

BUILDING & CONSTRUCTION



SABIC SOLUTIONS FOR BUILDING & CONSTRUCTION

With an increasingly urbanized world population, there is a growing demand for more sustainable, resource and energy efficient innovative and high-quality building and construction (B&C) solutions. Architects and builders are looking for new solutions to satisfy public demand for environmentally responsible structures, meet current and upcoming regulatory requirements. To meet these needs, SABIC has developed a versatile polymer and thermoplastic portfolio that focuses on pipe solutions, insulation, solid glazing and structural building systems. In addition, our Technology and Innovation centers around the world supports our customers with new material and process developments.

SABIC's portfolio offers a broad range of materials for the industry - SABIC® PP polypropylene, SABIC® PE polyethylene, SABIC®HDPE, SABIC® PP RELY, SABIC® PP VESTOLEN P, PP compounds, polyvinylchloride (PVC) and Acrylonitrile butadiene styrene (ABS). In addition, SABIC offers innovative Foam and Lightweight solutions that can meet consumer demand for smarter, more sustainable

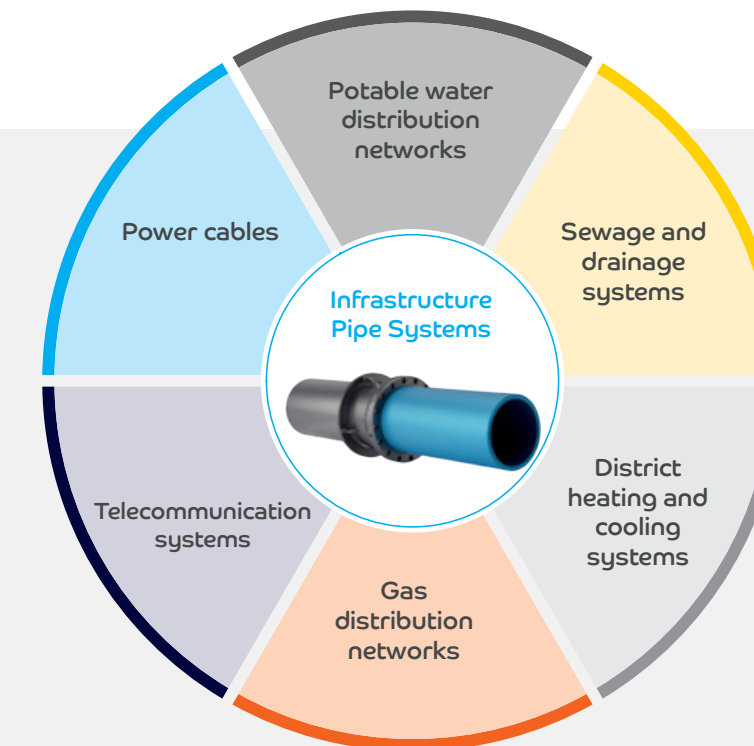
solutions for the Building & Construction market by helping save energy, with foamed insulation and structural solutions for buildings such as homes, offices and factories.

Through TRUCIRCLE™ portfolio and services, SABIC provide sustainable solutions that help companies to reduce carbon footprint and drive the change needed to become a circular global society.

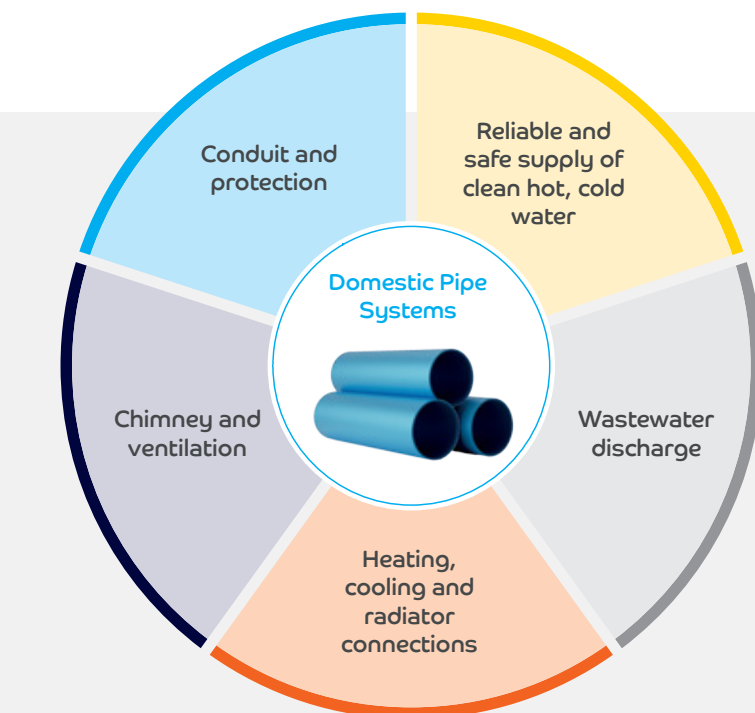
PIPE SYSTEMS & UTILITIES

Growing population and urbanization is increasing the demand for safe and secure potable water, sanitation, fluid and other critical piping above ground or below. SABIC offers material solutions that are more sustainable by increasing the performance and lifetime of pipes used in infrastructure, industrial such as chemical plants, mines and process industries, domestic and agricultural market areas.

