



# KIND SNAIL

Professional | Efficiency | Service

Focused on Excellence, recommending the optimal.

仁迴有限公司

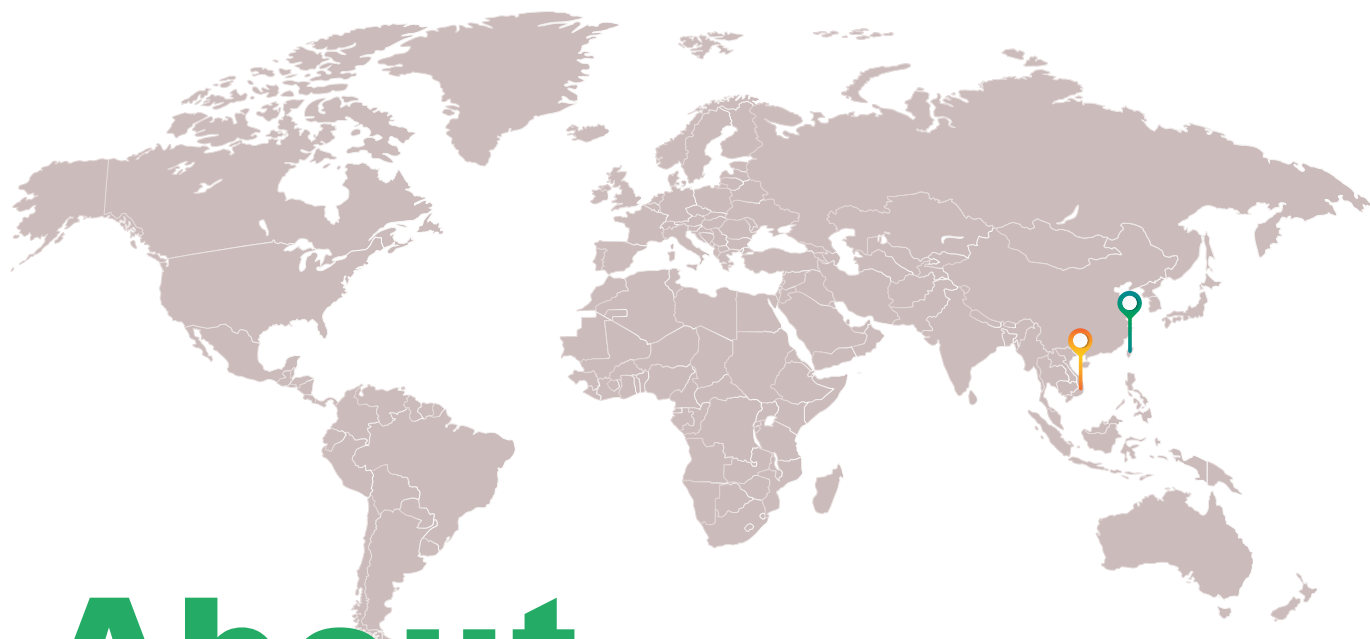


# CATALOGUE



- About Kind Snail
- Kind Snail - Rubber Specimen Cutter
- PCC - CS - Zinc Oxide
- Etana - Talc Powder
- PCBL - Carbon Black





# About Kind Snail



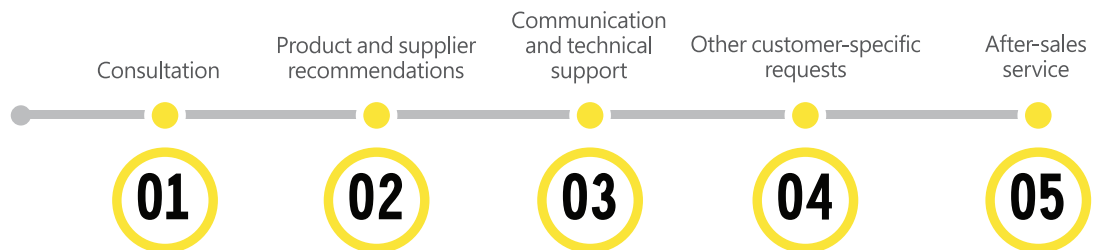
## // Company Introduction

Kind Snail Co., Ltd. was established in 2014 and is a professional agency specializing in the rubber industry, with business bases in Taiwan and Vietnam. The company has become a crucial hub for premium suppliers in the rubber industry.

