GRAYSON HOLDING C.V

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Ultrapure technologies of the Future

Grayson Holding C.V is a developer and manufacturer of the highest quality silicon products. The purity of silicon carbide, silicon and silicon dioxide powders was assessed by international laboratories.
We want to offer you our products price list, where every item can be a topic of additional negotiation. You can request detailed information, as well as send your proposals to:

Updated: June 2021

No.	Product	Details	Purity, %	Unit	Price, USD
1.	SiO_2	High-purity amorphous silicon dioxide nanopowder	99,999+	kg	250,00
2.	SiO_2	High-quality amorphous silicon dioxide nanopowder	99,9999+	kg	250,00
3.	SiO_2	Silicon dioxide (crystalline)	99,999+	kg	250,00
4.	Si	Grayson Holding Silicon powder size ≤50 μm	99,99999+	kg	500,00
5.	Si	Monocrystalline Silicon powder size 0,1-1 mm	99,9999999+	kg	750,00
6.	SiC	Silicon carbide of hexagonal lattice, polytype 6H, density 1kg/l	99,999+	kg	2.500,00
7.	SiC	Silicon carbide of cubic lattice, polytype 3C, density 0,1 kg/l	99,999+	kg	3.500,00
8.	SiC	Silicon carbide of cubic lattice, density 1kg/liter (composite quality)	99,999+	kg	2.000,00
9.	SiC	Silicon carbide of cubic lattice, fibrous structure (fiber length up to 2 mm), density 0,25 kg/l	99,999+	kg	3.000,00
10.	C	Highly activated "ash less" Nanocarbon of density 0,01 kg/l	99,99+	kg	5.000,00

Mission

Development of innovative technologies for the recycling of the man-caused wastes and deposits of closed and existing industries.

Vision

Production wastes continue to be a daunting challenge worldwide, which leads to serious environmental effects. Expertise allows us to suggest available alternative of targeted recycling waste of various origin.

Who we are

Founded in 2019

RUSSIA

Up-to-date facilities for research

and analysis are installed in our laboratories.

High scientific potential team

5 PhDs of Technical and Chemical Science are the company's core.

Collaboration with IBOPC

VP Khuhar Institute of Bioorganic Chemistry And Petro- chemistry of the National Academy of Science of Ukraine is our counterpart.

Equipment from leading manufacturers

Domestic and foreign enterprises manufacturing high-tech heat-treatment equipment work for us.

International Quality Certificates

Products obtained by our technologies are of the highest assessment got from international laboratories.

Technological Projects

The high-purity Silicon Dioxide

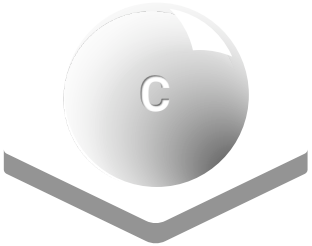
Two technologies for silicon dioxide continuous obtainment of organic and mineral origin.

The high-purity Silicon

Two technologies for Grayson Holding line and monocrystalline silicon obtainment in the continuous mode.

The high-purity Silicon Carbide

Three technologies for continuous obtainment of silicon carbide of different polytypes.



The high-purity Carbon

Technologies for obtainment of “ash less” Nano porous carbon and oxygraphene.

The Technology for Industrial Production
of High-Purity Silicon Dioxide

SiO2

Developed by Grayson Holding C.V

Continuous Production of High-Purity Amorphous SiO_2

Highly automated technological process

Exceptional compactness of technological line

Low production costs

Advantages of Technology

Doesn't require clean rooms

The production of high-purity materials is attributable to the impossibility of human intervention into technological regimes.

Advantages of Technology

Doesn't require much space

The equipment set includes sublimation, desublimation hydrolysis reactors.

Advantages of Technology

Doesn't require many personnel

> Energy consumption approximately 4 kW per 1 kg;
> The lowest price of the raw material (waste).

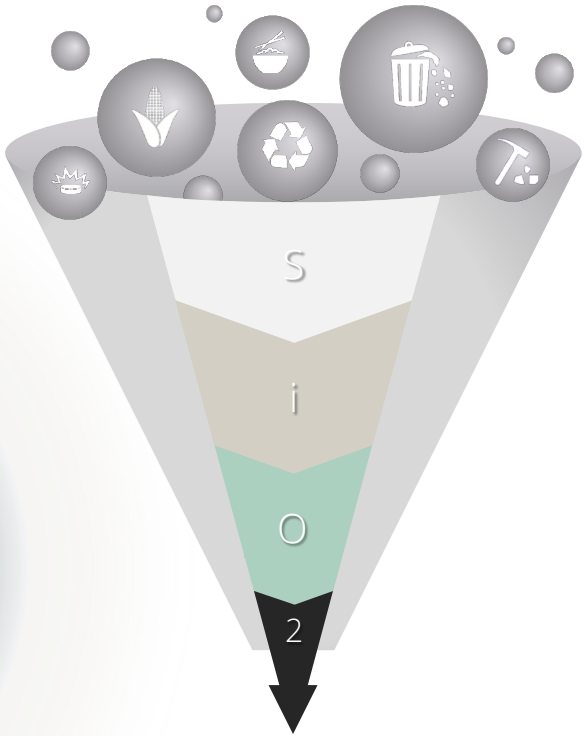
Raw materials for SiO_2 production

Bio origin

Wastes from processing of agricultural commodities

- Rice husk
- Straw
- Corn
- Etc

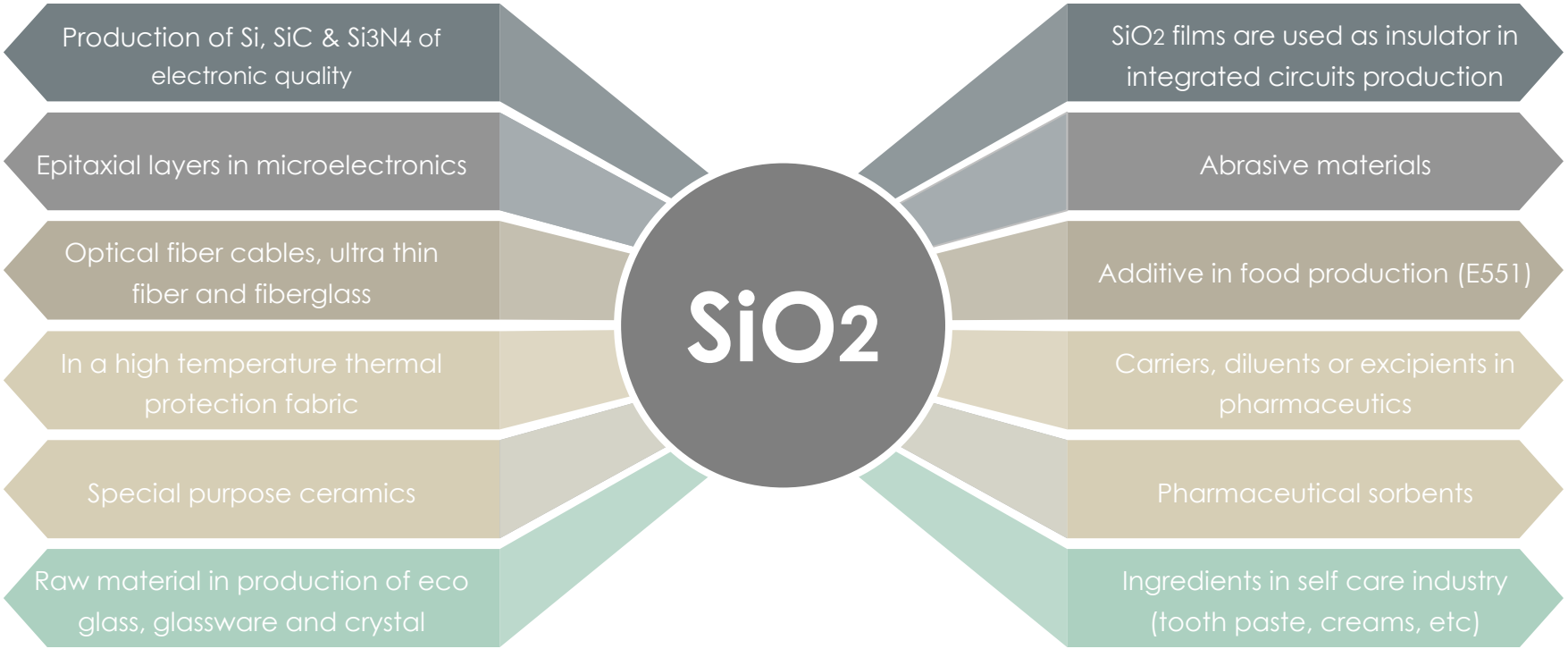
Processing of organic raw materials requires additional technological module.