INFRASTRUCTURE PIPE SYSTEMS

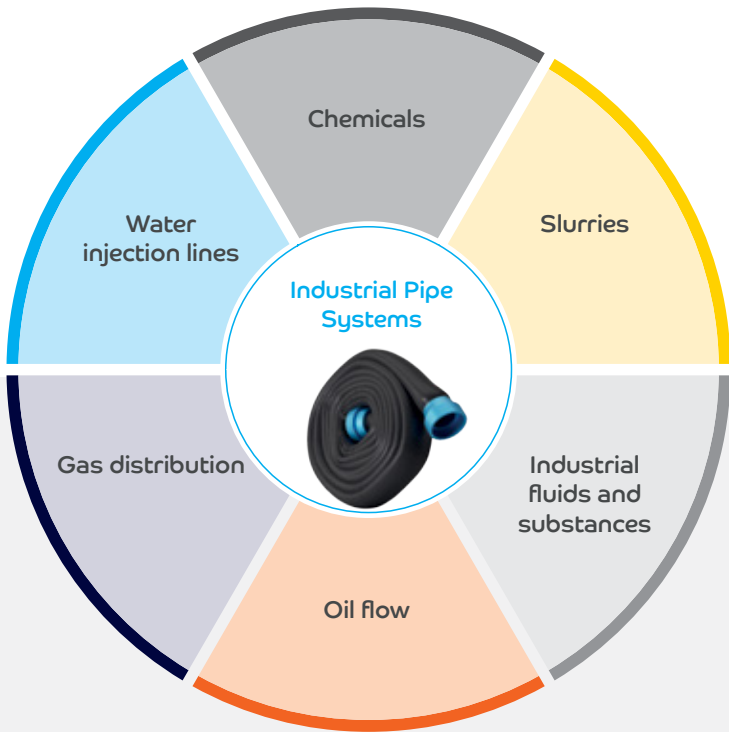


DOMESTIC PIPE SYSTEMS:



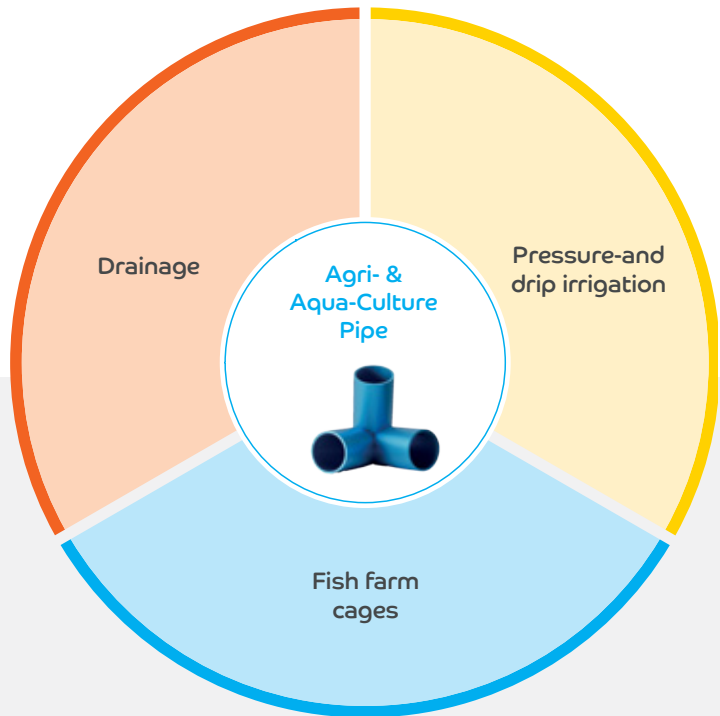
INDUSTRIAL PIPE SYSTEMS

Transport of aggressive, dangerous fluids and waste safely and economically



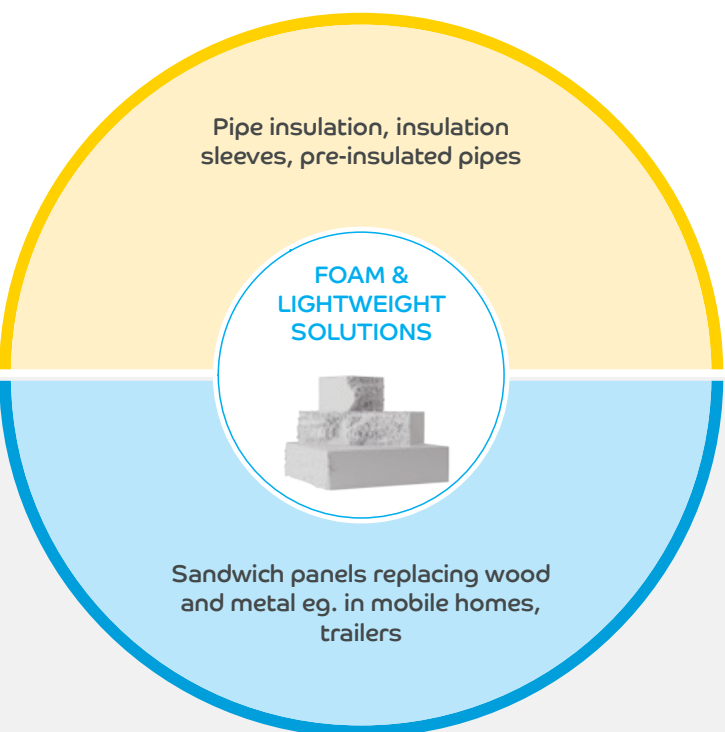
AGRI- & AQUA-CULTURE PIPE

Securing the efficient and reliable production of food across plantations, farms and large greenhouse operations.



