



SANDHYAFLEX

ISO 9001:2015 certified company

Dust and Air Vacuum Rubber Suction Hose as per IS: 446 (1987)

TECHNICAL DATASHEET

Sandhyaflex Dust and Air Rubber Suction Hose is a heavy-duty industrial conveying solution designed for the suction and delivery of air, dust, fumes, light abrasive particles and industrial waste materials in demanding operating environments. Manufactured from premium-quality rubber compounds with high-strength textile reinforcement and a rigid helical wire support, the hose provides excellent flexibility, vacuum resistance, abrasion resistance, and long service life.

Designed for use in industrial ventilation systems, dust extraction units, pneumatic conveying systems, woodworking plants, cement industries, and general engineering applications, the hose efficiently handles air, dust, smoke, powders, and lightweight abrasive materials. Its robust construction offers superior resistance to wear, weathering, and mechanical stress while maintaining flexibility and dimensional stability under continuous service conditions.

SANDHYAFLEX INDIA PVT LTD manufactures high-quality Dust and Air Rubber Suction Hoses engineered to withstand severe industrial conditions while ensuring reliable airflow and material handling performance. The hose delivers dependable operation, extended service life, and enhanced efficiency in critical industrial applications.

Overcoming Challenges, Delivering Excellence:

Industrial environments such as cement plants, woodworking units, steel plants, foundries, mining facilities, and general manufacturing industries often expose conveying systems to abrasive dust particles, vacuum conditions, continuous flexing and harsh environmental conditions. These factors can accelerate hose wear, increase maintenance costs, and reduce operational efficiency.

Recognizing these challenges, SANDHYAFLEX developed its Dust and Air Rubber Suction Hose, manufactured from rubber compounds reinforced with synthetic textile and helical wire support to provide reliable suction performance and superior resistance to abrasion and mechanical damage.

By delivering a durable, reliable, and high-performance conveying solution, SANDHYAFLEX Dust and Air Rubber Suction Hoses have become a preferred choice for cement industries, woodworking plants, steel mills, foundries, mining operations, dust collection systems, and numerous industrial applications where efficient suction and air handling are critical.

Key Features:

- Manufactured from premium-quality synthetic/natural rubber compounds.
- Reinforced with high-strength textile plies and helical wire support.
- Excellent flexibility and kink resistance.
- Designed for suction and delivery of air, dust, smoke, fumes, and lightweight abrasive materials.
- High vacuum resistance and dimensional stability.
- Superior abrasion and wear resistance.
- Smooth inner surface ensures efficient material flow with minimal pressure loss.
- Resistant to weathering, moisture, ozone, and ageing.
- Good resistance to oils, grease, and mild industrial chemicals.
- Capable of withstanding repeated flexing and bending.
- Heavy-duty construction designed for long service life.
- Suitable for both indoor and outdoor industrial applications.
- Low maintenance requirements and dependable long-term performance.

Applications:

- **Dust Collection Systems:** Used for conveying dust, powder, and airborne particles.
- **Industrial Ventilation Systems:** Suitable for air circulation and exhaust applications.
- **Woodworking Industries:** Used for extraction of sawdust, wood chips, and shavings.
- **Cement Plants:** Handles cement dust and dry powdered materials.
- **Foundries and Steel Plants:** Used for air and dust conveying systems.
- **Mining Industries:** Suitable for dust extraction and material transfer applications.
- **General Engineering Industries:** Used for pneumatic conveying and ventilation.

- **Chemical Plants:** Suitable for handling non-corrosive dust and fumes.
- **Textile Industries:** Used in centralized vacuum and dust collection systems.
- **Paper Industries:** Handles paper dust and light waste materials.
- **Construction Sites:** Used for debris extraction and air handling systems.
- **Industrial Vacuum Equipment:** Suitable for heavy-duty suction applications.
- **Agricultural Processing Plants:** Used for grain dust and lightweight particulate transfer.
- **Pollution Control Systems:** Suitable for filtration and dust extraction installations.

History of Dust and Air Rubber Suction Hoses:

- **1950s – Growth of Industrial Ventilation Systems:** Expansion of manufacturing industries increased the need for reliable air and dust conveying systems.
- **1960s – Development of Reinforced Rubber Hoses:** Textile and wire reinforcement technologies improved vacuum resistance and durability.
- **1970s – Growth of Cement and Mining Industries:** Demand increased for abrasion-resistant suction hoses capable of handling dust and powders.
- **1980s – Advances in Rubber Compounding:** Improved rubber formulations enhanced flexibility and wear resistance.
- **1990s – Expansion of Pneumatic Conveying Systems:** Industrial automation created increased requirements for efficient material transfer systems.
- **2000s – Improved Manufacturing Processes:** Enhanced reinforcement technologies increased hose strength and service life.
- **2010s – Focus on Environmental and Dust Control Systems:** Increasing emphasis on pollution control and worker safety expanded the use of dust extraction systems.
- **2020s – Modern High-Performance Industrial Conveying Solutions:** Dust and Air Rubber Suction Hoses continue to provide reliable airflow and particulate handling in demanding industrial applications worldwide.

