



— GRAPHITE MATERIALS

Product Catalog

PRODUCT FAMILIES

Flake · Fine Powder · Spherical
Expandable · Synthetic

HEAD OFFICE

Seoul
Republic of Korea

PRODUCTION

China

EDITION

2026
Typical values

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One chain. One accountable partner.

SANHO runs one chain from its production base in China — mining, flotation, purification and processing — to supply, quality verification and customer support in Korea. The customer deals with one point of contact for the entire chain.



No multi-tier traders

Material moves from production to SANHO directly, keeping specifications, documents and lead times traceable to the source.

Single point of accountability

SANHO is the supplier of record: quotation, documentation, incoming inspection, packaging and after-sales communication are handled in Korea.

Grade matched to process

We start from the customer's process and requirements, then select or adjust the grade at production — not the other way round.

**Production and supply,
managed as one.**

Plant, logistics and quality information stay connected from the mine to the customer's receiving dock.

Core Process.

Each stage is carried out at the production base and checked against the agreed grade before shipment.

Sourcing Mine	Flotation ~95% C	Milling Jet mill	Purification High temperature	Spheroidizing Anode grade	HPHT Synthesis Diamond feedstock
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01

Sourcing

MINE

Raw ore from the deposit is selected to keep flake size and crystal quality consistent.

02

Flotation

~95% C

Wet flotation separates gangue minerals and raises carbon content to around 95% while protecting the flake structure.

03

Milling

JET MILL

Air-jet milling and classification produce fine powder grades down to a few micrometres (ISO 13320 laser sizing).

04

Purification

HIGH TEMPERATURE

Silicate and iron minerals sit between the graphite layers, so chemical purification dissolves them and high-temperature treatment drives off the rest — bringing fixed carbon to 4N level.

05

Spheroidizing

ANODE GRADE

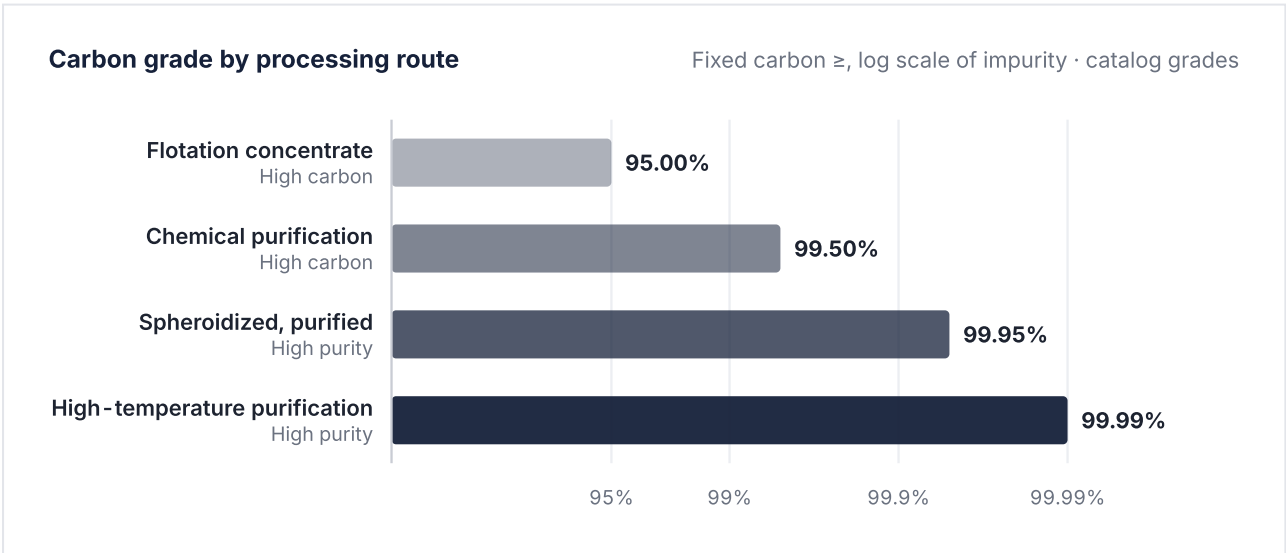
Shaping machinery rolls flake graphite into spheres for higher tap density; morphology is checked by SEM.