FOAM & LIGHTWEIGHT SOLUTIONS

The building and construction industry has considerable potential to help save thermal energy. If we can devise and implement better ways to insulate houses, offices, factories, and pipework systems against heat loss (and refrigeration equipment against heat gain), then we can make a considerable contribution to conservation of energy – and a reduction in our gas and electricity bills.



Lubricated Solution for Water Meter Pistons

LNPT™ LUBRICOMPT™ Compounds



SOLUTION SUMMARY

- Special lubricant effective for water environment
- Good mechanical properties, piston part robustness and dimensional stability for part accuracy
- Each part weighs <100 grams

VALUE PROPOSITION



- Low wear and friction
- Good mechanical properties
- Dimensional stability
- Easy processing



Pump Valve Body

NORYL™ Resins



SOLUTION SUMMARY

- Good stiffness to withstand water pressure and provide structural integrity
- Low moisture absorption for dimensional stability, non-corrosive and lightweight
- Each part weighs ~ 1kg

VALUE PROPOSITION



- High stiffness
- Dimensional stability
- Light weight
- Easy processing



3D printed Cellular Fabrication Structures for Building Material

LNPT™ THERMOCOMP™ Compounds



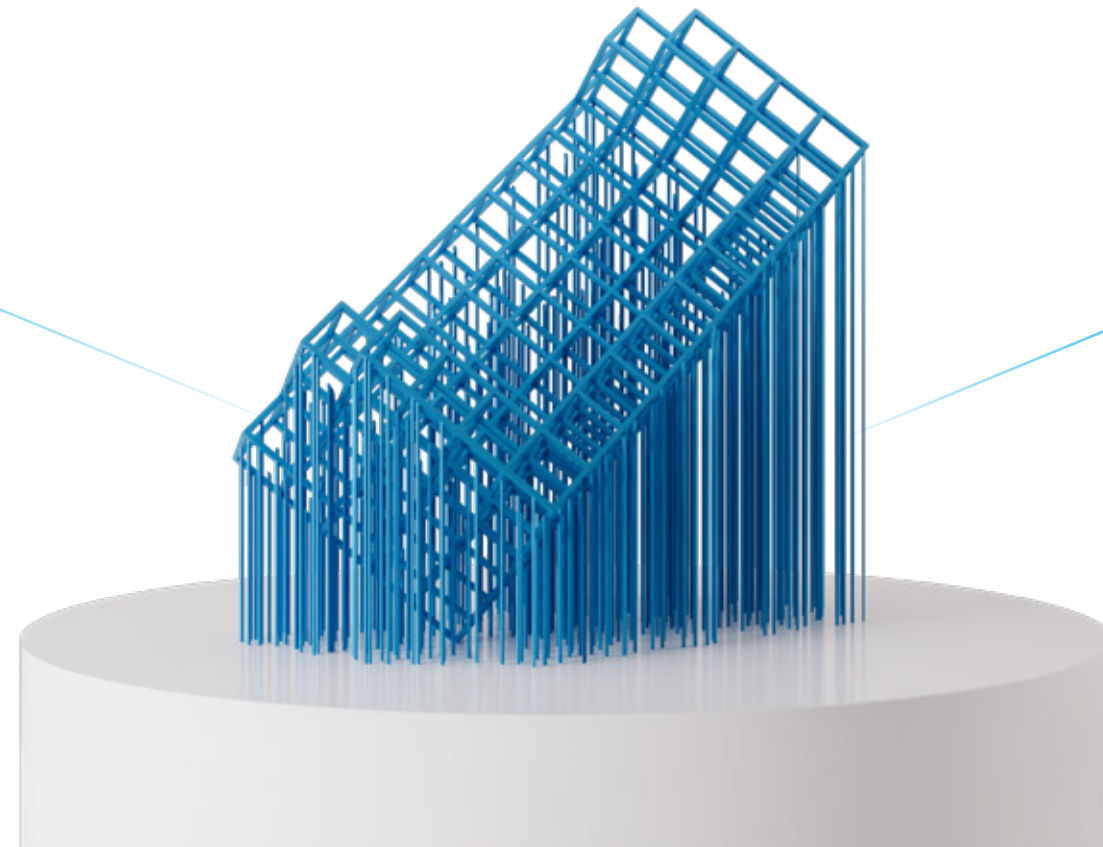
SOLUTION SUMMARY

- This 3D printing material available in pellets instead of filaments
- High stiffness and flame resistant, required for structural applications of buildings
- Each part weighs ~2kg

VALUE PROPOSITION



- 3D printable - pellet fed
- Easy processability
- High stiffness
- ECO flame retardant