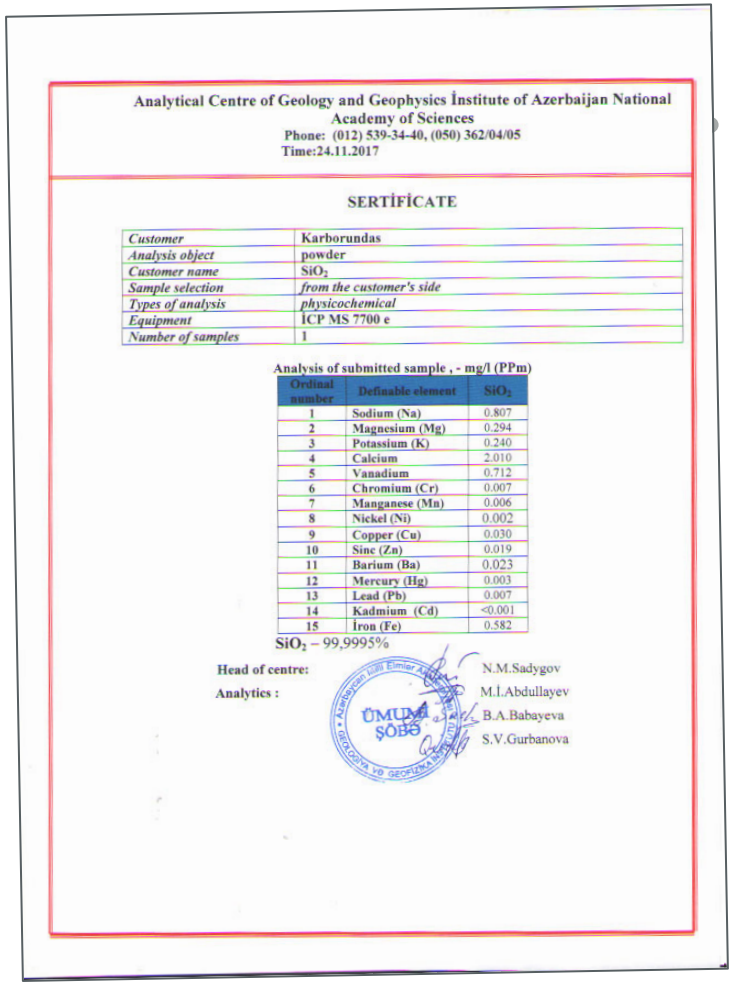


Min origin

- Silicate-containing wastes from production of ore materials
- Ashes from the coal burning of thermal power plants
- Ashes from the burning and gasification of sludge
- Mineral processing wastes
- Any silicate-containing substance
  - Sand
  - Ores

Application of the amorphous silicon dioxide





Analytical Centre of Geology and Geophysics İnstitute of Azerbaijan National Academy of Sciences
Phone: (012) 539-34-40, (050) 362/04/05
Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiO_2
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	ICP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiO_2
1	Sodium (Na)	0.807
2	Magnesium (Mg)	0.294
3	Potassium (K)	0.240
4	Calcium	2.010
5	Vanadium	0.712
6	Chromium (Cr)	0.007
7	Manganese (Mn)	0.006
8	Nickel (Ni)	0.002
9	Copper (Cu)	0.030
10	Sinc (Zn)	0.019
11	Barium (Ba)	0.023
12	Mercury (Hg)	0.003
13	Lead (Pb)	0.007
14	Kadmium (Cd)	<0.001
15	İron (Fe)	0.582

SiO_2 – 99,9995%

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev
B.A.Babayeva
S.V.Gurbanova

ÜMUMİ SÖBS

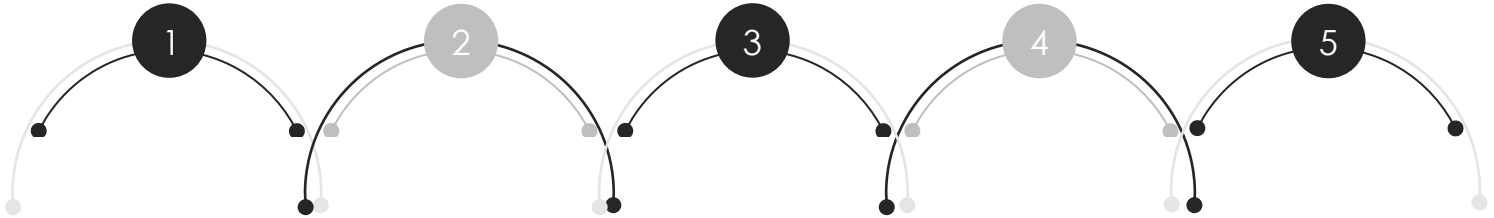
Properties of amorphous silicon dioxide SiO_2	
Form	Powder
Size of globule	≤ 5 micron
Size of primary particles	≤ 100 nm
Pore width of primary particles	2-3 nm
Purity	99,9995%

The Technology for Industrial Production
of High-Purity Silicon

Si

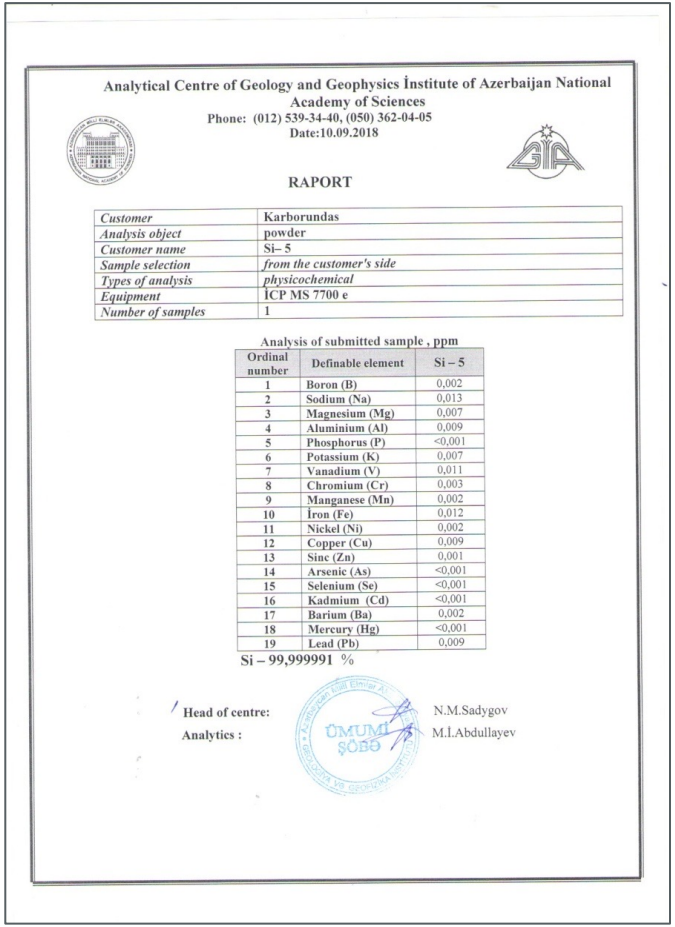
Developed by Grayson Holding C.V

Highlights of the Production of High-purity Grayson Holding line Silicon Powder (Si-1)