We are committed to providing various raw materials and additives used in the rubber industry to clients worldwide. By selecting the top suppliers in the industry, we help our clients save time and optimize their investment returns.

## // Comprehensive Services

Beyond product selection, our comprehensive services save professionals time, costs, and labor in sourcing ideal products and establishing business partnerships, covering :



## // Industry Recognition

Including ILAC ( International Laboratory Accreditation Cooperation), TAF ( Taiwan Accreditation Foundation ) , CE Marking, ISO 9001, and ISO 9002.



## // Scope of Services

### 《Rubber Industry》

We specialize in providing high-quality rubber additives and raw materials, including but not limited to carbon black, zinc oxide, SBR, EPDM, accelerators, and sulfur. Additionally, we offer various rubber testing equipment to meet the diverse needs of our clients.

### 《Plastics Industry》

We supply HDPE, LDPE, talc powder, and more, ensuring product reliability and stability for the production of various plastic products.

### 《Footwear Industry》

For the specific needs of the footwear industry, we provide talc powder, LDPE, R103, EVA, and more, guaranteeing product quality and performance. Additionally, we can offer a wider range of additives and testing equipment based on the specific needs of our clients.

Our services extend beyond the products mentioned above, covering more professional additives and advanced testing equipment. We are dedicated to providing comprehensive solutions for our clients. We always insist on recommending top suppliers in the rubber industry to ensure that every client enjoys the highest quality products and services.



# RUBBER SPECIMEN CUTTER



Angle



Trouser



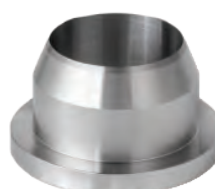
Crescent



Dumbbell



Specimen Cutting  
Illustration



Circular

## [ Material Selection ] :

We meticulously select high-quality alloy tool steel, strictly controlling dimensional precision and durability to ensure perfect execution with every cut.

## [ Robust Design ] :

Equipped with blades no less than 5 mm thick, we ensure the tool's sturdiness and stability when cutting intricate patterns, preventing any deformation.

## [ Extreme Sharpness ] :

The unmatched sharpness of our blades, finely honed, ensures clean and flawless edges during cutting, achieving higher testing standards.

## [ Perfect Cutting Experience ] :

Using our professional cutters, you can effortlessly handle natural rubber, resulting in smooth and tidy shapes with every cut, ensuring flawless creations every time.



<b>Dumbbell</b>	ASTM D638
	ASTM D412
	JIS K6251
	ISO 37
	DIN 53504
<b>Crescent</b>	ISO 34
	JIS K6252
	ASTM D624
<b>Angle</b>	ISO 34
	JIS K6252
	ASTM D624
<b>Trouser</b>	ISO 34
	JIS K6252
	ASTM D624
<b>Mooney cutter</b>	ASTM D1646
<b>Rheometer</b>	ASTM D5289

★ Other specifications or custom shapes can also be produced.