Laser Direct Structuring (LDS) Solution for Doorbell Enclosures

LNPT™ THERMOCOMP™ Compounds



SOLUTION SUMMARY

- Easy processing with good warpage control enables molding of flat enclosure
- Flame resistance is required for this home device and good impact resistance is desired
- Each part weighs <100 grams
- System cost reduction with less assembly and second process

VALUE PROPOSITION



- Easy processing
- Low temperature impact resistance
- Can be plated
- ECO flame retardant



Low Voltage Power Cables and Jacketing

SABIC® LLDPE 128CNJ Polymer



SOLUTION SUMMARY

- Designed for extrusion applications
- TNPP free
- Contains an optimized level of stabilizers
- No slip or anti-block additives
- SABIC material share of this application is 30%

VALUE PROPOSITION



- This grade is combining stiffness, toughness
- High melt strength with an excellent processability due to its broad molecular weight distribution



Structural Solution for Outdoor Sirens

LNPT™ THERMOCOMP™ Compounds



SOLUTION SUMMARY

- High strength required for this structural part
- Being an outdoor application, good UV resistance with good aesthetics also required
- Each part weighs <100 grams

VALUE PROPOSITION



- High stiffness
- weatherable
- Easy processing
- Good aesthetics



Roof Sheeting

SABIC® Carbon Black N330



SOLUTION SUMMARY

- Used for roof sheeting application in KSA
- Provides excellent surface finish and improved mechanical properties for the rubber roof sheeting

VALUE PROPOSITION



- Higher Durability
- Surface Finish
- Local Availability



Foam Blocks

SABIC® PS 155 Polystyrene



SOLUTION SUMMARY

- Meets customers' requirements for the foaming process and applications
- A medium melt flow rate grade
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Good processability
- Good dimensional stability
- Excellent foamability



Plastic Lining for Steel Pipe

SABIC® HDPE P6006AD Polyethylene



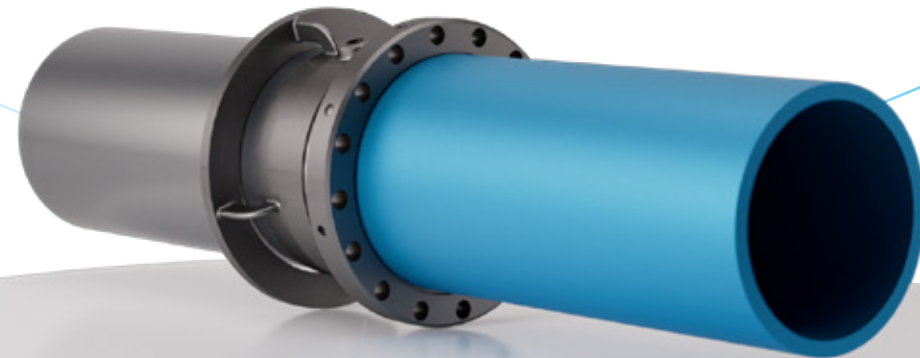
SOLUTION SUMMARY

- One of the great solutions for pipe lining
- Superior physical and mechanical properties
- Helps increase the steel pipe lifetime
- Reduces failure and maintenance because of corrosion protection
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Corrosion protection
- Mechanical strength
- Installation ease
- Reduced maintenance cost



Large Diameter Plastic Pipes

SABIC® HDPE P6006LS Polyethylene



SOLUTION SUMMARY

- Designed for large diameter pipes
- Superior sagging properties
- High mechanical strength and performance
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Corrosion free pipes
- Mechanical Strength
- Large Diameter pipes
- Reduced maintenance cost



Crack Resistant Plastic Pipe

SABIC® VESTOLEN A RELY 5922R (SABIC® HDPE PE100 RC) Polyethylene



SOLUTION SUMMARY

- Designed and certified for pressure pipe applications
- Can be used with new installation techniques
- High mechanical strength
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Durability
- Flexibility
- Lifetime
- H2 Ready



High Temperature Resistant Plastics Pipe

SABIC® HDPE PE100 Polyethylene



SOLUTION SUMMARY

- Provides cost effective trenchless installation of pipes and ducts
- Offers a combination of pressure resistance, temperature resistance and low temperature impact
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Deliver Green Energy
- Ideal for High Voltage W&C
- Renewable/Circular
- Excellent performance



High Performance Pipes

SABIC® PE & PPR Solutions



SOLUTION SUMMARY

- SABIC's new BiAx Pipe technology offers substantial improvements over incumbent polyolefin pipes
- Higher resistance against internal pressure enables wall-thickness reduction
- Can reduce material use by at least 30 percent
- Superior resistance to slow-crack growth (RC) facilitates trenchless pipe installation
- Very smooth inner wall surface reduces the energy required for pumping
- SABIC material share of this application is 100%

VALUE PROPOSITION



- 30 %Wall thickness reduction
- Higher pressure Resistance
- Resistance to Disinfectants
- Resistance to Cracking