Dimensions and Ratings of Sandhyaflex Dust & Air Rubber Suction Hose:

Nominal Size (Inch)	Internal Diameter (mm)	Outer Diameter (mm)	Vacuum Rating (Bar)	Minimum Bend Radius (mm)	Approx. Weight (g/m)
1"	25.4	32	0.60	40	417
1¼"	32	39	0.60	60	617
1½"	38	45	0.60	75	721
1¾"	44.5	52	0.60	90	806
2"	50.8	58	0.60	100	912
2½"	63.5	72	0.60	125	1,407
3"	76.2	84.5	0.60	150	1,694
4"	101.6	110	0.60	200	2,336
5"	127	135	0.60	295	3,176
6"	152.4	162	0.60	380	4,171
8"	203.2	214	0.60	700	6,282
10"	254	267	0.60	1,000	8,795
12"	305	319	0.60	1,400	10,430

25.4mm ID x 32mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

25.40	Sl.No.	Description	Thickness
27.80	1	Lining	1.20
29.00	2	1 Ply 18 OZ (4")	0.60
0.00	3	SS Wire 16 SWG	2.60
30.20	5	1Ply 18 OZ (5")	0.60
35.00	6	Cover	1.20

32.0mm ID x 39.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

32.00	Sl.No.	Description	Thickness
34.50	1	Lining	1.25
35.70	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
36.90	5	1Ply 18 OZ (9")	0.60
41.90	6	Cover	1.25

38.0mm ID x 45.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

38.00	Sl.No.	Description	Thickness
40.50	1	Lining	1.25
41.70	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
42.90	5	1Ply 18 OZ (9")	0.60
47.90	6	Cover	1.25

44.5mm ID x 52.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

44.50	Sl.No.	Description	Thickness
47.00	1	Lining	1.25
48.20	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
48.32	5	1Ply 18 OZ (9")	0.06
53.32	6	Cover	1.25

50.8mm ID x 58.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

50.80	Sl.No.	Description	Thickness
53.30	1	Lining	1.25
54.50	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
54.62	5	1Ply 18 OZ (9")	0.06
59.62	6	Cover	1.25

63.5mm ID x 72.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

63.50	Sl.No.	Description	Thickness
66.00	1	Lining	1.25
67.20	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
67.32	5	1Ply 18 OZ (9")	0.06
72.32	6	Cover	1.25

76.2mm ID x 84.5mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

76.20	Sl.No.	Description	Thickness
78.70	1	Lining	1.25
79.90	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
80.02	5	1Ply 18 OZ (9")	0.06
85.02	6	Cover	1.25

101.6mm ID x 110.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

101.60	Sl.No.	Description	Thickness
104.30	1	Lining	1.35
105.50	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
105.62	5	1Ply 18 OZ (9")	0.06
111.02	6	Cover	1.35

127.0mm ID x 135.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

127.00	Sl.No.	Description	Thickness
129.70	1	Lining	1.35
130.90	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
131.02	5	1Ply 18 OZ (9")	0.06
136.42	6	Cover	1.35

152.4mm ID x 162.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

152.40	Sl.No.	Description	Thickness
155.40	1	Lining	1.50
156.60	2	1 Ply 18 OZ (8")	0.60
0.00	3	SS Wire 12 SWG	2.60
156.72	5	1Ply 18 OZ (9")	0.06
162.72	6	Cover	1.50

203.2mm ID x 214.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

203.20	Sl.No.	Description	Thickness
206.20	1	Lining	1.50
207.80	2	1 Ply 18 OZ (8")	0.80
0.00	3	SS Wire 12 SWG	2.60
209.40	5	1Ply 18 OZ (9")	0.80
215.40	6	Cover	1.50

254.0mm ID x 267.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

254.00	Sl.No.	Description	Thickness
257.00	1	Lining	1.50
260.20	2	1 Ply 18 OZ (8"+)	0.80
0.00	3	SS Wire 12 SWG	2.60
263.40	5	1Ply 18 OZ (9"+8")	0.80
269.40	6	Cover	1.50

305.0mm ID x 319.0mm OD x 6.0.0Mtr (L) Flexible Vacuum Rubber Hose

305.00	Sl.No.	Description	Thickness
308.00	1	Lining	1.50
311.20	2	1 Ply 18 OZ (8"+8")	0.80
0.00	3	SS Wire 12 SWG	2.60
314.40	5	1Ply 18 OZ (9"+9")	0.80
320.40	6	Cover	1.50

Colours and Their Applications:

For **Dust and Air Rubber Suction Hoses**, colour coding is primarily used for product identification, application segregation, visibility requirements, and project-specific preferences rather than indicating differences in suction or abrasion performance.