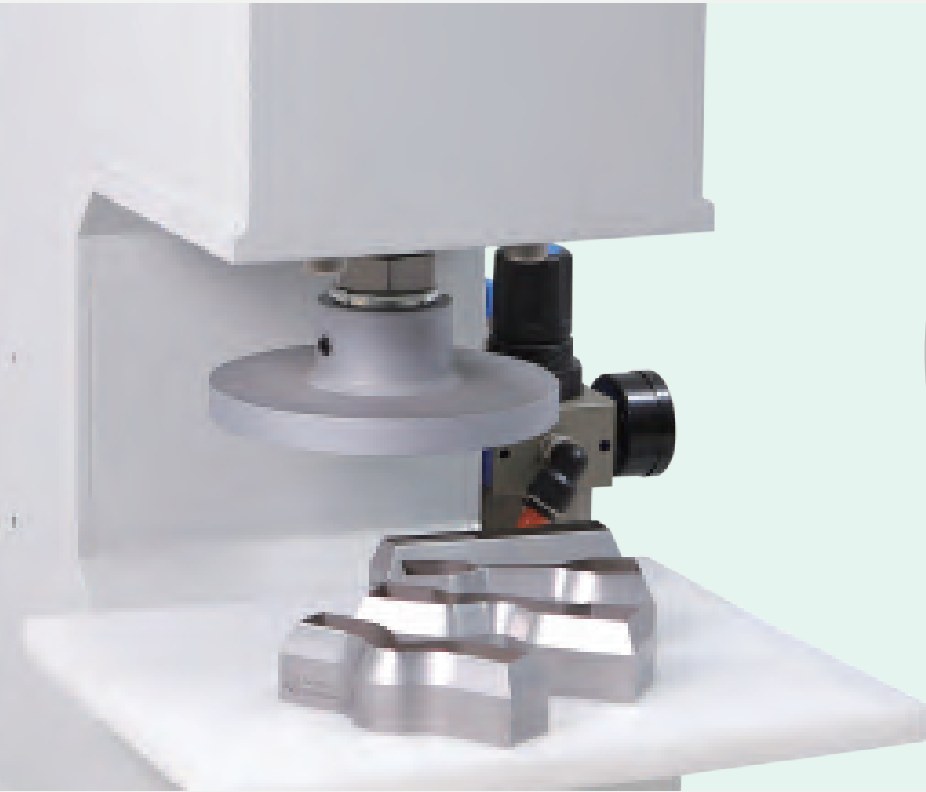


# Manual Specimen Cutting Machine

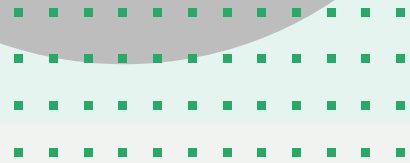


- 1 Lightweight
- 2 Long handle provides excellent leverage, making operation easier and more efficient.
- 3 No additional power source required.
- 4 Simple structural design, maintenance-free.
- 5 Can be used for extended periods without the need for part replacements.



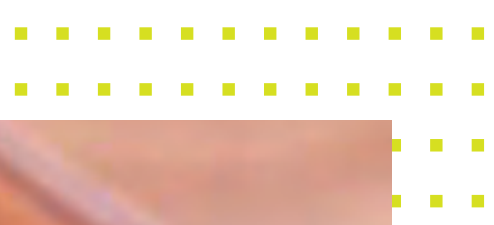


# Pneumatic Specimen Press Machine



- 1 This product supports various cutting tools for standard-shaped samples.
- 2 Suitable for paper, rubber, soft plastics, foam, and other soft materials.





# CS-ZINC OXIDE



## // About PAN CONTINENTAL CHEMICAL

Pan Continental Chemical was established in 1979 as Taiwan's first factory to produce active zinc oxide. The company focuses on the development and production of high-quality chemicals, continuously investing in R&D, which led to the creation of its patented CS zinc oxide.



## // Core Competencies

### » Carbon Reduction

The new gas boiler reduces annual carbon emissions by 1,224 tons.

### » Energy Reduction

Upgrading factory equipment reduces annual electricity consumption by 500,000 kWh.

### » Low Carbon Emissions

The carbon emissions from producing CS products are only 20% of those from regular zinc oxide.

### » Certification

Pan Continental is certified by Sedex, UL, and ZDHC.

