



SANDHYAFLEX

ISO 9001:2015 certified company

Rubber Speed Breaker as per IRC:99-2018

TECHNICAL DATASHEET

Sandhyaflex Rubber Speed Breakers are high-performance traffic calming solutions designed to effectively regulate vehicle speeds and enhance road safety in areas where controlled traffic movement is essential. Manufactured from premium-quality rubber compounds, these speed breakers are engineered to withstand heavy vehicular loads, harsh environmental conditions and continuous traffic exposure while providing long-term durability and reliable performance.

Designed for use in a wide range of traffic management applications, Sandhyaflex Rubber Speed Breakers are available in various sizes and configurations to suit residential, commercial, industrial, and public infrastructure requirements. Their highly visible design and durable construction help reduce vehicle speeds, improve pedestrian safety, and minimize the risk of accidents in high-traffic areas.

SANDHYAFLEX INDIA PVT LTD has a proven history of manufacturing high-quality safety and infrastructure products that meet demanding performance requirements. Our Rubber Speed Breakers are designed to provide effective traffic control while ensuring long service life and minimal maintenance.

Overcoming Challenges, Delivering Excellence:

Roads, parking facilities, industrial premises, residential communities, and public infrastructure often face challenges such as overspeeding vehicles, pedestrian safety concerns, inadequate traffic calming measures, and increased accident risks. These issues can compromise public safety, damage infrastructure, and create hazardous operating conditions.

Recognizing these challenges, SANDHYAFLEX developed its Rubber Speed Breakers, manufactured from premium-quality rubber compounds to provide effective speed control, enhanced visibility, and reliable long-term performance.

By delivering a durable, reliable, and high-performance traffic calming solution, SANDHYAFLEX Rubber Speed Breakers have become a preferred choice for residential complexes, industrial facilities, commercial establishments, parking areas, educational institutions, hospitals, toll plazas, and public road infrastructure where vehicle speed management and pedestrian safety are critical.

The modular design enables easy transportation, installation, replacement, and maintenance, making Sandhyaflex Rubber Speed Breakers an economical and practical solution for modern traffic management requirements.

Key Features:

- Manufactured from **high-strength natural and synthetic rubber compound** designed for heavy-duty road applications.
- Engineered to **withstand repeated loads from cars, buses, trucks, and light commercial vehicles** without deformation.
- Modular interlocking design allows **easy installation, alignment, and expansion across road widths**.
- High visibility **black and yellow colour pattern for enhanced day and night recognition**.
- Embedded **high-intensity reflective glass beads / reflective strips** for improved night-time visibility and accident prevention.
- UV-stabilized material provides **resistance against sunlight degradation and outdoor weathering**.
- Resistant to **rainwater, oil spills, road chemicals, and temperature fluctuations**.
- Anti-slip textured surface ensures **controlled vehicle deceleration and tire grip even in wet conditions**.
- Shock-absorbing design minimizes vehicle damage while effectively reducing speed.
- Pre-drilled mounting holes for **strong anchoring using bolts on asphalt or concrete surfaces**.
- Durable construction designed for **long service life under continuous traffic conditions**.
- Low maintenance requirement with **easy replacement of damaged modules**.
- Suitable for both **permanent road safety installations and semi-temporary traffic control setups**.

Applications:

- **Residential colonies and gated communities:** Controls vehicle speed in internal roads and entry zones.
- **Parking lots and commercial complexes:** Ensures safe movement of vehicles and pedestrians.
- **Industrial areas and warehouses:** Manages forklift and vehicle speed in loading/unloading zones.
- **School and college campuses:** Enhances safety in pedestrian-heavy environments.
- **Hospitals and healthcare facilities:** Controls traffic near emergency entrances and internal roads.
- **Toll plazas and checkpoints:** Enforces vehicle deceleration for inspection and safety.
- **Private roads and resorts:** Provides traffic calming in controlled-access areas.
- **Petrol pumps and service stations:** Ensures safe vehicle movement within premises.
- **Factory gates and logistics hubs:** Improves safety during heavy vehicle entry and exit operations.
- **Public infrastructure and municipal roads:** Used for traffic calming in low-speed zones.