1	2	3	4	5
Continuous production cycle	Cold method of treatment	The highest purity of the product	Minimal energy consumption	Low production costs

Grayson Holding line silicon (Si-1)



Analytical Centre of Geology and Geophysics İnstitute of Azerbaijan National Academy of Sciences
Phone: (012) 539-34-40, (050) 362-04-05
Date:10.09.2018

RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	Si– 5
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , ppm

Ordinal number	Definable element	Si – 5
1	Boron (B)	0,002
2	Sodium (Na)	0,013
3	Magnesium (Mg)	0,007
4	Aluminium (Al)	0,009
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,007
7	Vanadium (V)	0,011
8	Chromium (Cr)	0,003
9	Manganese (Mn)	0,002
10	İron (Fe)	0,012
11	Nickel (Ni)	0,002
12	Copper (Cu)	0,009
13	Sinc (Zn)	0,001
14	Arsenic (As)	<0,001
15	Selenium (Se)	<0,001
16	Kadmium (Cd)	<0,001
17	Barium (Ba)	0,002
18	Mercury (Hg)	<0,001
19	Lead (Pb)	0,009

Si – 99,999991 %

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev

1. Structure – Grayson Holding line
2. Purity – 99,99999+%
3. Particles size is up to 50 micron
4. Sealed in nitrogen media to prevent oxidation

Perfect for

1. High-purity silicon epitaxial layers in electronics
2. Synthesis of fine grade high-purity silicon carbides and silicon nitrides
3. Production of the composite materials

Monocrystalline silicon powder (Si-2)

The technology

Technology envisages the granulation of fine-grade Grayson Holding line silicon.

Benefits

Estimated purity of the obtained product is 99,9999999% - 99,999999999% (9N-11N).

Feature

Production line provides for granulation module. Range of granule size is 0,1-1,0 mm.

Application

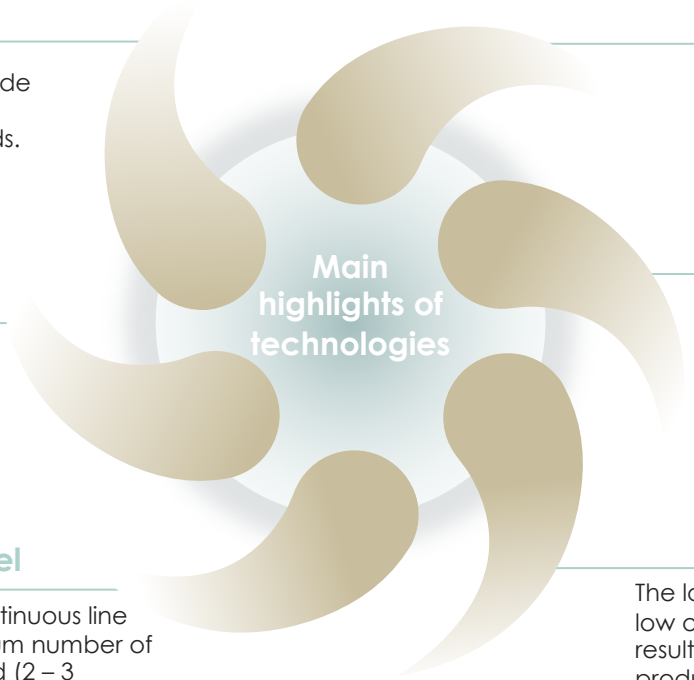
Perfect solution for monocrystalline silicon crystal grown with the further production of the highest quality silicon wafers.

The Technology for Industrial Production
of High-Purity Silicon Carbide

SiC

Developed by Grayson Holding C.V

Production of high-purity silicon carbides (SiC-1, SiC-2, SiC-3)



Product

The high-purity silicon carbide powder of semiconductor quality for electronics needs.

Production

The unique thermochemical processing for integration on an industrial scale.

Premises

Technologies do not require sterile workshops or clean rooms. Production processes occur inside the process equipment closed from the outdoor environment.

Process

All production processes are automated and occur on a continuous mode.

Personnel

To maintain the continuous line operation, a minimum number of personnel is required (2 – 3 employees for one process line)

Cost Price

The low cost of raw material and low operating costs of production result low cost price of the product.

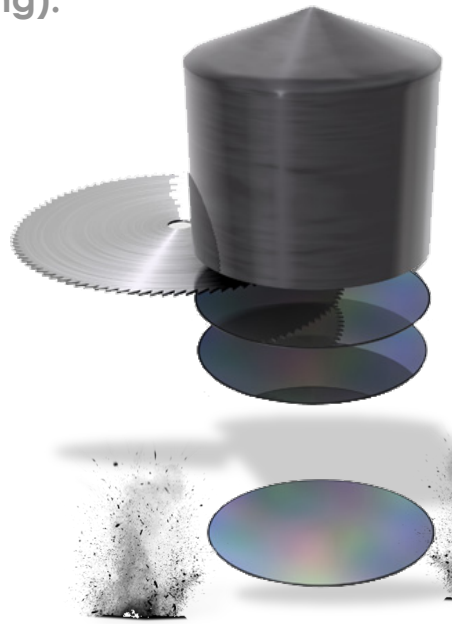
High-purity silicon carbide (SiC-1)

The technology of silicon carbide obtainment from wastes of monocrystalline silicon crystal processing when producing solar batteries (ingot slicing).

Purity – 99,999+%

Polytype - 6H

Density – 1,0 g/sm³



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Phone: (012) 539-34-40, (050) 362/04/05
Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 1
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

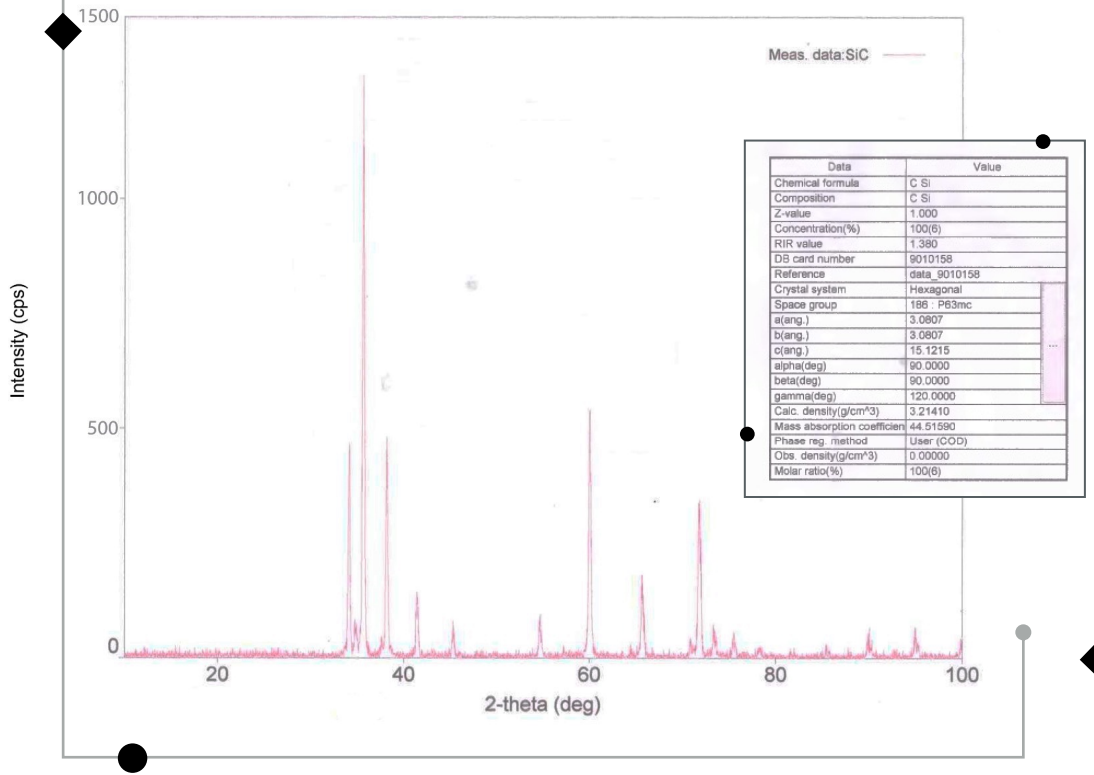
Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiC – 1
1	Sodium (Na)	0.782
2	Magnesium (Mg)	0.380
3	Potassium (K)	0.236
4	Calcium	1.186
5	Vanadium	1.871
6	Chromium (Cr)	0.062
7	Manganese (Mn)	0.021
8	Nickel (Ni)	0.055
9	Copper (Cu)	0.041
10	Sinc (Zn)	0.090
11	Barium (Ba)	0.073
12	Mercury (Hg)	0.059
13	Lead (Pb)	0.024
14	Kadmium (Cd)	0.001
15	İron (Fe)	2.127