## // Product Features

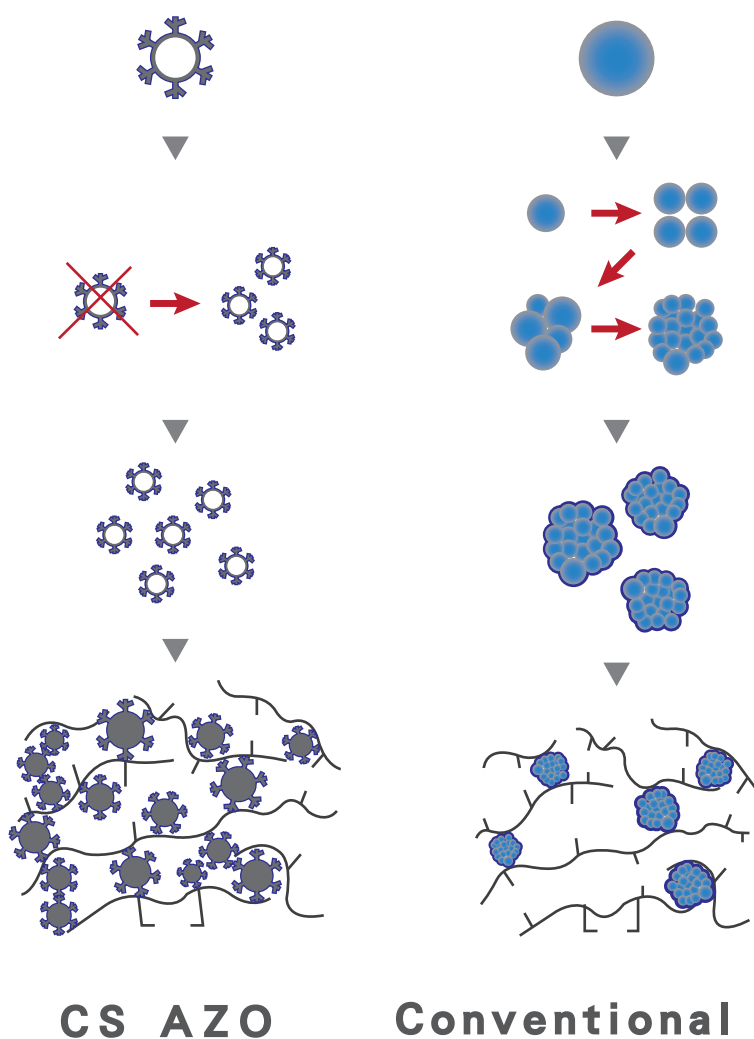
### 【Applications】

Rubber products, tires, EVA foam, and shoe soles.

### 【Advantages】

- High dispersibility and increased specific surface area improve the physical properties of products while meeting environmental standards.
- Enhances hardness, tensile strength, elongation, M300, and other physical properties by 3-5% compared to Conventional zinc oxide.

# CS AZO *VS.* Conventional ZNO



.....  
.....  
.....  
..... **POINT**

Traditional zinc oxide's spherical structure causes agglomeration, making dispersion difficult. CS zinc oxide, in flake form, reduces polarity, improves dispersibility, and boosts vulcanization efficiency by increasing surface area.





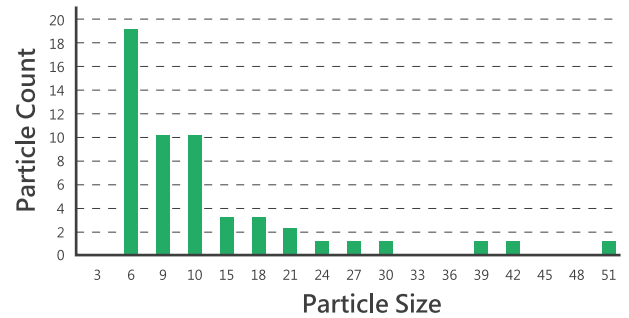
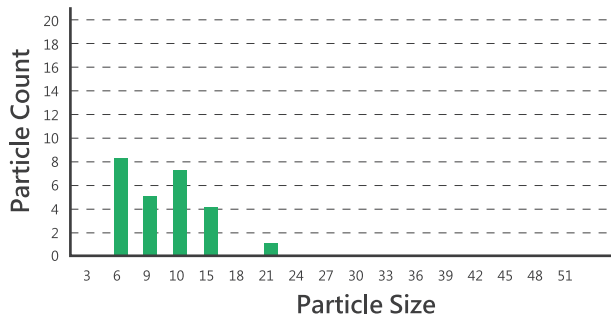
## // Rubber Mixing and Dispersion Status



