



SANDHYAFLEX

ISO 9001:2015 certified company

Natural Rubber Sheet

TECHNICAL DATASHEET

SANDHYAFLEX Natural Rubber Sheet is a high-performance elastomeric solution designed to provide excellent resilience, flexibility, abrasion resistance and sealing performance for a wide range of industrial, commercial, and engineering applications. Manufactured from premium-quality Natural Rubber compounds, these sheets are engineered to deliver dependable mechanical properties, superior elasticity and long-term durability under diverse operating conditions.

The inherent flexibility and resilience of natural rubber make these sheets particularly suitable for applications involving vibration absorption, cushioning, gasketing, sealing, insulation, and general-purpose industrial use. Their excellent tensile strength and elongation characteristics enable them to withstand repeated deformation while maintaining their original shape and performance. Natural Rubber Sheets also exhibit good resistance to water, mild acids, alkalis, and mechanical wear, making them ideal for demanding service environments.

Designed for applications where flexibility, impact resistance, and durability are critical, Sandhyaflex Natural Rubber Sheets are available in multiple thicknesses, widths, hardness grades, and custom dimensions to suit diverse industrial requirements. These sheets provide excellent cushioning, vibration damping, and sealing properties while ensuring ease of fabrication and installation.

SANDHYAFLEX has established itself as a trusted manufacturer and supplier of premium-quality Natural Rubber Sheets in India, delivering products that combine durability, flexibility, and reliable performance. Manufactured using carefully selected natural rubber compounds and advanced processing techniques, these sheets are designed to maintain their physical and mechanical properties throughout their service life while offering excellent performance in industrial applications.

Overcoming Challenges, Delivering Excellence:

Industrial sealing, lining, flooring, and vibration control applications often encounter challenges such as mechanical wear, repeated compression, environmental exposure, impact loading, and material fatigue. These conditions can reduce operational efficiency, increase maintenance requirements, and shorten equipment service life.

Recognizing these challenges, SANDHYAFLEX developed its Natural Rubber Sheet range using premium-quality natural rubber compounds designed to provide excellent elasticity,

resilience, and abrasion resistance. The material exhibits outstanding flexibility and cushioning properties while maintaining dimensional stability and durability under normal operating conditions.

By delivering a versatile and reliable solution, SANDHYAFLEX Natural Rubber Sheets have become a preferred choice for industrial gasketing, sealing, flooring, vibration isolation, machinery protection, and general engineering applications where dependable performance and long service life are essential.

Key Features:

- Manufactured from premium-quality Natural Rubber compounds.
- Excellent elasticity and resilience.
- High tensile strength and elongation properties.
- Outstanding abrasion and wear resistance.
- Good resistance to water and moisture.
- Excellent cushioning and vibration absorption characteristics.
- Good flexibility even under repeated compression cycles.
- Smooth surface finish for easy fabrication and installation.
- Suitable for cutting, punching, and gasket manufacturing.
- Good resistance to mild acids and alkalis.
- Excellent sealing and packing performance.
- Durable construction designed for long service life.
- Available in various hardness grades, thicknesses, and dimensions.
- Easy to install and maintain.
- Provides reliable performance across a wide range of industrial applications.

Applications:

- **Industrial Gaskets and Seals:** Used for manufacturing gaskets, washers, and sealing components.
- **Vibration Isolation Pads:** Suitable for machinery and equipment vibration control.
- **Industrial Flooring:** Used as protective and anti-slip flooring surfaces.
- **Packing and Lining Applications:** Provides cushioning and protective lining.
- **Machinery Protection:** Used as impact-resistant protective barriers.
- **Automotive Industry:** Used for vibration damping and sealing applications.
- **Electrical Equipment:** Suitable for moderate insulation and protective applications.
- **Material Handling Systems:** Used as wear-resistant protective surfaces.
- **Engineering Industries:** Suitable for general-purpose industrial applications.
- **Construction Sector:** Used for sealing, padding, and vibration control.
- **Workshop and Maintenance Areas:** Used as protective mats and surface coverings.
- **Manufacturing Industries:** Used for machine isolation and protection.
- **Mining and Processing Plants:** Used where abrasion resistance is required.
- **Utility Applications:** Suitable for diverse industrial and commercial uses.