High Voltage Cable Jacketing

SABIC® HDPE C0549 Polyethylene



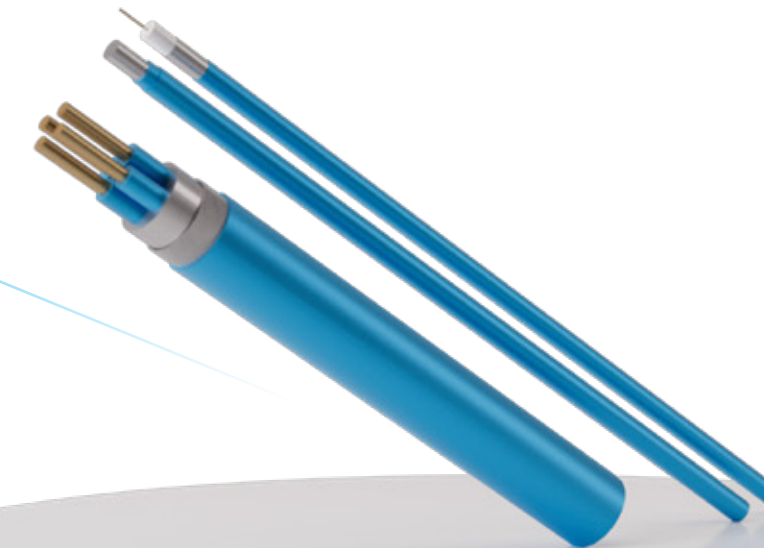
SOLUTION SUMMARY

- The first specialized Wire & Cable at SABIC
- SABIC material share of this application is 30%

VALUE PROPOSITION



- High mechanical properties
- Better aging
- Lower shrinkage
- Localization solution



Refugee Shelters

SABIC® PP-UMS Foam



SOLUTION SUMMARY

- SABIC's polymer solutions are used to build refugees shelters, providing foam sheets as the outside layer of the shelter
- Worked with KSrelief to adopt the units and design the shelters, based on specific requirements
- Ensured the materials were providing the comfort needed
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Comfortable environment
- Durability
- Superior insulation properties
- Friendly installation



High Pressure and Temperature Pipe for Industrial

SABIC® HDPE P6006NA Polymer



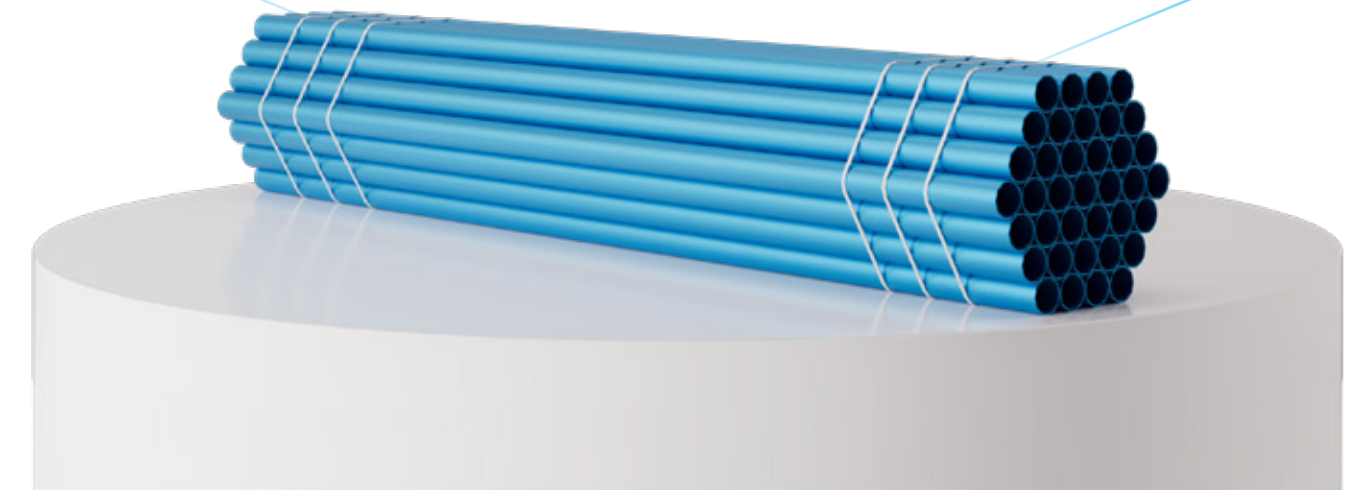
SOLUTION SUMMARY

- Excellent physical & mechanical properties
- Outstanding long term hydrostatic strength
- A great choice for reinforced thermoplastic pipes
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Crack resistance
- mechanical strength
- Hydrostatic strength
- Processability



Roof Sheeting

SABIC® EPDM 626 Rubber



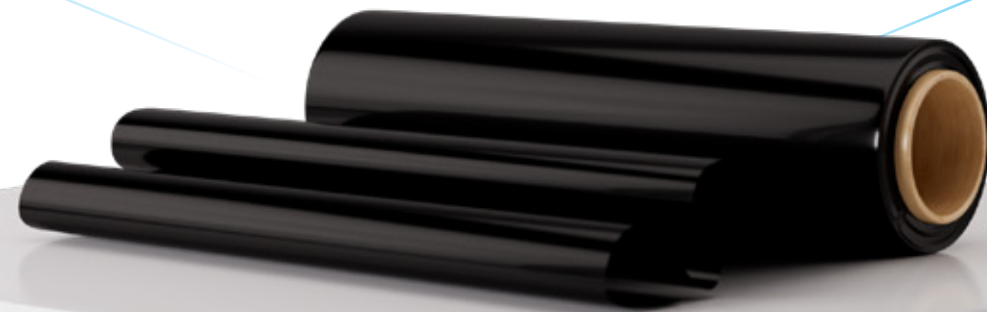
SOLUTION SUMMARY

- Very good weather and oxidative resistance
- Particularly suitable for roof-sheeting membranes and other sheeting applications
- Provides higher durability, lower lifecycle cost, environmental friendly and lighter weight