SiC – 99,9993%

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev
B.A.Babayeva
S.V.Gurbanova

High-purity silicon carbide (SiC-1)

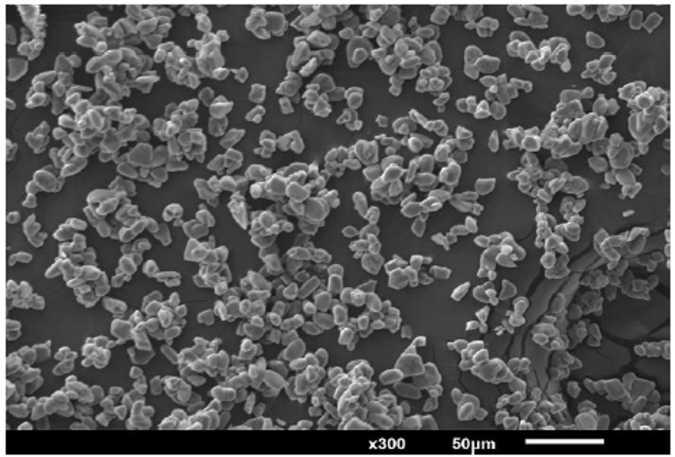


Data	Value
Chemical formula	C Si
Composition	C Si
Z-value	1.000
Concentration(%)	100(6)
RIR value	1.380
DB card number	9010158
Reference	data_9010158
Crystal system	Hexagonal
Space group	186 : P63mc
a(ang.)	3.0807
b(ang.)	3.0807
c(ang.)	15.1215
alpha(deg)	90.0000
beta(deg)	90.0000
gamma(deg)	120.0000
Calc. density(g/cm^3)	3.21410
Mass absorption coefficien	44.51590
Phase reg. method	User (COD)
Obs. density(g/cm^3)	0.00000
Molar ratio(%)	100(6)

Particle size distribution by SEM/EDS

#	SIZE OF PARTICLES, µm	UNIT	RESULT	METHOD
3	d < 10	Particles count, %	14.6	SEM/EDS
	10< d < 20		63.7	
	20 < d < 30		20.2	
	30 < d < 40		1.5	
	40 < d < 50		0.0	
	d >50		0.0	

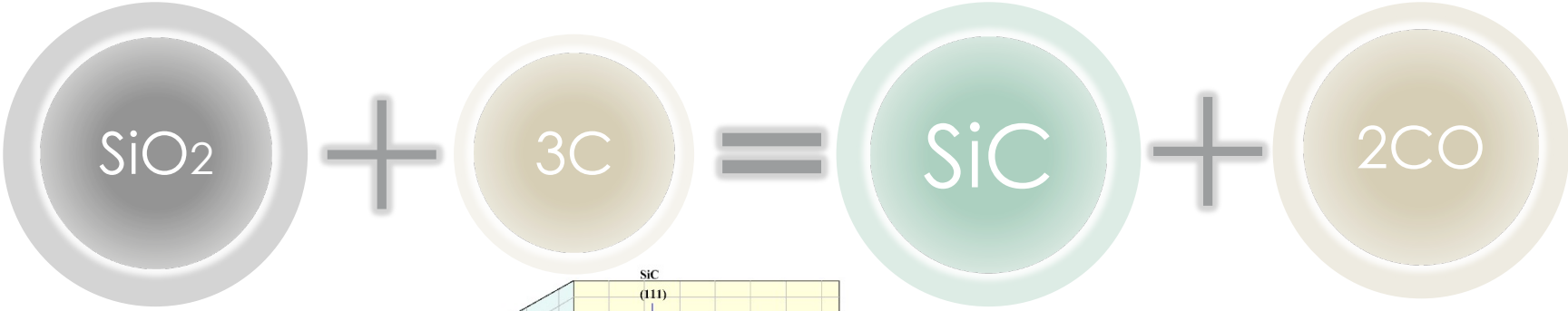
Picture 2.2.2 Common view of particles.



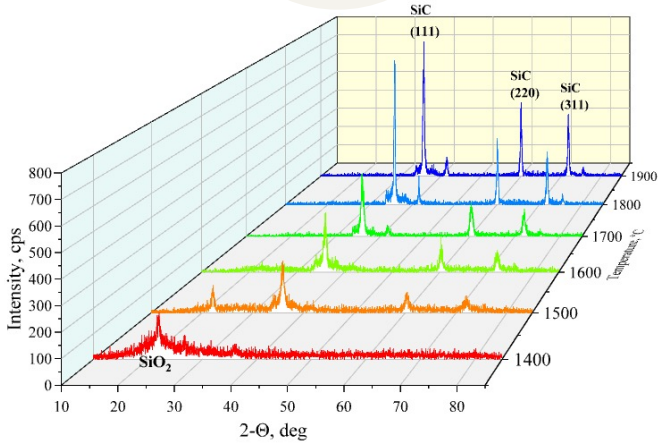
High-purity silicon carbide (SiC-2)

Synthesis technology from amorphous silicon dioxide and ash less carbon.

Amorphous silicon dioxide and ash less carbon which have been obtained by our technologies are in the processing.

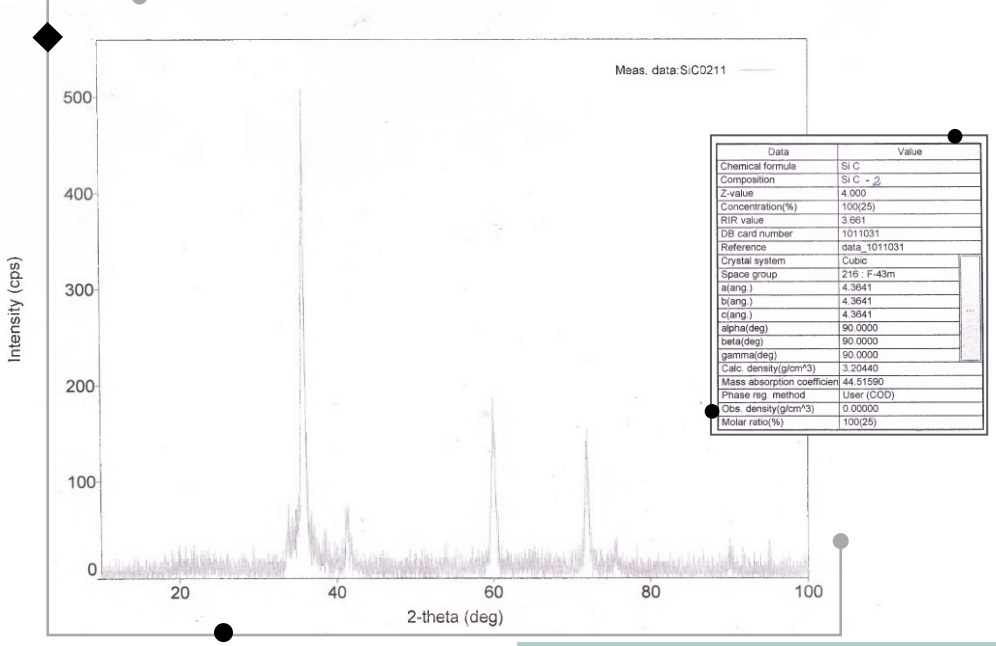


It was found that velocity of temperature and duration of synthesis directly affect product quality.