CS-AZO



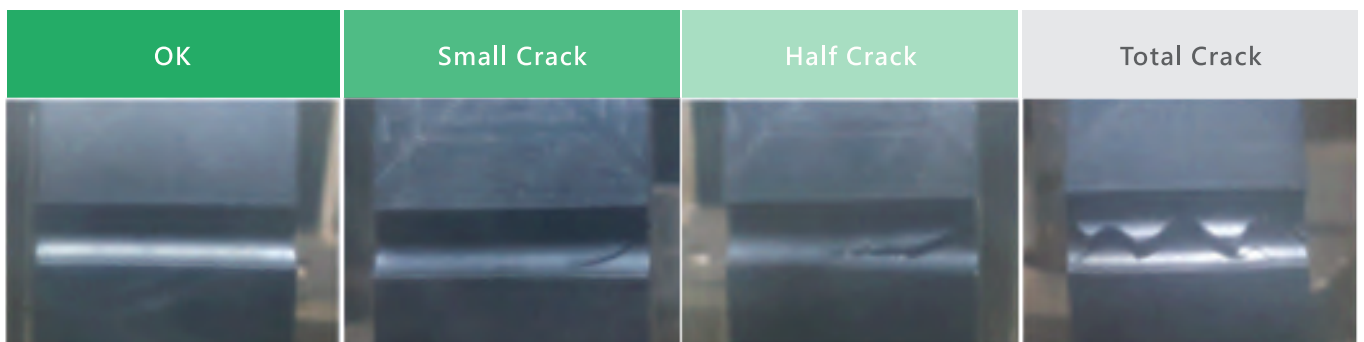
ZnO 99.7



## // Rubber Deterioration Test - Crack Growth

Test method: ASTM D813

Times	10000	20000	30000	40000	50000	60000	70000	80000	90000	100000	110000
Conventional ZNO	OK	OK	Small Crack	Half Crack	Total Crack	Total Crack	Total Crack	Total Crack	Total Crack	Total Crack	Total Crack
CS AZO®	OK	OK	OK	OK	OK	Small Crack	Small Crack	Half Crack	Half Crack	Total Crack	Total Crack





**Etana**

Since 1983

**Quality Filler Supplier**

## // About ETANA

Etana was established in 1983, specializing in high-quality filler solutions.

With extensive experience in material research and application development, we successfully meet the needs of various industries and offer customized raw material formulations and R&D collaboration plans based on customer requirements.

## // Advantages of Fillers

- » **Extensive Experience**  
Over 40 years of accumulated technical expertise.
- » **Technical Support**  
Providing customers with formulation advice and recommendations.
- » **Product Verification**  
Products are verified by SGS and BV, ensuring reliable quality.
- » **Testing Equipment**  
Equipped with advanced testing equipment to guarantee product quality.
- » **Market Coverage**  
Primary markets include Vietnam, China, Taiwan, Cambodia, Indonesia, India, and other countries.
- » **Application Areas**  
Products are widely used in the footwear industry, coatings industry, and engineering plastics, among others.

## // Advantages of Talc Powder

- » **High-Precision Grading**  
Etana talc powder undergoes high-precision grading, ensuring high purity and uniform particle size.
- » **Stable Ore Supply**  
We source from multiple countries and legally operated high-quality mines, ensuring a stable supply of ore.
- » **Planned Mass Production**  
Large-scale production with stable quality and sufficient supply.
- » **Brand Certification**  
Etana collaborates with major footwear brands, ensuring reliable quality.
- » **Rich Mineral Resources**  
Abundant mineral resources with large reserves to ensure stable quality.
- » **Advanced Equipment**  
Equipped with air jet mills, vertical mills, and ultra-fine classifiers to produce ultra-fine talc powder. We also offer powder surface treatment and customized products.





# TALC POWDER



# Triallyl-isocyanurate

## Crosslinking Coagent / Polymerizable Plastizer

### // Product Introduction

The organic multifunctional crosslinking agent ET-109 / ET-102, which is Triallyl Isocyanurate, chemically named TAIC, has the molecular formula  $C_{12}H_{15}N_3O_3$ .