VALUE PROPOSITION



- Higher Durability
- Installation ease
- Surface Finish
- Low Environment impact



Architectural Profiles

SABIC® EPDM 756 Rubber



SOLUTION SUMMARY

- Provides excellent durability
- High weather and oxidative resistance
- Excellent extrusion performance and good dimensional stability

VALUE PROPOSITION



- Excellent weather and heat resistance
- High mechanical properties
- Reduced maintenance cost
- Good processability



Water Tanks

SABIC®LLDPE RG50035 Polymer



SOLUTION SUMMARY

- A non-UV stabilized reactor powder for compounding with pigments
- Excellent for inner foam layer
- Offers weight saving advantage with balanced density and viscosity
- Designed to provide excellent stress cracking resistance
- High rigidity, toughness, and low warpage
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Excellent stress cracking resistance
- Good mechanical properties with high rigidity
- Toughness
- Low warpage



Pipe Fitting

SABIC® SPVC 57S Polyvinyl Chloride



SOLUTION SUMMARY

- Used in making pipes for plumbing, electrical conduits, vinyl flooring, and vinyl siding for buildings
- Strong, durable, and low-maintenance material
- Can withstand harsh environments and heavy use
- SABIC material share of this application is 60%

VALUE PROPOSITION



- Durability
- Installation ease
- Mechanical strength
- Lifetime



Domestic Sewage Pipes

SABIC® SPVC 67S Polyvinyl Chloride



SOLUTION SUMMARY

- Commonly used in high-performance applications
- Used in the manufacturing of window frames, electrical insulation materials, medical devices, outdoor furniture and decking
- Durable, can withstand harsh environments
- Resistant to heat, chemicals, and abrasion
- SABIC material share of this application is 60%

VALUE PROPOSITION



- Durability
- Mechanical strength
- Installation ease
- Lifetime



3D Construction Panel

SABIC® EPS Polystyrene Foam



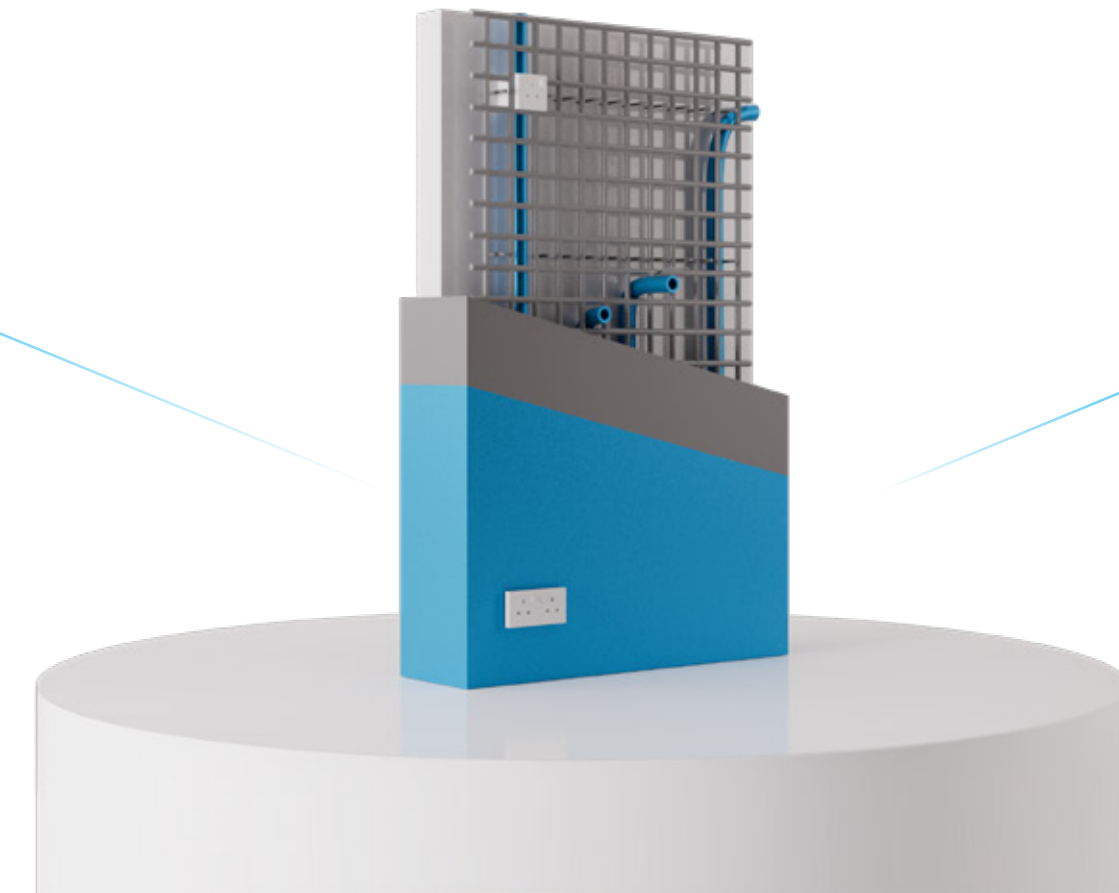
SOLUTION SUMMARY

- Used for the insulated concrete forms
- Provide excellent heat insulation properties
- Used for fast cycle shape and block molding applications with good surface finish
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Low thermal conductivity
- Energy saving
- Retarded to ignitability
- Fast construction



