

**BUILT TO PERFORM.
ENGINEERED TO LAST.**



sanhitgroup.co.in

SANHIT 
HDPE PIPES & FITTINGS





WHERE IDEAS FLOW INTO INNOVATION AND INNOVATION DRIVES GROWTH.

Established in 2001, Sanhit Group has emerged as a diversified organisation with interests spanning polymers, plasticulture, precision farming, irrigation systems, PCC poles, horticulture and hospitality. Headquartered in Eastern India, the Group integrates resources, manufacturing and distribution to deliver quality products and services with reliability and safety.

With a vision of becoming a hub where diverse ideas, talents and communities converge to create unified growth, Sanhit Group continues to open new pathways for innovation, collaboration and opportunity while remaining firmly rooted in integrity and collective strength.

The Group comprises Sanhit Polymer, Sanhit Polymer Private Limited, Sanhit Biosolutions Pvt. Ltd., Meco, Sanhit Petrochemicals Private Limited, Sanhit Prefabs and Sanhit Hotel & Banquet. Its companies manufacture heavy-duty LDPE film, geo-membranes, mulching and shrink films, greenhouse films, cap covers, cover tops, ice-cream packaging, roto-moulded PVC water storage tanks, PTMT bath fittings and uPVC and SWR pipes.

In addition to manufacturing, the Group owns Club Central, Bolpur's leading business-cum-leisure hotel. Sanhit Group's Integrated Corporate Management System and Quality Control Policy are ISO 9001:2000 and BIS certified. The Group is now preparing to launch Eastern India's first seven-layer UV film facility, reinforcing its leadership in quality and innovation.

PRESENTING

SANHIT 

HDPE PIPES & FITTINGS



PRECISION ENGINEERED FOR PERFORMANCE AND RELIABILITY

Sanhit Petrochemicals is a technology-driven organization dedicated to delivering high-performance piping solutions for water transportation, irrigation, and sewerage systems. Our advanced manufacturing facility at Bolpur, Birbhum produces HDPE pipes and fittings from 20 mm to 315 mm, engineered to meet diverse infrastructure requirements.

Manufactured with premium PE100 and PE80 grade resins, Sanhit pipes are produced using state-of-the-art extrusion technology under strict process control. Each batch undergoes rigorous testing of both raw materials and finished products in our in-house laboratory to ensure consistent quality and compliance with international standards.

With an installed capacity of 400–450 metric tons per month, our facility is designed for scalability to meet growing market demand.

Beyond superior products, Sanhit offers value-added services including project-specific design support, compatibility assessment, and technical consultation for various water supply and pressure applications.

Sanhit HDPE Pipes and Fittings deliver long-term reliability, efficiency, and sustainability, ensuring trusted performance in every project environment.

QUALITY AND CERTIFICATION

Sanhit HDPE pipes and fittings conform to IS 4984:2016 and ISO 4427 Part 1:2019, and our manufacturing system is certified under ISO 9001:2018.

KEY BENEFITS OF SANHIT HDPE PIPES



HIGH STRENGTH AND DURABILITY

Resistant to impact, abrasion, and mechanical stress, ensuring long service life even under harsh site conditions.



CORROSION AND CHEMICAL RESISTANCE

Immune to rust, chemical attack, and electrochemical reactions, making them ideal for diverse soil and water conditions.



LEAK-PROOF JOINTS

Butt-fusion and electrofusion welding provide seamless, leak-free connections for efficient fluid transport.



LIGHTWEIGHT AND FLEXIBLE

Easier handling, transportation, and installation compared to conventional piping materials.



SMOOTH INTERNAL SURFACE

Ensures low frictional losses, resulting in higher flow efficiency and reduced energy consumption.



WEATHER RESISTANCE

Formulated to withstand exposure to outdoor environments without degradation.



ENVIRONMENTALLY FRIENDLY

Non-toxic, recyclable, and energy-efficient during manufacturing and operation.



EXCELLENT HYDRAULIC EFFICIENCY

Maintains consistent flow characteristics over time due to minimal scaling and deposit formation.



LONG SERVICE LIFE

Expected operational life of over 50 years under normal conditions.



COST-EFFECTIVE SOLUTION

Low maintenance and installation costs make HDPE systems economically viable for large-scale infrastructure projects.



APPLICATIONS OF SANHIT HDPE PIPES

WATER SUPPLY SYSTEMS	Urban and rural potable water distribution
IRRIGATION NETWORKS	Agricultural, horticultural, and drip irrigation systems
SEWERAGE AND DRAINAGE SYSTEMS	Wastewater and stormwater conveyance
INDUSTRIAL PIPING	Transportation of chemicals and process fluids
CABLE DUCTING AND CONDUITS	Protection for electrical and communication cables
EFFLUENT DISPOSAL SYSTEMS	Industrial waste discharge pipelines
GAS DISTRIBUTION	Low and medium pressure gas transport networks
MINING AND SLURRY LINES	Conveyance of slurry, tailings, and mine water
MARINE AND SUBMARINE APPLICATIONS	Outfall and intake pipelines for desalination or cooling systems



SPECIFICATIONS THAT DEFINE PERFORMANCE.