Colour	Typical Application
Black	Standard industrial installations including dust extraction systems, cement plants, foundries, and general pneumatic conveying applications
Red	High-temperature industrial areas, steel plants, and heavy engineering environments requiring clear identification
Blue	Air conveying systems, utility services, and general industrial installations
Green	Agricultural processing units, grain handling systems, and environmentally sensitive facilities
Yellow	High-visibility safety applications and hazardous operating areas requiring enhanced identification
Grey	Commercial ventilation systems and general-purpose industrial environments
Orange	Mining, construction sites, and heavy-duty material handling applications requiring increased visibility
Custom Colours	Available as per client specifications and project requirements

Materials:

The Sandhyaflex Dust and Air Rubber Suction Hose shall be manufactured using high-quality materials designed to provide superior suction performance, mechanical strength, flexibility, abrasion resistance, and long-term durability under demanding industrial operating conditions.

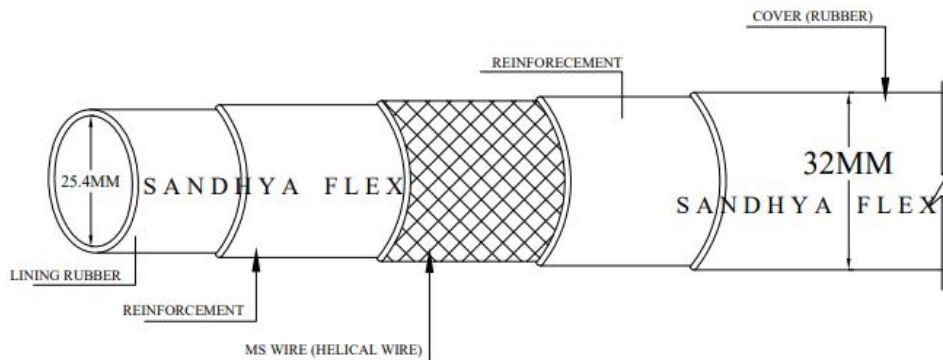
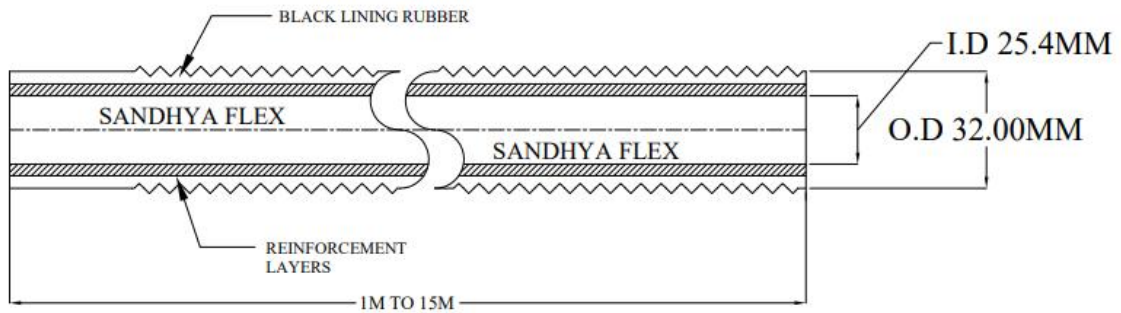
The rubber compound shall consist of premium-grade synthetic rubber blended with performance-enhancing additives to ensure excellent abrasion resistance, flexibility, weather resistance, and ageing resistance. The hose construction shall incorporate high-strength textile reinforcement and a helical steel wire support to provide excellent vacuum resistance and dimensional stability. The compound shall maintain its physical and mechanical properties under varying environmental and operating conditions.