History of Rubber Speed Breakers:

- **1970s** – Early Traffic Calming Concepts: Growing urban traffic led to development of physical speed control measures like humps and raised road structures.
- **1980s** – Introduction of Rubber-Based Road Safety Products: Rubber compounds began replacing concrete in certain applications due to flexibility and durability.
- **1990s** – Modular Speed Breaker Systems: Standardized rubber speed breakers with reflective markings and bolt-down systems became widely adopted.
- **2000s** – Expansion in Industrial and Private Infrastructure: Rubber speed breakers became common in factories, parking areas, and gated communities.
- **2010s** – Improved Reflective and UV-Resistant Materials: Enhanced visibility features and long-lasting rubber compounds improved performance and safety.

- **2020s** – Modern Traffic Safety Solutions: Rubber speed breakers are now widely used as a preferred alternative to rigid concrete systems for controlled traffic management worldwide.

Colours and Their Applications:

For Rubber Speed Breakers, colours are generally used for **visibility enhancement, traffic safety coding, hazard marking, and site-specific design requirements**, rather than indicating any difference in structural strength or load-bearing performance.

Colour	Typical Application
Black	Standard road installations, parking areas, industrial premises, and general traffic calming zones
Yellow	High-visibility safety marking for residential societies, school zones, and pedestrian-heavy areas
Black & Yellow Combination	Standard safety pattern for speed breakers on public roads, highways, and industrial access roads for maximum visibility
Red	Hazard-prone zones, emergency access routes, fire lanes, and restricted-speed critical areas
Blue	Institutional facilities, IT parks, corporate campuses, and controlled-access private roads
Green	Eco-sensitive zones, parks, renewable energy sites, and environmentally conscious infrastructure projects
White	Special marking applications, directional guidance zones, and customized visibility requirements
Custom Colours	Available as per project specifications, municipal standards, or branding requirements

Materials:


The Sandhyaflex Rubber Speed Breaker shall be manufactured using **high-density rubber compound** to provide superior impact resistance, load-bearing strength, and long-term durability under continuous vehicular movement.

The rubber compound shall consist of **natural rubber blended with synthetic elastomers and performance additives** to ensure high tensile strength, flexibility, and resistance to deformation under heavy loads. The material shall maintain structural integrity under repeated compression and dynamic traffic conditions.


The product shall be free from defects such as **cracks, air pockets, surface irregularities, or weak bonding zones** that may affect performance or lifespan.

The material shall exhibit strong resistance to **UV radiation, rainwater, oil spills, road salts, ozone exposure, and varying climatic conditions**, ensuring reliable performance in outdoor road environments.

The speed breaker shall retain its **shape, visibility, and functional efficiency over long-term usage** with minimal maintenance requirements in high-traffic installations.