### // Product Specifications

Item	ET-102	ET-109
Chemical Name	Triallyl Isocyanurate ( TAIC )	
Quality Index	1. TAIC Content (%) : 70 2. SiO <sub>2</sub> Content (%) : 30 3. pH : 6.0-7.0	1. TAIC Content (%) : $\geq 98.5$ 2. Chromaticity ( Pt-Co method ) : 50 3. Acid Value : $\leq 0.3\text{mgKOH/g}$
Applications	Plastics industry, often used in various non-molding plastics, polyolefin crosslinking, ionizing radiation crosslinking agents, heat-resistant resins, adhesives, and more.	
Packaging	25kg fiber drum with plastic lining (wooden fiber barrel), or customized according to customer needs.	25kg plastic drum, or customized according to customer needs.
Appearance	White powder.	Light yellow liquid (25 °C), hexagonal crystal flake (18 °C or less)





# Intensification Improved Filler

## Talc Powder Series

### // Product Introduction

● Silica ( SiO<sub>2</sub> ) : 50~65 %    ● Magnesium Oxide ( MgO ) : 30~34 %    ● Calcium Oxide ( CaO ) : 1.5%  
The intensification improved fillers are ultrafine particles milled by special machinery.

The RB series products are further tailored for various applications., utilizing different coupling agents, high-grade fatty acids, and anionic surfactants for activation and reinforcement as modified fillers.

### // Product Specifications

- Appearance : White powder, flake structure
- True Specific Gravity : 2.7
- Moisture Content : Less than 0.5% (bound water)
- PH : 8.5-9.3

Item	CA-8000S	RB-510	AH-1250	AH-2500	AH-3000	AH-9000
Particle Size ( micron )	12-13	10-12	6.5-7.5	5-6	4.6-5.3	3.8-4.2
Whiteness ( % )	> 92	> 91	> 93	> 93	> 93	> 93
Oil Absorption ( cc / 100g )	52~56	63~68	60~65	55~60	65~70	70~75
Bulk Density ( g / ml )	0.65-0.8	0.3-0.34	0.26-0.36	0.2-0.25	0.24-0.29	0.2-0.25



# Precipitated Barium Sulfate

## BaSO<sub>4</sub> Powder Series

### // Product Introduction

- Barium Sulfate ≥ 98%
- Iron oxide ≤ 80 ppm
- Refractive index : 1.64
- PH : 6.5-9

Item	AB-02	AB-03N	AB-05
Particle Size D50 ( μ m)	< 0.3	< 0.7	< 0.5
Particle Size D97 ( μ m)	≤ 2	≤ 3	≤ 2
Whiteness (%)	≥ 98	≥ 98	≥ 98
Oil absorption (g/100g)	10-20	10-20	10-20
Specific Gravity (g/cm <sup>3</sup> )	4.4-4.5	4.4-4.5	4.4-4.5
Surface Treatment	v		

### // Product Applications

Applications	Details
Printing	BaSO <sub>4</sub> as an ink filler resists aging, enhances adhesion, and maintains vibrant colors.
Paint	Used in coatings and paints, it improves weather and corrosion resistance, and enhances impact strength.
Wood Grain Printing	Used in wood grain panels as a base layer and for printing inks.
Plastic and Rubber Fille	Used in rubber, plastic bags, and engineering plastics as a filler, it prevents aging, improves smoothness, and reduces costs. In films, less than 15% filler does not affect transparency.
Other Functional Uses	Used in flame-retardants, X-ray shields, batteries, coatings, textiles, ceramics, glass, with defoaming and gloss-enhancing properties



# High Transparent Filler Masterbatch

## BaSO<sub>4</sub> Masterbatch Series

### // Product Specifications

● Carrier : PE 15-20% ● Powder Content : 80-85 % ● Specific gravity : 2.0-2.8 g/cm<sup>3</sup> ● Melting Point: 125°C

Specification	AB-60	AB-80	AB-90
Particle Size	100 nm	300 nm	700 nm
Whiteness (%)	≥ 98%	≥ 98%	≥ 98%
Melt Index MI (5kg / 190 °C)	3-6 g / 10min	3-6 g / 10min	10-20 g/10min

# Flame Retardant Filler

## Mg(OH)<sub>2</sub> Series

### // Product Specifications

● Appearance : White powder, Layered structure ● Density : 2.8  
● Thermal decomposition temperature : 340°C ● PH : 8.5~10.5