RAW MATERIALS OF DUST AND AIR RUBBER SUCTION HOSE BY SANDHYAFLEX				
S. No.	Raw Material	Image	Typical Grade / Example	Function / Purpose
1	Synthetic Rubber Compounds		<ul style="list-style-type: none"> SBR / NBR / EPDM High abrasion resistant grade Good flexibility & wear resistant 	<ul style="list-style-type: none"> Provides base material for inner & outer cover Excellent abrasion & ageing resistance Withstands industrial conditions
2	Reinforcing Fabrics (Textile Plies)		<ul style="list-style-type: none"> Polyester / Nylon / Cotton High tensile strength fabric Multiple ply construction 	<ul style="list-style-type: none"> Provides mechanical strength Improves pressure & vacuum resistance Enhances durability
3	Steel Wire Helix		<ul style="list-style-type: none"> High tensile steel wire Galvanized / Carbon steel Helical design 	<ul style="list-style-type: none"> Provides vacuum resistance Prevents hose collapse Maintains hose shape & stability
4	Carbon Black		<ul style="list-style-type: none"> N330 / N550 / N660 High reinforcing grade Furnace black 	<ul style="list-style-type: none"> Improves tensile strength Enhances abrasion resistance Improves durability
5	Processing Oil		<ul style="list-style-type: none"> Aromatic / Paraffinic Oil High purity grade Low volatility 	<ul style="list-style-type: none"> Improves workability Enhances flexibility Aids in processing
6	Zinc Oxide		<ul style="list-style-type: none"> Zinc Oxide (ZnO) High purity grade Active grade 	<ul style="list-style-type: none"> Activator for vulcanization Improves heat resistance Enhances overall performance
7	Accelerators		<ul style="list-style-type: none"> MBTS / CBS / TMTD High activity grade Vulcanization accelerator 	<ul style="list-style-type: none"> Controls curing process Improves physical properties Enhances production efficiency
8	Antioxidants & Anti-ozonants		<ul style="list-style-type: none"> 6PPD / TMQ / IPPD High performance grade Long lasting protection 	<ul style="list-style-type: none"> Prevents ageing & oxidation Protects against ozone & UV Extends hose service life
9	Lubricants & Release Agents		<ul style="list-style-type: none"> Paraffin Wax / Stearic Acid Silicone based agents Mould release type 	<ul style="list-style-type: none"> Aids smooth processing Prevents sticking in moulds Improves surface finish
10	Protective Additives		<ul style="list-style-type: none"> UV Stabilizers Anti-ozonants Heat stabilizers 	<ul style="list-style-type: none"> Protects against UV & ozone Improves heat & weather resistance Enhances long term durability

MANUFACTURING PROCESS							
							
RAW MATERIALS MIXING	CALENDERING (SHEET FORMING)	CUTTING TO SIZE	SURFACE TEXTURE EMBOSSING	HOSE BUILDING (WIRE WINDING)	VULCANIZATION / CURING	QUALITY INSPECTION	FINISHED DUST AND AIR RUBBER SUCTION NOSE

 HIGH QUALITY MATERIALS	 EXCELLENT SUCTION PERFORMANCE	 ABRASION & WEAR RESISTANT	 VACUUM & COLLAPSE RESISTANT	 COMPLIANT WITH STANDARDS	 LONG SERVICE LIFE & RELIABLE PERFORMANCE
--	---	---	---	--	--

The hose shall be free from defects such as cracks, blisters, pinholes, foreign inclusions, or surface irregularities that may affect its suction performance or mechanical integrity. The materials shall possess adequate resistance to moisture, humidity, oils, grease, abrasion, weathering, ozone, ultraviolet exposure, and normal industrial chemicals, ensuring reliable performance in demanding industrial applications such as dust extraction systems, pneumatic conveying systems, cement plants, foundries, woodworking units, mining operations, and general engineering industries.



Physical and Mechanical Properties of Sandhyaflex Dust and Air Rubber Suction Hose:

S. No.	Property / Test	Requirement
1	Product Type	Dust and Air Rubber Suction Hose
2	Material Composition	Synthetic Rubber Compound with Textile Reinforcement and Helical Steel Wire
3	Colour	Black / Red / Blue / Green or Specified Industrial Colours
4	Construction Type	Flexible Reinforced Suction Hose
5	Inner Surface Finish	Smooth for Efficient Air and Dust Flow
6	Outer Surface Finish	Abrasion-Resistant, Weather-Resistant Rubber Cover
7	Vacuum Resistance	Excellent
8	Pressure Resistance	Suitable for Suction and Delivery Applications
9	Flexibility	High Flexibility for Easy Installation and Handling
10	Abrasion Resistance	High Resistance to Wear from Dust and Light Particles
11	Collapse Resistance	Helical Wire Reinforcement Prevents Hose Collapse
12	Water Absorption	Negligible
13	Moisture Resistance	Excellent
14	Chemical Resistance	Resistant to Oils, Grease, and Mild Industrial Chemicals
15	Weather Resistance	Resistant to UV, Ozone, Humidity, and Ageing
16	Temperature Resistance	Suitable for Moderate Industrial Temperature Conditions
17	Impact Resistance	High Resistance to Mechanical Stress and External Damage
18	Bend Resistance	Excellent Resistance to Kinking and Repeated Flexing