06

HPHT Synthesis

DIAMOND FEEDSTOCK

High-purity graphite serves as the carbon source for high-pressure, high-temperature (around 5.5 GPa) synthetic diamond growth.



CLASSIFICATION

Product Lines.

Natural graphite grades are supplied as particles and classified by three criteria: particle form, how the size is graded, and purity class.

01

Form

Natural flake shape, milled fine powder, shaped spheres, expandable flake, or synthetic graphite.

02

Size basis

Coarse flake is graded by screen (mesh). Fine and spherical powders are graded by laser D50 (µm).

03

Purity class

Fixed carbon classes based on GB/T 3518: medium carbon, high carbon and high purity.

Family	Graded by	● Medium carbon FC 80 – < 94 %	● High carbon FC 94 – < 99.9 %	● High purity FC ≥ 99.9 %	Page
01 Flake Natural flake shape kept	Screen size –200 to +50 mesh	F-93-80 F-92-M200	F-98-M200	F-3N-80 F-4N-50	06
02 Fine Powder Milled and air-classified	Laser D50 1.5 – 90 µm	P-85-75 P-90-60	P-95-45 P-2N5-55 P-99-1.5 P-99-2.5	P-3N5-35 P-4N-35	07
03 Spherical Flake shaped into spheres	Laser D50 + tap density	—	—	S-3N5-10 S-3N5-17 S-3N5-20	08
04 Expandable & Specialty Intercalated flake, foil, HPHT	Screen size + expansion volume	—	E-95-50 E-99-32	—	09
05 Synthetic & Carbon Blocks, parts, electrodes, recarburi­zers	Density + dimensions	Grades agreed per application			10

Fixed-carbon classes are based on GB/T 3518. Values are typical values.

Flake Graphite.

Natural crystalline flake graphite with its flake shape kept, classified by screen mesh. Large, well-ordered flakes give high thermal and electrical conductivity.

■ Flake grades

Item No.	Purity class	Size basis
F-4N-50	High purity	+50 mesh
F-3N-80	High purity	+80 mesh
F-98-M200	High carbon	-200 mesh
F-93-80	Medium carbon	+80 mesh
F-92-M200	Medium carbon	-200 mesh

Detailed data sheet (TDS) available on request

FLAKE MORPHOLOGY

Large, well-ordered crystals. Coarser flakes give higher conductivity and better expansion.

APPLICATIONS

- Bipolar plates
- Refractories
- Expandable feedstock
- Brushes & seals
- Thermal materials

Fine Powder.

Natural graphite milled and air-classified to a target D50, from general-purpose grades to high-purity and micronized grades.

■ Fine powder grades

Item No.	Purity class	Size basis
P-85-75	Medium carbon	D50 ≈ 75 μm
P-90-60	Medium carbon	D50 ≈ 60 μm
P-95-45	High carbon	D50 ≈ 45 μm
P-2N5-55	High carbon	D50 ≈ 55 μm
P-3N5-35	High purity	D50 ≈ 35 μm
P-4N-35	High purity	D50 ≈ 35 μm
P-99-1.5	High carbon	D50 ≈ 1.5 μm
P-99-2.5	High carbon	D50 ≈ 2.5 μm

Detailed data sheet (TDS) available on request

PARTICLE UNIFORMITY

Multi-stage air classification gives a narrow particle size distribution with a small fine fraction.

APPLICATIONS

- Conductive additives
- Batteries & electrodes
- Lubricants
- Coatings
- Powder metallurgy

Spherical Graphite.

Flake graphite shaped into dense spheres and purified for lithium-ion battery anodes.