History of Natural Rubber Sheets:

- **Ancient Era** – Natural rubber was first obtained from latex derived from rubber trees and used by indigenous civilizations.
- **1839** – Charles Goodyear developed the vulcanization process, significantly improving rubber durability and elasticity.
- **Late 1800s** – Industrial production of rubber sheets expanded rapidly with growing demand from manufacturing industries.
- **Early 1900s** – Natural rubber sheets became widely used for sealing, insulation, and engineering applications.

- **1950s** – Improvements in compounding technology enhanced abrasion resistance and mechanical performance.
- **1970s** – Industrial growth increased the use of rubber sheets in machinery, construction, and infrastructure projects.
- **1990s** – Advanced manufacturing processes improved consistency, dimensional accuracy, and durability.
- **2000s** – Increasing demand for vibration control, gasketing, and industrial protection expanded the application range of natural rubber sheets.
- **2020s** – Modern Natural Rubber Sheets continue to play a vital role in industrial sealing, vibration isolation, flooring, and protective applications worldwide, delivering reliable performance, flexibility, and long service life.

Dimensions of Natural Rubber Sheets by Sandhyaflex:

Standard Dimensions – Plain Natural Rubber Sheet (Press Cured)

Sr. No.	Description	Thickness (mm)	Width (m)	Length (m)
1	Plain Natural Rubber Sheet	1.5	1.0	2.0
2	Plain Natural Rubber Sheet	2.0	1.0	2.0
3	Plain Natural Rubber Sheet	3.0	1.0	2.0
4	Plain Natural Rubber Sheet	4.0	1.0	2.0
5	Plain Natural Rubber Sheet	5.0	1.0	2.0
6	Plain Natural Rubber Sheet	6.0	1.0	2.0
7	Plain Natural Rubber Sheet	8.0	1.0	2.0
8	Plain Natural Rubber Sheet	10.0	1.0	2.0
9	Plain Natural Rubber Sheet	12.0	1.0	2.0
10	Plain Natural Rubber Sheet	16.0	1.0	2.0
11	Plain Natural Rubber Sheet	20.0	1.0	2.0
12	Plain Natural Rubber Sheet	25.0	1.0	2.0
13	Plain Natural Rubber Sheet	50.0	1.0	2.0

Standard Dimensions – Plain Natural Rubber Sheet (Rotocured)

Sr. No.	Description	Thickness (mm)	Width (m)	Length (m)
1	Plain Natural Rubber Sheet	1.5	1.0	10.0
2	Plain Natural Rubber Sheet	2.0	1.0	10.0
3	Plain Natural Rubber Sheet	3.0	1.0	10.0
4	Plain Natural Rubber Sheet	4.0	1.0	10.0

5	Plain Natural Rubber Sheet	5.0	1.0	10.0
6	Plain Natural Rubber Sheet	6.0	1.0	10.0
7	Plain Natural Rubber Sheet	8.0	1.0	10.0
8	Plain Natural Rubber Sheet	10.0	1.0	10.0
9	Plain Natural Rubber Sheet	12.0	1.0	10.0
10	Plain Natural Rubber Sheet	16.0	1.0	10.0
11	Plain Natural Rubber Sheet	20.0	1.0	10.0
12	Plain Natural Rubber Sheet	25.0	1.0	10.0

Colours and their Applications:









For Natural Rubber Sheets, colours are generally used for identification, aesthetic requirements, application-specific visibility, project specifications, or customer preferences rather than indicating significant differences in mechanical properties. Certain coloured compounds may contain specific additives to suit specialized applications; however, the fundamental characteristics remain largely dependent on the rubber formulation.








Colour	Typical Application
Black	General industrial applications, gaskets, vibration pads, flooring, and machinery protection
Red Oxide	Industrial gasketing, sealing, and engineering applications
Grey	Commercial flooring, workshop areas, and utility installations
Green	Industrial flooring, anti-fatigue applications, and safety-designated areas
Blue	Food-processing support applications, identification purposes, and project-specific requirements
White	Pharmaceutical, food-processing, and cleanliness-sensitive environments
Brown	General engineering and cushioning applications
Custom Colours	Available as per client specifications and project requirements

Materials:

The Sandhyaflex Natural Rubber Sheet shall be manufactured using high-quality Natural Rubber compounds designed to provide superior elasticity, resilience, abrasion resistance, cushioning performance, and long-term durability in industrial, commercial, and engineering applications.

The sheets shall be manufactured using advanced mixing, calendaring, vulcanization, and finishing processes and shall be free from defects such as cracks, blisters, porosity, foreign inclusions, delamination, or surface irregularities that may adversely affect performance or service life.