Thermal Insulation in Buildings and in Appliances

SABIC® MDI 2031 Polyurethane Rigid Foam



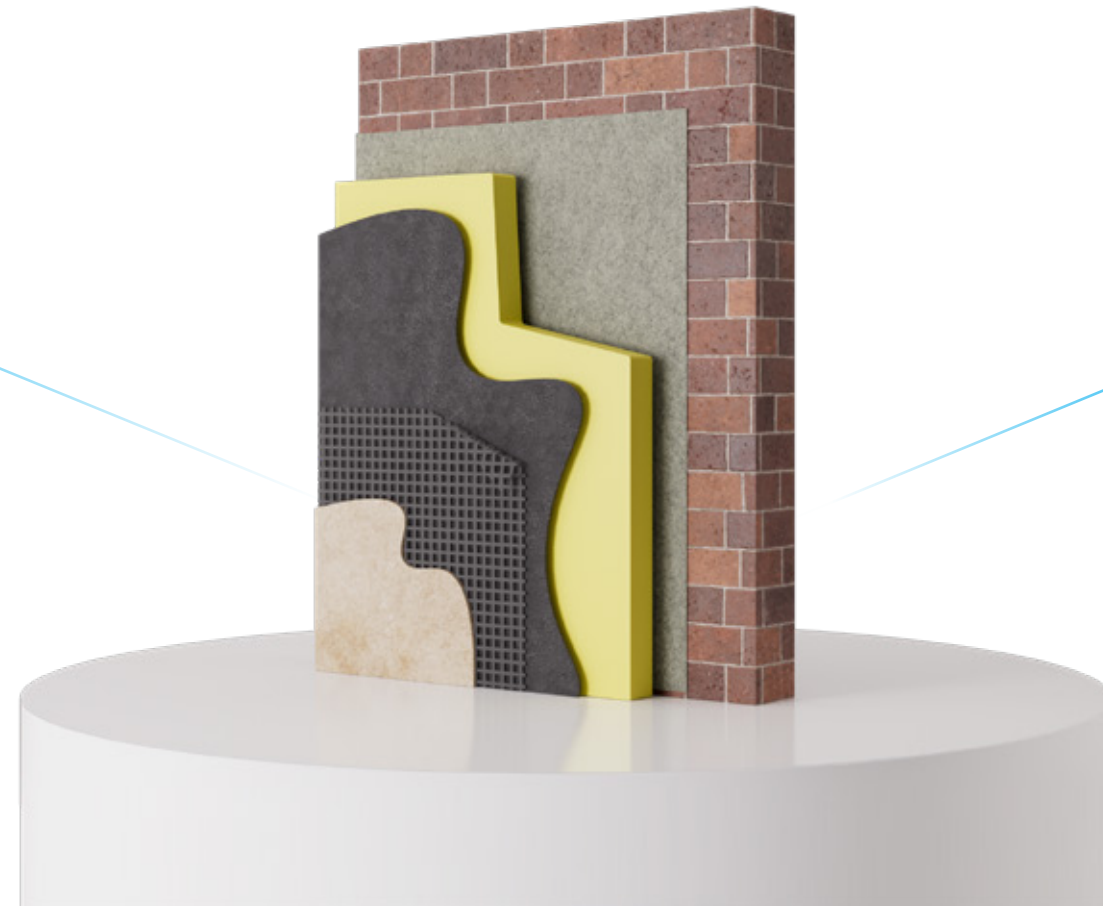
SOLUTION SUMMARY

- Used to produce rigid form that provides high insulation properties
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Mechanical performance
- Thermal insulation
- Durability
- Easy processing



Plastic Stadium Seats

SABIC®PPCP 49MK45 Polymer



SOLUTION SUMMARY

- Ideal for manufacturing seats due
- Good flowability, colorability, weatherability, resistance to solar irradiation
- Used for World Cup stadium seats in Qatar
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Medium impact
- High stiffness
- Weatherability



Hot & Cold Pipes

SABIC® VESTOLEN P 9421 Polymer



SOLUTION SUMMARY

- Used for domestic hot & cold potable water pipes
- Proven superior mechanical properties
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Heat resistant
- Cost savings
- Drinking water approvals
- Strength