■ Spherical grades

Item No.	Purity class	Size basis
S-3N5-10	High purity	D50 ≈ 10 μm
S-3N5-17	High purity	D50 ≈ 17 μm (standard)
S-3N5-20	High purity	D50 ≈ 20 μm

Detailed data sheet (TDS) available on request

SPHEROIDIZING

Rolling flakes into dense spheres raises packing density and lowers specific surface area (BET).

APPLICATIONS

- Li-ion anode materials
- Conductive coatings
- Dispersions

Expandable & Specialty.

Expandable graphite with high expansion volume for flame retardancy, plus flexible foil, machined crucibles and HPHT feedstock.

■ Expandable grades

Item No.	Purity class	Size basis
E-99-32	High carbon	+32 mesh
E-95-50	High carbon	+50 mesh

Detailed data sheet (TDS) available on request

Flexible Foil & Sheet

Rolled from expanded graphite without binders. Used for sealing, gaskets and heat spreading.

Machined Crucibles

High-density graphite crucibles and tubes machined to drawing dimensions.

HPHT Feedstock

High-purity graphite as carbon source for high-pressure, high-temperature synthetic diamond growth.

EXPANSION MECHANISM

Intercalated layers separate sharply on heating, expanding by several hundred times in volume to form a protective char barrier.

APPLICATIONS

Flame retardants

Sealing & gaskets

Thermal management

Diamond synthesis

Synthetic Graphite & Carbon Additives.

Engineered graphite and carbon products for semiconductor, metallurgical and foundry processes. Grades and dimensions are agreed per application.

■ Selection guide — specify these items for a quotation

Product	Form	Key parameters to specify	Used in
Synthetic graphite block	Isostatic · extruded · molded	Bulk density, grain size, ash, dimensions	Heat-treatment furnaces, EDM, electrical parts
Machined graphite parts	Heaters, jigs, crucibles, boats	Drawing, density, purity (ash ppm)	Vacuum furnace, semiconductor, PV
Graphite electrode	Electrode + nipple	Diameter, grade (RP / HP / UHP), length	EAF, ladle furnace
Recarburizer	Granular	Fixed carbon, S, N, sizing (mm)	Steelmaking, foundry

FOR A QUOTATION, PLEASE SHARE

- 01 Application and process conditions

03 Required density, purity or S / N levels
- 02 Drawing or dimensions

04 Monthly volume and packaging

SPECIFICATIONS

Grades, dimensions and properties are confirmed per application and order.

APPLICATIONS

- Semiconductor & PV
- Vacuum furnaces
- EAF steelmaking
- Foundry
- Metallurgy

Quality Assurance.

Every lot is tested at production with a certificate of analysis and checked by SANHO on arrival before labelling and delivery.

01 Production QC Lot testing and COA issue	02 Pre-shipment Grade and packaging checked against order	03 Incoming inspection Quantity, packaging and appearance check in Korea	04 Documentation COA with every delivery; TDS and MSDS on request
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Test items by product family

Family	FC / Ash	Moisture	D50 (laser)	Mesh	Tap density	Expansion
Flake (F)	●	●	—	●	—	—
Fine powder (P)	●	●	●	—	—	—
Spherical (S)	●	—	●	—	●	—
Expandable (E)	●	—	—	●	—	●

■ Testing standards referenced

Item	Standard	Scope
Crystalline flake graphite	GB/T 3518	Flake classification by carbon content and mesh size
Micro-powder graphite	GB/T 3520	Particle size grading of fine graphite powder
Chemical analysis	GB/T 3521	Fixed carbon, ash, volatile matter and moisture
Laser particle sizing	ISO 13320	Particle size distribution by laser diffraction

Catalog values are typical values. Specified values are set out in the grade TDS and confirmed with each order.



GET IN TOUCH

Contact.

Tell us about your process and requirements. We will propose the grade and supply plan that fits.

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