federal, state or local regulations, as applicable.

Notes



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