NO	SPECIFICATIONS	PE PIPES
1.	Size Range (O.D.)	20 mm to 315 mm
2.	Material Grade	PE 80 & PE 100
3.	Pressure Class	2.5 Kg/cm ² to 20 Kg/cm ²
4.	Standard Dimension Ratio	SDR 41, SDR 33, SDR 26, SDR 21, SDR 17, SDR 13.6, SDR 11, SDR 9, SDR 7.4 & SDR 6
5.	Colour	Black with Blue Stripe
6.	Working Temperature	-10 ^o C to 45 ^o C
7.	Length	Coils option up to 125mm. 125 mm straight length in 6 mtr.
8.	M.F.I. (190 ^o C, 5Kg load)	0.20 to 1.1 gm/10min (base Resin)
9.	Specified base density	940 to 960 Kg/m ³ (Base Resin)
10.	Carbon Black	2-3%
11.	Antioxidant	<=0.3%
12.	Elongation	>350%
13.	Longitudinal Reversion	<3%
14.	Hydraulic Characteristics	No sign of localized swelling, leakage or weeping for specified temperature and pressure ratings.



STATE-OF-THE-ART INFRASTRUCTURE. PERFECTED BY SANHIT.

At Sanhit Petrochemicals, we combine advanced engineering with world-class manufacturing technology to deliver pipes that perform beyond expectations. Our production facility at Bolpur is equipped with high-precision extrusion lines from Windsor Machines, ensuring exceptional accuracy, strength, and consistency across every pipe.

Our fully automated process is designed for precision, maintaining uniform wall thickness, minimizing material wastage, and ensuring reliable dimensional control. Computerized calibration and coiling systems streamline operations, guaranteeing smooth surface finishes and efficient production cycles.

To uphold our commitment to quality, we maintain an in-house testing laboratory equipped with advanced instruments and online monitoring tools that evaluate every batch for dimensional accuracy, pressure resistance, and durability.

A clean, dust-free environment further enhances surface quality and long-term reliability, ensuring each Sanhit HDPE pipe reflects our promise of durability, efficiency, and trust.



TESTED FOR TRUST. PROVEN FOR PERFORMANCE.

At Sanhit Petrochemicals, quality is not just a process, it's a promise. Every Sanhit PE pipe is manufactured with meticulous attention to detail and undergoes a series of rigorous tests to ensure consistent performance, durability, and safety in every application.

From raw material selection to final inspection, each stage of production is monitored through advanced testing and precise quality control systems. Our products conform to national and international standards, guaranteeing long-term reliability and customer satisfaction.

COMPREHENSIVE QUALITY CHECKS

- **DIMENSIONAL CHECK** – to verify accurate diameter and wall thickness.
- **INTERNAL PRESSURE CREEP RUPTURE TEST** – to assess long-term pressure resistance.
- **LONGITUDINAL REVERSION** – to ensure thermal stability and structural integrity.
- **CARBON BLACK CONTENT & DISPERSION** – to confirm UV protection and uniform material blend.
- **MELT FLOW RATE** – to evaluate consistency in material behavior during extrusion.
- **OXIDATION INDUCTION TIME** – to measure thermal aging resistance.
- **OVERALL MIGRATION** – to ensure non-toxicity and suitability for potable water use.
- **DENSITY TEST** – to maintain uniformity in raw material properties.
- **TENSILE STRENGTH & ELONGATION AT BREAK** – to test mechanical strength and flexibility.
- **SLOW CRACK GROWTH RATE** – to guarantee long-lasting performance under stress.

Each test reinforces our commitment to delivering pipes that perform flawlessly and last longer, no matter the terrain or application.

GUIDELINES FOR RELIABLE PIPE INSTALLATION

LAYING THE FOUNDATION RIGHT

Proper installation begins with a well-prepared trench that ensures safety, stability, and long-term performance of the piping system.

TRENCH WIDTH

The trench should be wide enough to allow safe and easy handling, alignment, and jointing of the pipe. Adequate width also facilitates efficient installation and future maintenance.

Typically, the trench width should exceed the pipe's outer diameter by at least twice the size of the largest bedding granule, with an additional working space of 200–300 mm on each side.

TRENCH BASE

A stable, level base is critical to prevent stress, deflection, or deformation of the pipe. It must support the pipe evenly and reduce the risk of damage during and after installation.