Product model	BR-2000	BR-3000H	DR-1000
Particle Size (micron)	7.1 μ m	4.8 μ m	6.53 μ m
Whiteness (%)	≥ 88	≥ 91	≥ 90
Specific Surface Area (m <sup>2</sup> / g)	4~6	7~9	5.5~7
Bulk Density (g / ml)	0.39	0.30	0.32
Loss on Ignition (1000 °C)	31	31	29
MgO Content (%)	55±1	55±1	60±1
Surface Treatment		V	



# CARBON BLACK





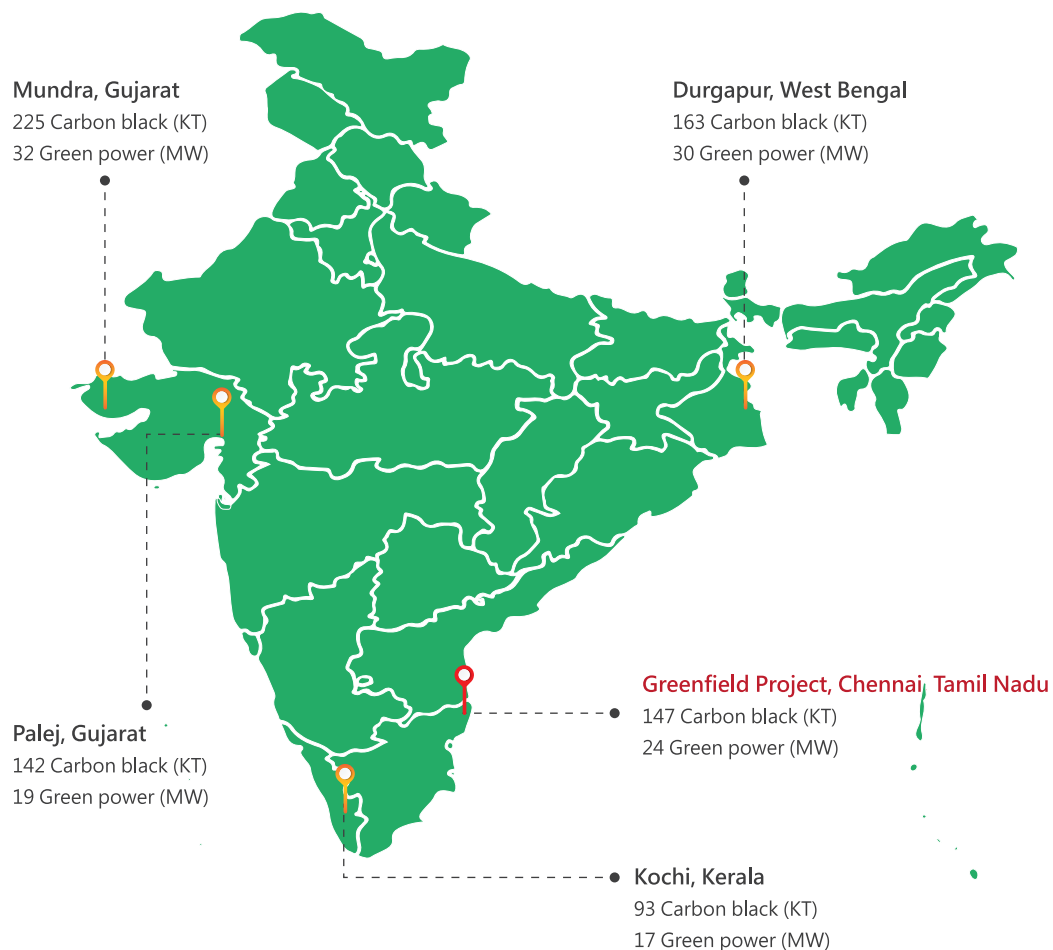
## // About PCBL

PCBL (Phillips Carbon Black Limited) is part of the RP-Sanjiv Goenka Group and was founded by Mr. K.P. Goenka in 1960, beginning production in Durgapur with an initial annual capacity of 14,000 tons. Over the past sixty years, PCBL has been a pioneer in the field of performance materials and specialty chemicals.