19	Service Life	Long-Term Durable Performance in Industrial Applications
20	Operating Environment	Cement Plants, Foundries, Woodworking Units, Mining Industries, Ventilation and Dust Collection Systems

Usage Tips:

- **Select the Correct Hose Size:** Always choose the hose diameter, vacuum rating, and connection type suitable for the intended application.
- **Verify Operating Conditions:** Ensure the hose is used within the specified pressure and temperature range.
- **Install with Proper Bend Radius:** Avoid excessive bending or twisting that may damage the hose structure or restrict flow.
- **Inspect Before Use:** Check for cuts, abrasion, cracks, deformation, or signs of wear before installation.
- **Use Suitable Fittings:** Ensure compatible end connections are used for secure and leak-free operation.
- **Keep the Inner Surface Clean:** Remove accumulated dust and foreign particles to maintain efficient airflow.
- **Avoid Sharp Objects and Mechanical Damage:** Prevent crushing, dragging, or contact with sharp edges.
- **Use in Designated Applications:** Install the hose only for air, dust, fumes, smoke, and light particulate conveying applications.
- **Follow Applicable Safety Standards:** Ensure installation and operation comply with plant safety requirements and engineering practices.
- **Use Qualified Personnel:** Installation, inspection, and maintenance should be performed by trained personnel.

Maintenance and Care:

Maintaining the Sandhyaflex Dust and Air Rubber Suction Hose is simple and helps ensure long service life, reliable performance, and safe operation:

- **Regular Inspection:** Periodically examine the hose for cracks, wear, cuts, bulging, or external damage.

- **Keep Clean:** Remove dust, dirt, oil, grease, and contaminants using a clean cloth and mild cleaning solution.
- **Store Properly:** Store in a cool, dry place away from direct sunlight, ozone sources, and excessive heat.
- **Avoid Chemical Exposure:** Prevent prolonged exposure to aggressive chemicals incompatible with the hose material.
- **Prevent Mechanical Damage:** Avoid dragging heavy equipment or subjecting the hose to excessive tension, crushing, or impact.
- **Observe Minimum Bend Radius:** Maintain the recommended bend radius during operation and storage.
- **Protect End Connections:** Ensure fittings are clean and free from damage before installation.
- **Replace Damaged Hoses:** Remove and replace hoses showing excessive wear, leakage, collapse, or reduced performance.

Applications by Countries:

India

- Widely used in cement plants, foundries, woodworking industries, and dust extraction systems.
- Commonly employed in ventilation systems, pneumatic conveying lines, and mining operations.
- Growing demand in heavy engineering industries and industrial air-handling applications.

China

- Extensively used in steel manufacturing, cement plants, and large-scale industrial facilities.
- Commonly installed in dust collection systems and pneumatic conveying applications.
- Preferred for heavy-duty industrial environments requiring abrasion resistance and flexibility.

United States

- Widely used in manufacturing industries, ventilation systems, and dust extraction units.

- Commonly employed in woodworking plants, mining operations, and material handling systems.
- Increasing adoption in environmental control and industrial filtration applications.

Europe

- Preferred for cement plants, foundries, and industrial ventilation systems.
- Commonly used in woodworking industries, recycling plants, and material handling facilities.
- Strong demand driven by stringent industrial safety and environmental regulations.

Middle East

- Extensively used in cement industries, mining operations, and industrial processing plants.
- High demand in infrastructure projects and heavy engineering industries.
- Suitable for harsh operating environments and continuous industrial service.

Africa

- Used in mining operations, cement plants, and industrial processing facilities.
- Important for dust collection systems and heavy engineering projects.
- Growing adoption due to durability, abrasion resistance, and long-term reliability under demanding operating conditions.

Get in touch:

Address : 5-24-1223/5/1, Ambedkar Nagar, Gajularamaram, Quthbullapur, R. R. Dist, Hyderabad, Telangana - 500055, India

PhoneNo : [\(+91\) 9652998932](tel:+919652998932)
[\(+91\) 6304766851](tel:+916304766851)
[\(+91\) 8688537041](tel:+918688537041)
[\(+91\) 9392275616](tel:+919392275616)
[\(+91\)9550921831](tel:+919550921831)
[\(+91\) 8919488523](tel:+918919488523)
[\(+91\)8074580219](tel:+918074580219)

Email : info@sandhyaflex.com

Website: <https://www.sandhyaflex.com>