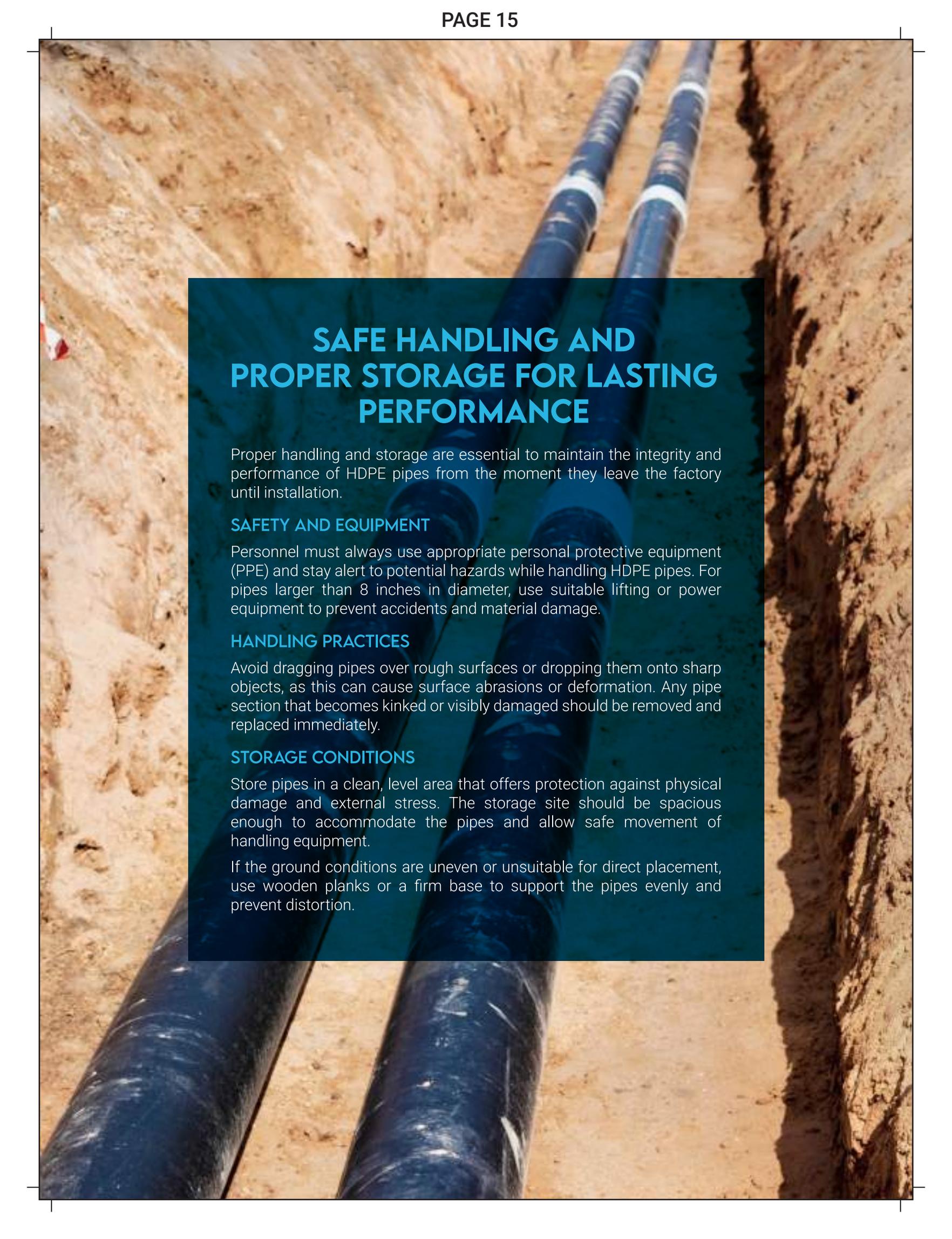
In areas with unstable or uneven soil, a bedding layer of sand or fine gravel is recommended to provide additional support. The base should be clean, free of rocks, debris, or sharp objects that could harm the pipe surface.

SOIL

The nature of the surrounding soil directly affects backfilling and compaction practices. Proper handling based on soil type is essential to ensure the structural integrity and alignment of solid wall pipes.

COVER

Adequate cover depth protects the pipeline from external loads, temperature variations, and surface activities. The recommended minimum cover ranges from 300 mm to 1.3 meters, depending on the pipe diameter, soil type, and surface load conditions. Proper cover ensures durability, safety, and extended service life.

The background of the page is a photograph showing two large, dark blue HDPE pipes laid out in a trench. The pipes are positioned parallel to each other, extending from the foreground into the distance. The trench walls are made of light-colored, sandy soil. A semi-transparent dark blue rectangular box is overlaid on the center of the image, containing white text.