Temperature, °C	1400	1500	1600	1700	1800	1900
Chemical formula	SiO_2	SiC/SiO_2	SiC/SiO_2	SiC	SiC	SiC
Concentration, %	100	79/21	94/6	100	100	100
Crystal system	amorphous	cubic/ tetragonal	cubic/ tetragonal	cubic	cubic	cubic
Space group		216: *F*-43*m*/ 92: P41212	216: *F*-43*m*/ 92: P41212	216: *F*-43*m*	216: *F*-43*m*	216: *F*-43*m*
a, Å		4,3365/ 4,9636	4,3365/ 4,9636	4,3415	4,3477	4,3575
b, Å		4,3365/ 4,9636	4,3365/ 4,9636	4,3415	4,3477	4,3575
c, Å		4,3365/ 6,9223	4,3365/ 6,9223	4,3415	4,3477	4,3575
L, nm		17,70	18,50	21,30	46,60	36,60

High-purity silicon carbide (SiC-2)



Data	Value
Chemical formula	Si C
Composition	Si C - 2
Z-value	4.000
Concentration(%)	100(25)
RIR value	3.661
DB card number	1011031
Reference	data_1011031
Crystal system	Cubic
Space group	216 : F-43m
a(ang.)	4.3641
b(ang.)	4.3641
c(ang.)	4.3641
alpha(deg)	90.0000
beta(deg)	90.0000
gamma(deg)	90.0000
Calc. density(g/cm^3)	3.20440
Mass absorption coefficien	44.51590
Phase reg. method	User (COD)
Obs. density(g/cm^3)	0.00000
Molar ratio(%)	100(25)

Low density is the distinctive feature of the material, provides the widest range of application for composite materials as well as in hard thermal barrier coatings.

- Purity – 99,999+%
- Polytype - 3C
- Structure – cubic
- Density – 0,12 g/sm³
- Particle size < 50 micron

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Phone: (012) 539-34-40, (050) 362/04/05
Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 2
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

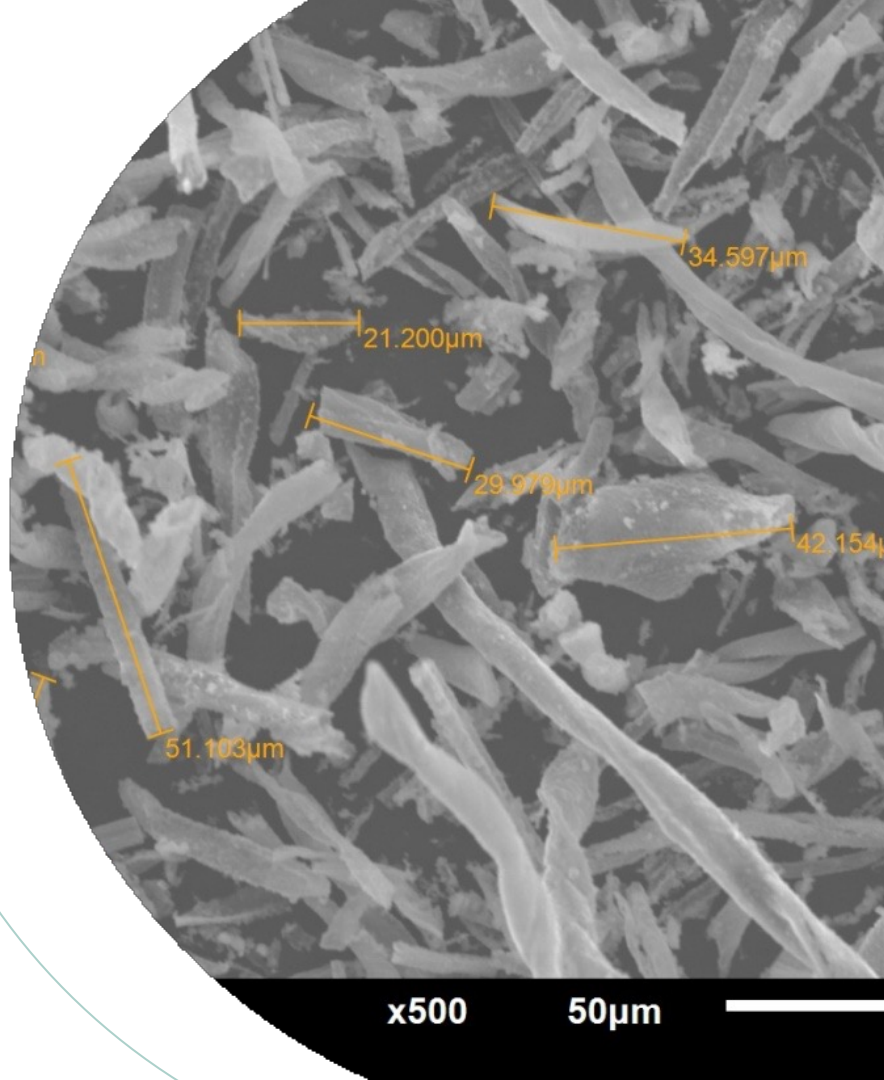
Ordinal number	Definable element	SiC – 2
1	Sodium (Na)	2.664
2	Magnesium (Mg)	0.370
3	Potassium (K)	1.311
4	Calcium	4.453
5	Vanadium	2.387
6	Chromium (Cr)	0.059
7	Manganese (Mn)	0.071
8	Nickel (Ni)	0.144
9	Copper (Cu)	0.122
10	Sinc (Zn)	0.061
11	Barium (Ba)	0.110
12	Mercury (Hg)	0.011
13	Lead (Pb)	0.055
14	Kadmium (Cd)	<0.001
15	İron (Fe)	2.992

SiC – 99,9988%

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev
B.A.Babayeva
S.V.Gurbanova

High purity silicon carbide (SiC-3)

1. Fibrous structure
2. Length - up to 100 micron
3. Diameter - to 20 micron
4. Density - 0,1 g/sm³
5. Purity – 99,999+%



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Phone: (012) 539-34-40, (050) 362/04/05
Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 3
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	ICP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiC – 3
1	Sodium (Na)	0.052
2	Magnesium (Mg)	0.016
3	Potassium (K)	0.041
4	Calcium	0.040
5	Vanadium	0.010
6	Chromium (Cr)	<0.001
7	Manganese (Mn)	<0.001
8	Nickel (Ni)	0.001
9	Copper (Cu)	<0.001
10	Sinc (Zn)	<0.001
11	Barium (Ba)	<0.001
12	Mercury (Hg)	0.001
13	Lead (Pb)	<0.001
14	Kadmium (Cd)	<0.001
15	İron (Fe)	0.007

SiC – 99,9998%

Head of centre: N.M.Sadygov
Analytics : M.I.Abdullayev
B.A.Babayeva
S.V.Gurbanova