RAW MATERIALS OF NATURAL RUBBER SHEETS BY SANDHYAFLEX				
S. No.	Raw Material	Image	Typical Grade / Example	Function / Purpose
1	Natural Rubber (NR) (Ribbed Smoked Sheet / Technically Specified Rubber)		<ul style="list-style-type: none"> RSS-3 / RSS-4 / RSS-5 ISNR 5 / ISNR 10 / ISNR 20 High purity, consistent grade 	<ul style="list-style-type: none"> Provides elasticity & resilience High tensile strength Excellent abrasion resistance Base polymer for sheet
2	Vulcanizing Agents (Curing System)		<ul style="list-style-type: none"> Sulfur Accelerators (CBS, MBTS, TMTD) Activators (Zinc Oxide, Stearic Acid) 	<ul style="list-style-type: none"> Enables vulcanization (curing) Improves strength & elasticity Enhances heat ageing resistance Ensures dimensional stability
3	Fillers / Extenders		<ul style="list-style-type: none"> Calcium Carbonate Clay Silica 	<ul style="list-style-type: none"> Improves mechanical properties Enhances dimensional stability Reduces cost Improves abrasion resistance
4	Softening Oils (Processing Oils)		<ul style="list-style-type: none"> Aromatic Oil Paraffinic Oil Naphthenic Oil 	<ul style="list-style-type: none"> Improves processability Enhances softness & flexibility Reduces compound viscosity Improves surface finish
5	Antioxidants & Protectors		<ul style="list-style-type: none"> Antioxidants (TMQ, 6PPD) Waxes Anti-degradants 	<ul style="list-style-type: none"> Prevents ageing & oxidation Improves heat & ozone resistance Extends service life Maintains physical properties
6	Processing Aids		<ul style="list-style-type: none"> Zinc Oxide Stearic Acid Peptizing Agents 	<ul style="list-style-type: none"> Improves dispersion of ingredients Enhances mixing & milling Improves cure efficiency Ensures uniform compound
7	Pigments (If Applicable)		<ul style="list-style-type: none"> Organic / Inorganic Pigments Carbon Black 	<ul style="list-style-type: none"> Provides color & identification Enhances appearance Maintains consistency
8	Release Agents		<ul style="list-style-type: none"> Stearic Acid Waxes 	<ul style="list-style-type: none"> Prevents sticking during processing Ensures smooth surface finish Improves handling

MANUFACTURING PROCESS												
	→		→		→		→		→		→	
RAW MATERIALS MIXING		MILLING (COMPOUNDING)		CALENDERING (SHEET FORMING)		VULCANIZATION / CURING		COOLING & FINISHING		QUALITY INSPECTION		FINISHED NATURAL RUBBER SHEETS
HIGH QUALITY MATERIALS		CONSISTENT PERFORMANCE		EXCELLENT ELASTICITY		RELIABLE & DURABLE		COMPLIANT WITH STANDARDS		LONG SERVICE LIFE		

The materials shall possess adequate resistance to water, moisture, mechanical wear, impact loading, and repeated compression, ensuring dependable performance in industrial environments. Natural Rubber Sheets are particularly suitable for applications requiring excellent resilience, cushioning, vibration damping, sealing efficiency, and abrasion resistance.

Manufactured from high-quality Natural Rubber compounds, Sandhyaflex Natural Rubber Sheets provide reliable performance, long service life, and consistent quality across a wide range of industrial and commercial applications.

Physical and Chemical Properties of Natural Rubber sheet:

S. No.	<u>Property / Test</u>	<u>Requirement</u>
1	Product Type	Natural Rubber Sheet
2	Material Composition	Premium Natural Rubber (NR) Compound
3	Colour	Black, Red Oxide, Grey, White, Green, Blue or Other Specified Colours
4	Manufacturing Process	Vulcanized Rubber Sheet
5	Shape	Flat Sheet
6	Surface Finish	Smooth Finish on Both Sides or as Specified
7	Hardness Range	45 to 85 Shore A (Physical Properties Before Ageing)
8	Thickness Range	1 mm to 50 mm
9	Width Range	Up to 2 m (or as specified)
10	Length	Standard Rolls or Custom Cut Lengths
11	Specific Gravity	1.10 to 1.40
12	Tensile Strength	5 MPa to 17MPa (Physical Properties Before Ageing)
13	Elongation at Break	200% to 700% (Physical Properties Before Ageing)
14	Change in Hardness	-5/+8 IHRD (Physical Properties After Ageing at 70 C)
15	Change in Tensile Strength	+20% (Physical Properties After Ageing at 70 C)
16	Change in Elongation at break	-30%/+10% (Physical Properties After Ageing at 70 C)
14	Tear Resistance	Excellent
15	Abrasion Resistance	Excellent
16	Compression Set	Low
17	Resilience	High
18	Water Absorption	Negligible
19	Moisture Resistance	Excellent
20	Impact Resistance	Excellent
21	Vibration Damping	Excellent
22	Flexibility	Excellent
23	Weather Resistance	Moderate
24	Ozone Resistance	Limited
25	Oil Resistance	Not Recommended for Petroleum Oils
26	Chemical Resistance	Good Resistance to Water, Mild Acids and Alkalis
27	Temperature Range	-20°C to +70°C
28	Dimensional Stability	Good
29	Electrical Insulation Properties	Moderate
30	Service Life	Long-Term Performance Under Normal Conditions
31	Typical Applications	Gaskets, Seals, Flooring, Vibration Pads, Lining and Industrial Protection
32	Country of Origin	Made in India
33	Availability	Standard and Custom Sizes Available
34	Maintenance Requirement	Low

Usage Tips:

- Select the correct sheet thickness and hardness for the intended application.
- Ensure compatibility with operating temperature and environmental conditions.
- For gasket applications, use appropriate compression levels to achieve effective sealing.
- Inspect sheets before installation for cuts, tears, punctures, or surface defects.
- Avoid prolonged exposure to petroleum oils, fuels, solvents, and ozone-producing environments.
- Use suitable fastening, bonding, or clamping methods where required.
- Keep surfaces clean during installation to ensure optimum sealing and performance.
- Store flat wherever possible to avoid permanent deformation.
- Follow applicable engineering and safety standards during installation.
- Installation and fabrication should be performed by trained personnel using suitable equipment.

Maintenance and Care:

Maintaining Sandhyaflex Natural Rubber Sheets is simple and helps ensure reliable long-term performance:

- **Regular Inspection:** Check periodically for wear, cuts, cracking, excessive compression, or mechanical damage.
- **Keep Clean:** Remove dirt, grease, dust, and contaminants using mild soap and water.
- **Proper Storage:** Store in a cool, dry place away from direct sunlight, ozone sources, and excessive heat.
- **Avoid Oil Contamination:** Prevent contact with petroleum oils, fuels, and incompatible chemicals.
- **Protect from Sharp Objects:** Avoid punctures, cuts, and excessive abrasion during handling.
- **Maintain Environmental Conditions:** Avoid prolonged exposure to extreme temperatures and weathering.

- **Replace Damaged Material:** Replace sheets showing significant wear, hardening, cracking, or loss of elasticity.

Applications by Countries:

India

- Widely used in industrial gasketing, vibration isolation, flooring, and machinery protection.
- Commonly installed in engineering, manufacturing, mining, and infrastructure sectors.
- Strong demand in industrial maintenance and fabrication industries.

China

- Extensively used in manufacturing, industrial sealing, and machinery applications.
- Preferred for abrasion-resistant lining and cushioning applications.

United States

- Widely used in industrial sealing, anti-vibration systems, and equipment protection.
- Commonly employed in construction, automotive, and maintenance industries.

Europe

- Preferred for engineering applications requiring flexibility, resilience, and wear resistance.
- Used extensively in industrial flooring and machinery protection systems.

Middle East

- Applied in industrial facilities, construction projects, and infrastructure developments.
- Suitable for vibration control and equipment protection applications.

Africa

- Used in mining, industrial processing, agriculture, and infrastructure projects.
- Increasing demand due to durability and abrasion resistance.

Southeast Asia

- Widely used in manufacturing, engineering, and maintenance applications.
- Growing adoption in industrial and infrastructure sectors.

Australia

- Preferred for mining, engineering, agriculture, and industrial maintenance applications.
- Commonly used where impact resistance and abrasion resistance are required.

Get in touch:

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

PhoneNo : *(+91) 9652998932*

(+91) 6304766851

(+91) 8688537041

(+91) 9392275616

(+91)9550921831

(+91) 8919488523

(+91)8074580219

Email: *info@sandhyaflex.com*

Website: *https://www.sandhyaflex.com*