RAW MATERIALS USED IN THE MANUFACTURING OF SANDHYAFLEX RUBBER SPEED BREAKERS				 SANDHYAFLEX® SAFE ROADS • STRONGER FUTURE
S. No.	Raw Material / Component	Image	Typical Grade / Example	Function / Purpose
1	Natural Rubber / Synthetic Rubber (NR / SBR / EPDM)		<ul style="list-style-type: none"> Natural Rubber (NR) RSS-4 / RSS-5 Synthetic Rubber (SBR / EPDM) Industrial Grade 	<ul style="list-style-type: none"> Provides elasticity, resilience, abrasion resistance and impact absorption
2	Carbon Black		<ul style="list-style-type: none"> N220 / N330 High Structure Grade 	<ul style="list-style-type: none"> Increases strength, durability and UV resistance
3	Reclaimed / Recycled Rubber Crumb		<ul style="list-style-type: none"> Tyre Crumb Rubber 10 Mesh – 30 Mesh 	<ul style="list-style-type: none"> Improves sustainability, reduces cost and adds toughness
4	Processing Oil		<ul style="list-style-type: none"> Aromatic / Paraffinic Oil Industrial Grade 	<ul style="list-style-type: none"> Improves processability and flexibility
5	Zinc Oxide		<ul style="list-style-type: none"> Rubber Grade 99% Min. Purity 	<ul style="list-style-type: none"> Activator for vulcanization and improves properties
6	Stearic Acid		<ul style="list-style-type: none"> Rubber Grade 1801 / 1842 	<ul style="list-style-type: none"> Acts as activator and lubricant in rubber compounds
7	Sulphur		<ul style="list-style-type: none"> Powder / Granular 60% – 80% Purity 	<ul style="list-style-type: none"> Essential for vulcanization and cross-linking
8	Accelerators & Vulcanization Chemicals		<ul style="list-style-type: none"> MBT / CBS / TMTD Industrial Grade 	<ul style="list-style-type: none"> Controls curing process and improves performance
9	Reflective Sheeting / Strips		<ul style="list-style-type: none"> IRC:67 Compliant ASTM D4956 Type IV 	<ul style="list-style-type: none"> Provides high visibility at night for road safety
10	Anchor Bolts & Washers		<ul style="list-style-type: none"> Galvanized Steel / SS 304 IS 1367 / ASTM A193 B7 	<ul style="list-style-type: none"> Secure fixing to road surface for long-term stability
11	Adhesive (If Applicable)		<ul style="list-style-type: none"> Epoxy / PU Based High Bond Strength 	<ul style="list-style-type: none"> Strong bonding with road surface and prevents water seepage

SANDHYAFLEX RUBBER SPEED BREAKER MANUFACTURING PROCESS



NATURAL / SYNTHETIC RUBBER
+ CARBON BLACK + CHEMICALS



MIXING
(COMPOUNDING)



COMPRESSION
MOULDING



VULCANIZATION /
CURING



REFLECTIVE STRIP
INSTALLATION



QUALITY
INSPECTION



FINISHED
SANDHYAFLEX
RUBBER SPEED BREAKER



MADE IN INDIA
BY SANDHYAFLEX



PREMIUM QUALITY
RAW MATERIALS



DURABLE PERFORMANCE
& HIGH STRENGTH



MADE FOR INDIAN ROADS
BUILT TO LAST



ISO 9001:2015
CERTIFIED COMPANY

SANDHYAFLEX – A TRUSTED INDIAN MANUFACTURER OF HIGH QUALITY RUBBER SPEED BREAKERS

Technical Specifications:

Property	Specification
Product Type	Rubber Speed Breaker
Base Material	High-Density Rubber Compound
Applicable Standard	IRC Guidelines / Municipal Road Safety Standards (as applicable)
Load Capacity	Suitable for Light, Medium & Heavy Vehicle Traffic
Colour	Black with Yellow Reflective Segments (Standard)

Reflective Elements	Night vision reflectors made of glass metals
Surface Design	Anti-Skid Textured Pattern for Enhanced Grip
UV Resistance	Excellent
Water Resistance	Excellent
Oil & Chemical Resistance	Good Resistance to Road Oils, Fuels & Mild Chemicals
Weather Resistance	Excellent Performance in Outdoor Conditions
Impact Resistance	High Energy Absorption & Shock Resistance
Operating Environment	Outdoor Roadways, Parking Areas, Industrial Zones
Maintenance Requirement	Low

Physical and Mechanical Properties:

S. No.	Property / Test	Requirement
1	Product Type	Rubber Speed Breaker
2	Material Composition	Natural or Synthetic Rubber
3	Colour	Black with Yellow Reflective Strips or Custom Colours
4	Height	As per Traffic Requirement (Standard 50–75 mm typical range)
5	Surface Finish	Anti-Skid Textured Surface
6	Load Bearing Strength	Designed for Heavy Vehicle Traffic
7	Impact Resistance	High Shock Absorption Capability
8	Reflectivity	High Visibility Night-Time Reflective Performance
9	UV Resistance	High Resistance to Sunlight Degradation
10	Water Absorption	Negligible
11	Abrasion Resistance	High Resistance to Tire Wear
12	Chemical Resistance	Resistant to Fuel, Oil, Road Salts & Mild Chemicals
13	Weather Resistance	Resistant to Heat, Rain, Humidity & Ozone
14	Installation Strength	Firm Anchoring with Bolts for Road Stability
15	Service Life	Long-Term Durable Outdoor Performance
16	Maintenance	Minimal Maintenance with Replaceable Modules

Relevant Standards of Rubber Speed Breaker:

Component	Standard
Rubber Speed Breaker	IRC:99-2018 – Tentative Guidelines on the Provision of Speed Breakers for Control of Vehicular Speeds
Material Composition (Rubber Compound)	Manufacturer's Specification
Reflective Sheeting (Yellow/Black Reflectors)	IRC:67 / ASTM D4956
Dimensional & Profile Requirements	IRC:99-2018
Location & Installation Guidelines	IRC:99-2018
Road Safety Markings & Signage	IRC:67
Mechanical Strength & Load Capacity	Manufacturer's Specification
Quality & Performance Requirements	IRC:99-2018 and Applicable Road Safety Guidelines

RUBBER SPEED BREAKER as per IS:99-2018 with Specifications

S.No.	Description	HSN CODE
1	Size:500x350x45mmthick, Color: Black & Yellow Load capacity 40 Tons	4008
2	Size:500x350x50mmthick, Color: Black & Yellow Load capacity 40Tons	4008
3	Size:500x400x75mmthick, Color: Black & Yellow Load capacity 40 Tons	4008
4	Size:500x420x75mmthick, Color: Black & Yellow weight 33kg/Mtr Load capacity 40 Tons	4008
5	Size:500x400x75mmthick, Color: Black & Yellow Load capacity 75 Tons	4008
6	Rumbler Strip Size:500x125x25mmthick, ,weight 4kg/Mtr Load capacity 40 Tons Color: Black & Yellow	4008
7	Conner Guard L1000mmxWidhr 100x100mmxThickness 10mm Reflecting Tape Type 60mmx6tape	4008
8	PVC Conner Guard L1200mmxWidhr 100x100mmxThickness 10mm Reflecting Tape Type 60mmx6tape weight 3.5kg/Nos	4008

9	3M Median Marker (We need the Fixed Marker not the Flexible one)	4008
10	3M Road Reflector Studs, Color : White with Red Reflector in either side	4008

Standard of Rubber Speed Breaker:

S. No.	Product Type	Dimensions (Typical)	Load Capacity	Reflective Type	Applicable Standard
1	Standard Rubber Speed Breaker	250 x 300 x 50 mm (module)	Light Vehicle Traffic	Yellow/White Reflective Tape	IS 15061
2	Heavy Duty Rubber Speed Breaker	250 x 350 x 75 mm (module)	Up to Commercial Vehicles	High Intensity Reflective Sheeting	IS 15061
3	Highway Grade Speed Breaker	Custom Length (Modular)	High Traffic Load	ASTM D4956 Type IV Reflectors	IRC:SP:84
4	Parking Area Speed Breaker	250 x 250 x 40 mm	Light Traffic	Standard Reflective Tape	IS 15061
5	Industrial Area Speed Breaker	250 x 350 x 60 mm	Medium–Heavy Load	High Visibility Reflectors	IS 15061
6	Modular Interlocking Speed Breaker	As per requirement	Variable Load Capacity	Embedded Reflectors	IS 15061
7	High Visibility Night Grade Speed Breaker	As per design	High Traffic Roads	Micro-prismatic Reflectors	IRC:67
8	Custom Length Speed Breaker (Sandhyaflex)	As per site requirement	As applicable	Reflective as specified	IS 15061