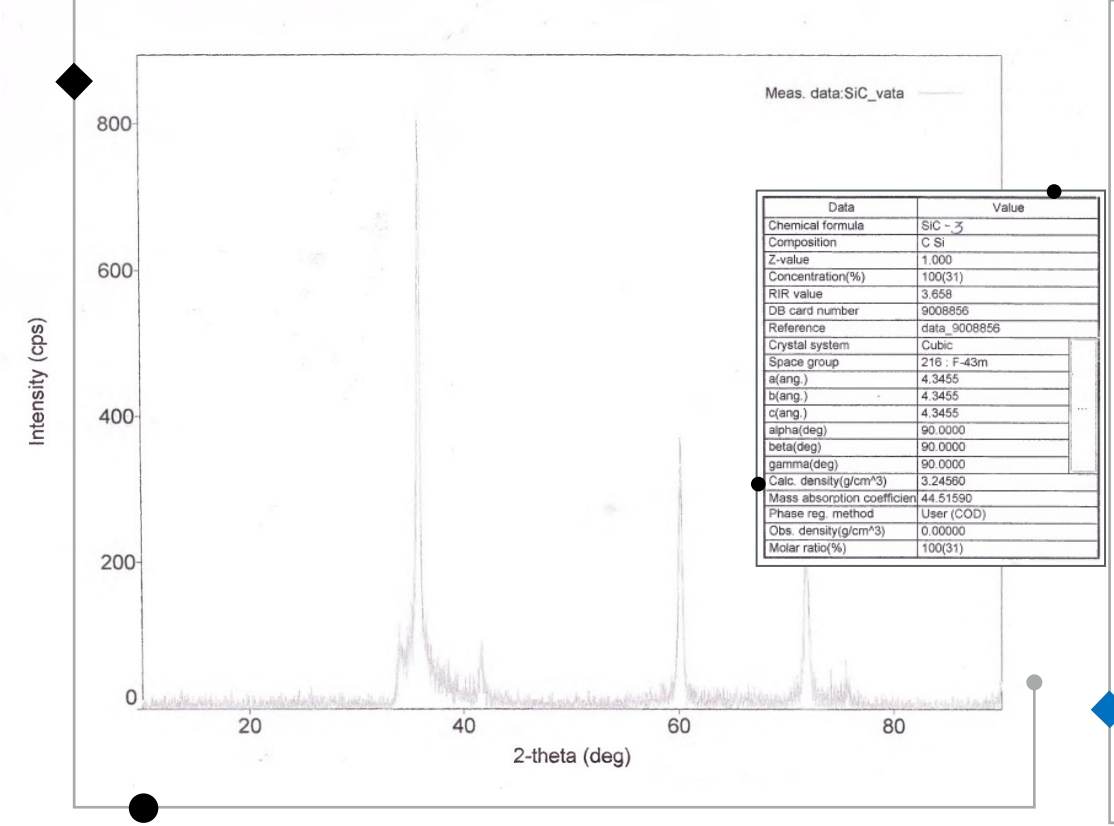
High purity silicon carbide (SiC-3)

1 **Technology of silicon carbide fibers obtainment.**

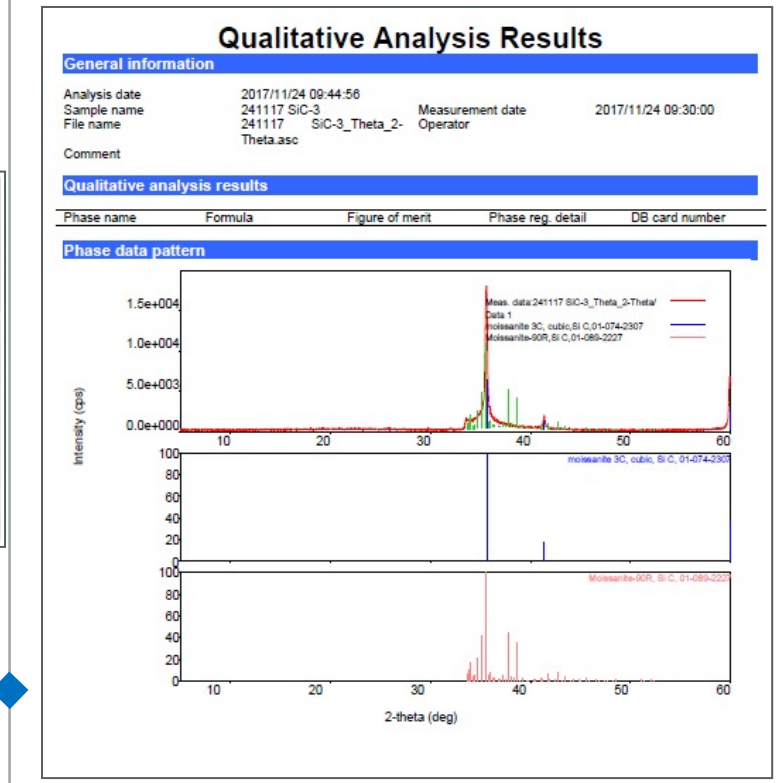
2 The raw material for the technology is amorphous silica of low density.
The output material synthesis stands out for its light weight.

3 The technology provides continuous industrial production line with estimated efficiency of 15 kg per hour.

High purity silicon carbide (SiC-3)



Data	Value
Chemical formula	SiC ~ 3
Composition	C Si
Z-value	1.000
Concentration(%)	100(31)
RIR value	3.658
DB card number	9008856
Reference	data_9008856
Crystal system	Cubic
Space group	216 : F-43m
a(ang.)	4.3455
b(ang.)	4.3455
c(ang.)	4.3455
alpha(deg)	90.0000
beta(deg)	90.0000
gamma(deg)	90.0000
Calc. density(g/cm^3)	3.24560
Mass absorption coefficien	44.51590
Phase reg. method	User (COD)
Obs. density(g/cm^3)	0.00000
Molar ratio(%)	100(31)



Qualitative Analysis Results

General information

Analysis date	2017/11/24 09:44:56		
Sample name	241117 SiC-3	Measurement date	2017/11/24 09:30:00
File name	241117 SiC-3_Theta_2-Theta.asc	Operator	
Comment			

Qualitative analysis results

Phase name	Formula	Figure of merit	Phase reg. detail	DB card number

Phase data pattern

Application of Silicon Carbides (SiC-1, SiC-2, SiC-3)

Nuclear Industry

SiC is an important material in TRISO-coated fuel particles, the type of nuclear fuel found in high temperature gas cooled reactors such as PBR.
A layer of SiC gives coated fuel particles structural support and is the main diffusion barrier of the release of fission product.

Ceramic coatings

SiC – coating of metal units and details allow to apply the constructions in conditions of high temperatures up to 1300°C, when corrosive vapors of acids and basis become affective.

Composite materials

Well known and widely used oxygen-free matter.
Mechanically robust, durable, with low thermal expansion coefficient and oxygen resistance at up to 1500°C.

Jewelry

SiC is used for monocrystalline "synthetic moissanite" crystal growth. Moissanite is similar to a diamond in respect to it's transparency, hardness and high refractive index.

Electronics

Electronic components produced of silicon carbide have well above capabilities comparing to details made of ordinary semiconductor matters (e.g. silicon)
Band gap: 2,36-3,23 eV. The electrical breakdown field of silicon carbide exceeds silicon almost in ten times.

Military hardware

Chemicals and radiation resistant.
It's applied in Stealth-technologies for covering of military equipment and arming from detection. The dense material is perfect for body and vehicles armoring application.

Metallurgy

The fine fractions silicon carbide if added to melt drastically changes metal properties. For instance magnesium may become matter of high plasticity and fire resistance. The aluminum case shows the increased hardness and durability with preserving plastic properties.