Sewage Pipes

SABIC® PP RELY PPC Polymer



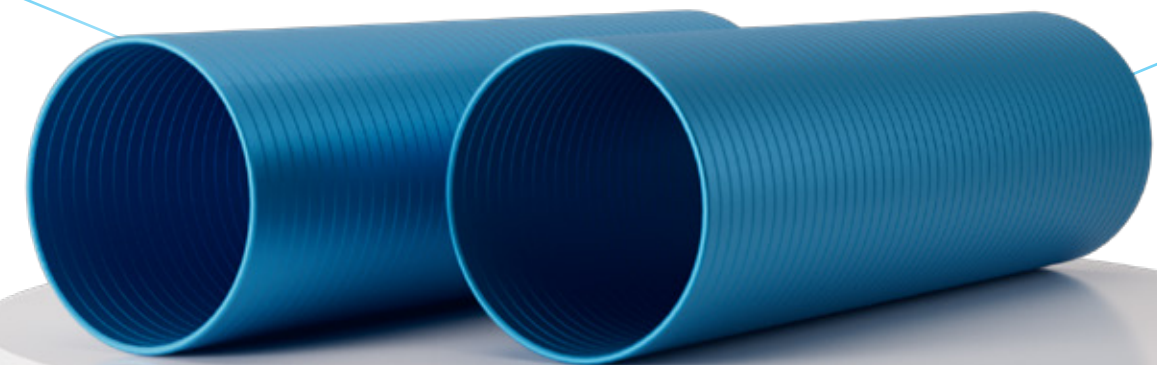
SOLUTION SUMMARY

- Offer a good balance of stiffness and impact resistance
- Ideal for corrugated and non-corrugated sewage pipes
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Crack resistant
- Cost savings
- Tough
- Strength



Premium Concrete Hollow Blocks

SABIC® Carbon Black N330



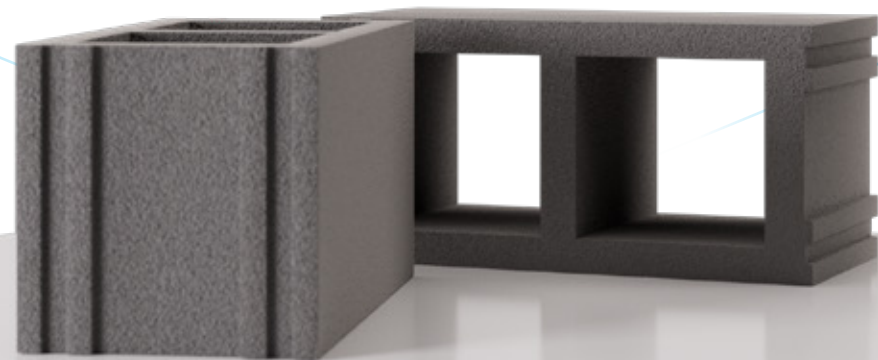
SOLUTION SUMMARY

- When blended in specific proportion with concrete and other chemicals helps to achieve high compressive strength for concrete hollow blocks as per SASO-GSO standards
- Generally used up to 20% in this application

VALUE PROPOSITION



- Reduced casting time (50%) Productivity improvement
- Concrete strength improvement by 5-8%
- Improved color



Plastic Asphalt Modification

COHERE™ (POP) 8170D Plastomer



SOLUTION SUMMARY

- One of the great solutions for asphalt modification
- Superior physical and mechanical properties
- Helps increase the asphalt lifetime
- Excellent resistance to rutting and thermal cracking
- SABIC material share of this application is 20%

VALUE PROPOSITION



- Resistance to rutting
- Resistance to thermal cracking
- Lower Emission
- Localization solution



Geo-Membrane

SABIC® HDPE GF1442 Polymer



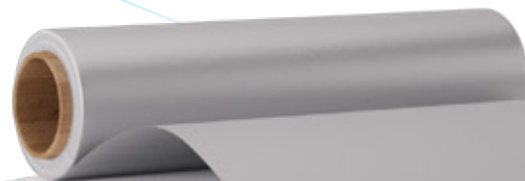
SOLUTION SUMMARY

- One of the first geo-membrane solutions
- Helps prevent migration from liner to control fluid or gas into building construction & agriculture
- High mechanical properties and lower shrinkage
- SABIC material share of this application is 100%

VALUE PROPOSITION



- High mechanical properties
- Better aging
- Lower shrinkage
- Localization solution



Bath Tubs

CYCOLAC™ Resin MG47F



SOLUTION SUMMARY

- Can provide a perfect blend of strength, durability, and attractive appearance
- Offers excellent impact resistance
- Ensures a high-gloss finish and resistance to staining
- SABIC material share of this application is 100%

VALUE PROPOSITION



- Excellent Toughness Properties
- Good Mechanical Properties
- Ease of Machining
- Dimension Stability



Lightweight Solar PV Panels

SABIC® PP Compounds



SOLUTION SUMMARY

- Allow more than 50% solar panel weight reduction
- More than 25% carbon footprint reduction
- Recyclable and free of toxic components
- SABIC material share of this application is 100%

VALUE PROPOSITION



- 50 % Weight
- Weatherability
- 25% lower carbon footprint
- High impact



Roof Sheeting

SABIC® Carbon Black N330



SOLUTION SUMMARY

- Successfully qualified for Rubber Roof Sheeting application in KSA
- Provides better UV stability and longer durability

VALUE PROPOSITION



- Higher Durability
- Better aging
- Surface Finish
- Local availability