SAFE HANDLING AND PROPER STORAGE FOR LASTING PERFORMANCE

Proper handling and storage are essential to maintain the integrity and performance of HDPE pipes from the moment they leave the factory until installation.

SAFETY AND EQUIPMENT

Personnel must always use appropriate personal protective equipment (PPE) and stay alert to potential hazards while handling HDPE pipes. For pipes larger than 8 inches in diameter, use suitable lifting or power equipment to prevent accidents and material damage.

HANDLING PRACTICES

Avoid dragging pipes over rough surfaces or dropping them onto sharp objects, as this can cause surface abrasions or deformation. Any pipe section that becomes kinked or visibly damaged should be removed and replaced immediately.

STORAGE CONDITIONS

Store pipes in a clean, level area that offers protection against physical damage and external stress. The storage site should be spacious enough to accommodate the pipes and allow safe movement of handling equipment.

If the ground conditions are uneven or unsuitable for direct placement, use wooden planks or a firm base to support the pipes evenly and prevent distortion.

JOINTING TECHNIQUES FOR LASTING PERFORMANCE

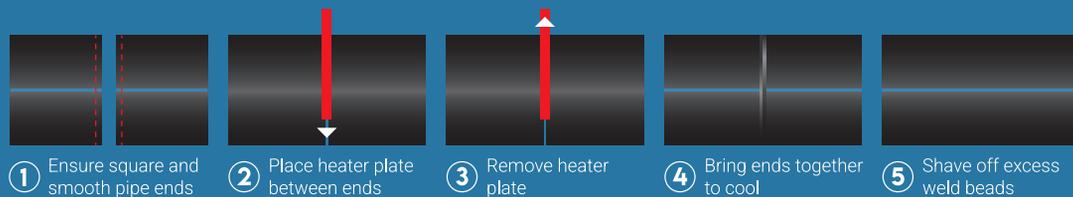
Ensure maximum strength and durability in your PE pipe connections with the right jointing method.

For a reliable and cost-effective solution, butt fusion welding or electrofusion fittings are recommended for joining pressurized PE pipes.

BUTT FUSION WELDING

This method involves heating and pressing the pipe ends together to create a seamless, leak-proof bond. The process begins with applying a 'bead-up' pressure to form the initial joint, followed by a 'heat-soak' pressure that ensures complete fusion across the interface.

Butt fusion is ideal for larger diameter pipes and fittings such as bends and tees. The technique requires trained professionals and precise temperature and pressure control to ensure long-term joint integrity and performance.



PROCEDURE FOR BUTT-WELDING OF PE PIPES

Butt-welding is a precise process that ensures a strong, uniform, and long-lasting joint between PE pipes. Follow these key steps for optimal results:

1. PREPARATION

Thoroughly clean the pipe ends, fitting surfaces, and the heating plate to remove dirt, grease, or moisture. Proper cleaning ensures a contaminant-free fusion zone.

2. ALIGNMENT CHECK

Place the pipes or fittings in the welding machine and ensure that the ends are properly aligned and square to each other. Accurate alignment is essential for uniform heat distribution and a perfect joint.

3. HEATING PROCESS

Use a butt-welding machine equipped with a temperature control system to reach the specified fusion temperature. Once achieved, insert the heating plate between the pipe ends and apply the necessary pressure until a uniform bead forms around the circumference.

4. JOINT FORMATION

After the prescribed heating time, quickly remove the heating plate and press the heated pipe ends together with steady pressure. Maintain this pressure to allow the molten material to fuse completely.

5. COOLING STAGE

Keep the joint undisturbed during the cooling period recommended for the specific pipe diameter. Proper cooling ensures full strength and integrity of the joint.



SANHIT HDPE PIPE FITTINGS: BUILT FOR STRONGER CONNECTIONS

Sanhit HDPE Pipe Fittings are designed to create durable, secure, and efficient water supply networks. Each fitting is crafted with precision to ensure seamless integration, long-term reliability, and superior flow performance.



HDPE REDUCER
(90 MM X 40 MM)



SHORT NPE AND
LONG NPE



HDPE 90MM LONG
90 DEGREE BEND



HDPE 90MM SHORT
45 DEGREE BEND



HDPE DOUBLE TEE



HDPE LONG TEE
(110 MM)



PP FULL SADDLE
(90 MM)



PP SERVICE SADDLE
(110 MM)



HDPE END CAP
(90 MM)



HDPE FLANGE, LNPE &
OTHER FITTINGS

BUILT FOR STRONGER CONNECTIONS

All Sanhit HDPE solid wall fittings meet the BIS IS 8008 Part 1:2003 standard.

Density: Minimum of 0.9555 g/cc

Hydrostatic Design Basis (HDB): 1,600 psi.

Standard Dimension Ratio (SDR): Fittings meet the requirements of SDR 17 for minimum strength.





Manufactured By:

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