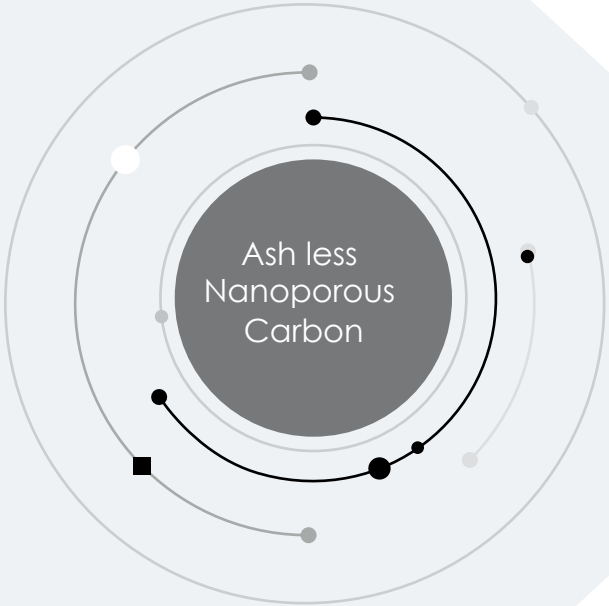
Photovoltaics

SiC supports to optimize optical and photoelectrical parameters of solar elements. The use of SiC converters eliminates power losses and also increases efficiency of energy conversion up to 99,2%

The Technology for Industrial Production of High-Purity Carbon

C

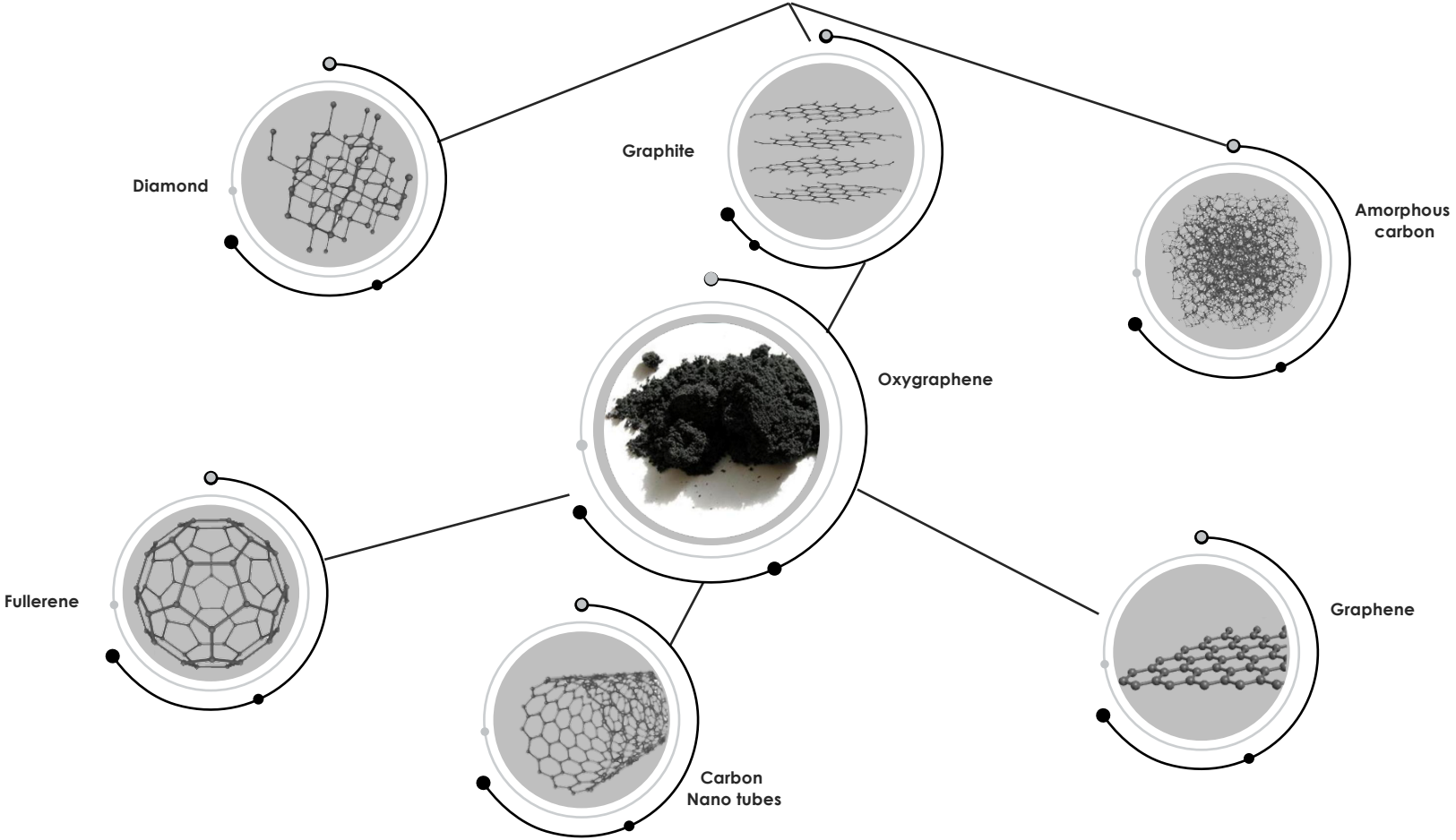
Developed by Grayson Holding C.V



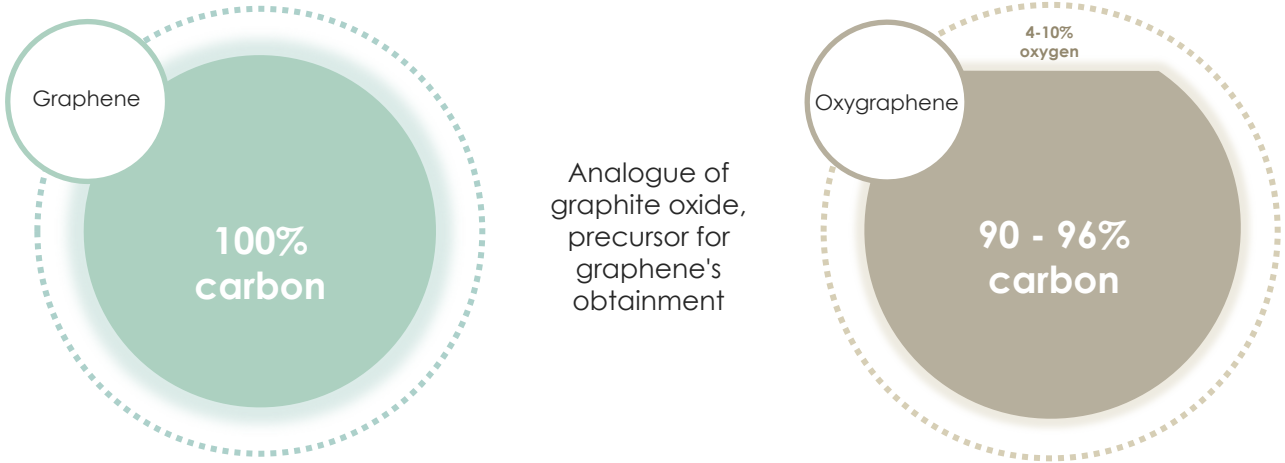
- Perfect for semi conductive shells of power cables
- Used for various purposes of sorbent production
- Applied for synthesis of high purity metal carbides
- Indispensable in catalyst carrier production
- Electrode material for double layer capacitors (super capacitors)
- Ideal matter for electrically conductive construction polymers

Purity	%	≥ 99,99
Particle size	micron	≤ 50
Specific surface area	m^2/g	≥ 500
Pore size	nm	5 ÷ 10
Humidity	%	≤ 0,5