Today, PCBL's annual production capacity has reached 770,000 tons, with the generation of 122

MW of green power per hour. PCBL is the largest carbon black manufacturer in India and a significant player in the global market, serving a wide customer base across more than 50 countries.

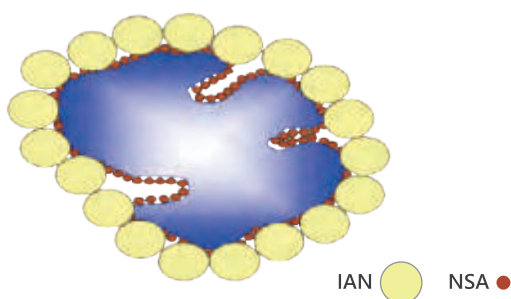
PCBL's oil fields are securely sourced from the United States, ensuring a stable supply of raw materials and reliability in product quality.





## // Explanation of Carbon Black Key Data Indicators

Total Surface Area (NSA) or External Surface Area (IAN)



### » NSA (Nitrogen Surface Area)

The total surface area that cannot be detected by other components but can be detected by the rubber.

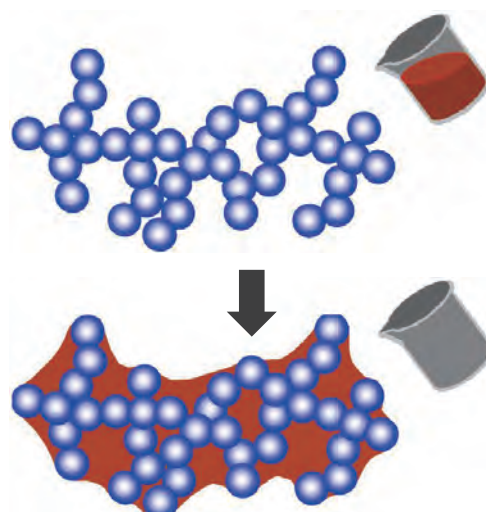
### » IAN

The external surface area that can be detected by rubber.

STSA (Statistical Thickness Surface Area)

$$= \text{Total S.A. (NSA)} - \text{Porosity}$$

Test Method for Oil Absorption



### » OAN (Oil Absorption Number)

The volume of carbon black particles in the polymer increases when mixed with an oil absorbent liquid. More voids and higher oil absorption indicate a more complex structure.

Indicator	Definition	Effect
Total Surface Area (NSA)	The surface area detectable by the rubber but not by other components.	Affects the rubber's reinforcement level; the smaller the area, the higher the reinforcement.
External Surface Area (IAN)	Includes only the accessible external surface area.	Directly affects the degree of reinforcement and the processing performance of rubber.
Structure	Describes the degree of branching and aggregation of carbon black particles.	Affects the filling efficiency and dispersion of carbon black in rubber.
Oil Absorption (OAN)	Represents the amount of oil absorbed when mixed with carbon black, indicating the size of voids between aggregates.	Influences the filling and dispersion efficiency of carbon black in rubber compounds.
Calculation Formula	$STSA = \text{Total S.A. (NSA)} - \text{Porosity}$	This formula reflects the effective surface area accessible to rubber after accounting for porosity.



## // Key Data Indicators for Common Carbon Blacks

Grade		Iodine Adsorption No. (IAN) (mg/g)	Oil Absorption Number (OAN) (cc/100g)	Compressed Oil Absorption Number (COAN) (cc/100g)	Tint Strength (% ITRB)	Specific Surface Area (STSA) (m <sup>2</sup> /g)	*Sieve Residue 325M (PPM)
ASTM Method		D-1510	D-2414	D-3493	D-3265	D-6556	D-1514
Hard Blacks	N110	145	113	97	123	115	120
	N134	142	127	103	131	137	120
	N220	121	114	98	116	106	150
	N234	120	125	102	123	112	150
	N326	82	72	68	111	76	250
	N330	82	102	88	104	75	250
	N339	90	120	99	111	88	250
Soft Blacks	N550	43	121	85	-	39	100
	N660	36	90	74	-	34	150
	N774	29	72	63	-	29	150





**Kind Snail**

**Professional Rubber Agency Service Integrator**

**Kind Snail Co., Ltd**

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