Rubber Speed Breaker Packaging & Dimension Details:

S. No.	Dimension (mm)	Weight per Meter	Colour	Packing (Nos/Box)	Weight per Pack (kg)	Length (m)	Width (m)	Thickness (m)	CBM (m ³)
--------	----------------	------------------	--------	-------------------	----------------------	------------	-----------	---------------	-----------------------

1	500 × 350 × 45	17 kg	Yellow / Black	2 Nos	17 kg	0.50	0.35	0.090	0.0158
2	500 × 350 × 50	18 kg	Yellow / Black	2 Nos	18 kg	0.50	0.35	0.100	0.0175
3	500 × 400 × 75	32 kg	Yellow / Black	2 Nos	32 kg	0.50	0.40	0.150	0.0300
4	500 × 125 × 25	5 kg	Yellow / Black	2 Nos	5 kg	0.50	0.125	0.050	0.0030

Usage Tips:

- **Select the Correct Voltage Class:** Always use a mat with a voltage rating suitable for the electrical installation.
- **Install on a Clean Surface:** Ensure the floor is dry, clean, and free from sharp objects before placing the mat.
- **Inspect Before Use:** Check for cuts, cracks, punctures, or signs of wear that may affect insulation performance.
- **Keep the Surface Clean:** Remove dust, oil, grease, and moisture regularly to maintain safety and anti-skid properties.
- **Avoid Sharp Objects:** Prevent damage from tools, equipment, or heavy impacts.
- **Use in Designated Areas:** Place mats in front of switchboards, control panels, transformers, and electrical equipment.
- **Follow Safety Standards:** Ensure installation and usage comply with applicable electrical safety regulations.
- **Use Qualified Personnel:** Inspection and maintenance should be carried out by trained personnel.

Maintenance and Care:

Maintaining Sandhyaflex Insulating Mats is simple and helps ensure long service life and reliable electrical protection:

- **Regular Inspection:** Check the mat periodically for cracks, cuts, punctures, or surface damage.
- **Keep Clean:** Remove dust, dirt, oil, grease, and moisture using a clean cloth or mild cleaning solution.
- **Store Properly:** Store in a cool, dry place away from direct sunlight and heat sources.
- **Avoid Chemical Exposure:** Prevent prolonged contact with aggressive chemicals that may

affect material properties.

- **Prevent Mechanical Damage:** Avoid dragging heavy equipment or sharp objects across the mat surface.
- **Replace Damaged Mats:** Remove and replace mats showing excessive wear or reduced insulation performance.

Applications by Countries:

India

- Widely used in substations, transformer yards, switchgear rooms, and industrial electrical installations.
- Commonly installed in power generation plants, manufacturing facilities, and utility networks.
- Growing demand in smart cities, metro rail projects, and renewable energy infrastructure.

China

- Extensively used in industrial plants, substations, and large-scale electrical infrastructure projects.
- Commonly installed in manufacturing facilities, power stations, and utility networks.
- Preferred for high-capacity industrial and urban development projects.

United States

- Widely used in electrical substations, power distribution facilities, and industrial plants.
- Commonly installed in commercial buildings, data centres, and utility infrastructure.
- Increasing adoption in renewable energy and critical power applications.

Europe

- Preferred for substations, switchgear installations, and industrial electrical systems.
- Commonly used in transportation infrastructure, power plants, and commercial facilities.
- Strong demand due to stringent workplace safety regulations.

Middle East

- Extensively used in power generation facilities, substations, and utility networks.
- High demand in oil & gas facilities, industrial plants, and smart city developments.
- Suitable for harsh environmental and operating conditions.

Africa

- Used in power distribution systems, substations, and industrial facilities.
- Important for utility infrastructure, renewable energy projects, and public facilities.
- Growing adoption due to reliability, durability, and electrical safety requirements.

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