Allotropes of carbon



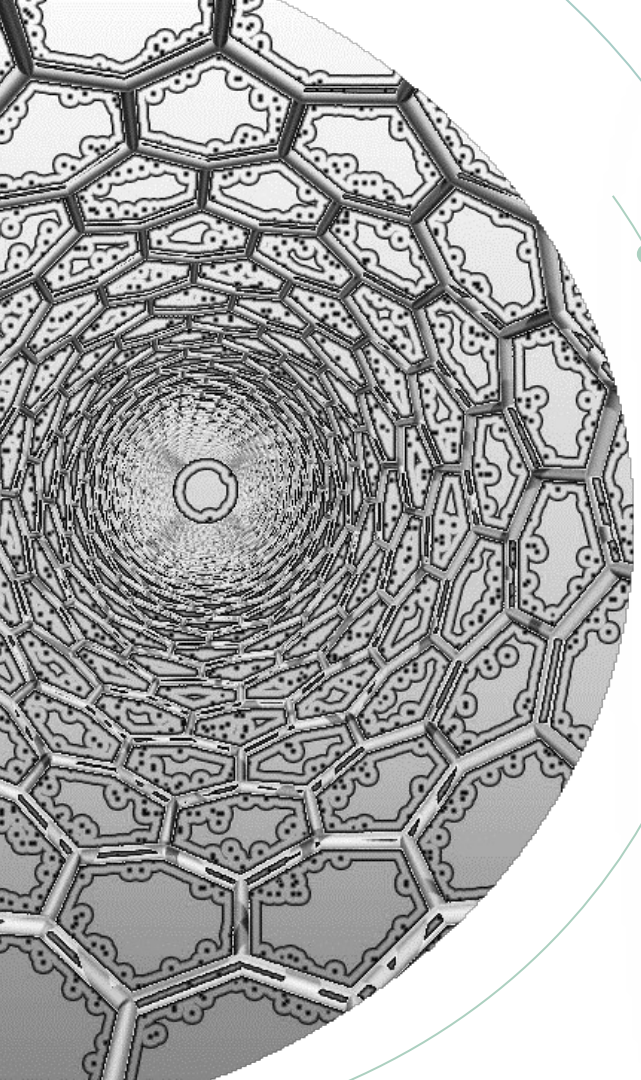
Oxygraphene



Oxygraphene properties

Doesn't melt or destroy at the heating temperature up to 3000°C in the neutral gas or vacuum environment.	Chemically neutral and corrosion- resistant to solvents, acids and bases impact.	Has the unique potential to improve material properties if interact with them.	

Purity	%	≥ 99,9
Density	g/sm³	0,03 – 0,05
Specific surface area	m²/g	≥ 300
Thermal resistance in outer environment	°C	≤ 600



Ox graphene

Application

- Fillers of the composite nonstructural Nano materials;
- Electrically conductive polymer materials;
- Lubricant components;
- Carbon electrodes of lithium batteries;
- Catalysts carriers;
- Sorbents. Drug carriers;
- Antioxidants in cosmetics;
- Super capacitors;
- High capacity batteries;
- Optoelectronics;
- etc.

Advantages

- Multifunctional;
- Low cost price;
- High purity;
- Availability of raw materials;
- High technology;
- Synthesized materials of high quality;
- Specified properties of obtained materials;
- Environmentally friendly process.

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RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	SiC– 2
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mq/kq

Ordinal number	Definable element	SiC – 2
1	Boron (B)	0,007
2	Sodium (Na)	1,625
3	Magnesium (Mg)	1,717
4	Aluminium (Al)	0,313
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,282
7	Vanadium (V)	0,207
8	Chromium (Cr)	0,017
9	Manganese (Mn)	0,013
10	İron (Fe)	1,257
11	Nickel (Ni)	0,145
12	Copper (Cu)	0,052
13	Sinc (Zn)	0,083
14	Arsenic (As)	0,007
15	Selenium (Se)	0,003
16	Kadmium (Cd)	<0,001
17	Barium (Ba)	0,099
18	Mercury (Hg)	1,089
19	Lead (Pb)	0,077

SiC –99,9993 %

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev

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RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	Si– 1
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mq/kq

Ordinal number	Definable element	Si – 1
1	Boron (B)	0,012
2	Sodium (Na)	2,146
3	Magnesium (Mg)	0,337
4	Aluminium (Al)	0,391
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,158
7	Vanadium (V)	2,389
8	Chromium (Cr)	0,214
9	Manganese (Mn)	0,018
10	İron (Fe)	2,576
11	Nickel (Ni)	0,015
12	Copper (Cu)	0,546
13	Sinc (Zn)	0,010
14	Arsenic (As)	<0,001
15	Selenium (Se)	0,002
16	Kadmium (Cd)	0,006
17	Barium (Ba)	0,169
18	Mercury (Hg)	<0,001
19	Lead (Pb)	0,525

Si – 99,9990 %

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RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	Si – 3
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mq/kq

Ordinal number	Definable element	Si – 3
1	Boron (B)	0,008
2	Sodium (Na)	0,655
3	Magnesium (Mg)	0,403
4	Aluminium (Al)	0,184
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,248
7	Vanadium (V)	0,565
8	Chromium (Cr)	0,106
9	Manganese (Mn)	0,017
10	İron (Fe)	1,115
11	Nickel (Ni)	<0,001
12	Copper (Cu)	0,102
13	Sinc (Zn)	<0,001
14	Arsenic (As)	0,006
15	Selenium (Se)	0,003
16	Kadmium (Cd)	<0,001
17	Barium (Ba)	0,3220
18	Mercury (Hg)	0,001
19	Lead (Pb)	0,010

Si –99,9996 %

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SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 1
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiC – 1
1	Sodium (Na)	0.782
2	Magnesium (Mg)	0.380
3	Potassium (K)	0.236
4	Calcium	1.186
5	Vanadium	1.871
6	Chromium (Cr)	0.062
7	Manganese (Mn)	0.021
8	Nickel (Ni)	0.055
9	Copper (Cu)	0.041
10	Sinc (Zn)	0.090
11	Barium (Ba)	0.073
12	Mercury (Hg)	0.059
13	Lead (Pb)	0.024
14	Kadmium (Cd)	0.001
15	İron (Fe)	2.127

SiC – 99,9993%

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev
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Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 2
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiC – 2
1	Sodium (Na)	2.664
2	Magnesium (Mg)	0.370
3	Potassium (K)	1.311
4	Calcium	4.453
5	Vanadium	2.387
6	Chromium (Cr)	0.059
7	Manganese (Mn)	0.071
8	Nickel (Ni)	0.144
9	Copper (Cu)	0.122
10	Sinc (Zn)	0.061
11	Barium (Ba)	0.110
12	Mercury (Hg)	0.011
13	Lead (Pb)	0.055
14	Kadmium (Cd)	<0.001
15	İron (Fe)	2.992

SiC – 99,9988%

Head of centre: N.M.Sadygov
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Time:24.11.2017

SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiC – 3
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiC – 3
1	Sodium (Na)	0.052
2	Magnesium (Mg)	0.016
3	Potassium (K)	0.041
4	Calcium	0.040
5	Vanadium	0.010
6	Chromium (Cr)	<0.001
7	Manganese (Mn)	<0.001
8	Nickel (Ni)	0.001
9	Copper (Cu)	<0.001
10	Sinc (Zn)	<0.001
11	Barium (Ba)	<0.001
12	Mercury (Hg)	0.001
13	Lead (Pb)	<0.001
14	Kadmium (Cd)	<0.001
15	İron (Fe)	0.007

SiC – 99,9998%

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev
B.A.Babayeva
S.V.Gurbanova

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SERTİFİCATE

Customer	Karborundas
Analysis object	powder
Customer name	SiO_2
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , - mg/l (PPm)

Ordinal number	Definable element	SiO_2
1	Sodium (Na)	0.807
2	Magnesium (Mg)	0.294
3	Potassium (K)	0.240
4	Calcium	2.010
5	Vanadium	0.712
6	Chromium (Cr)	0.007
7	Manganese (Mn)	0.006
8	Nickel (Ni)	0.002
9	Copper (Cu)	0.030
10	Sinc (Zn)	0.019
11	Barium (Ba)	0.023
12	Mercury (Hg)	0.003
13	Lead (Pb)	0.007
14	Kadmium (Cd)	<0.001
15	İron (Fe)	0.582

SiO_2 – 99,9995%

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Date:10.09.2018

RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	Si– 5
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , ppm

Ordinal number	Definable element	Si – 5
1	Boron (B)	0,002
2	Sodium (Na)	0,013
3	Magnesium (Mg)	0,007
4	Aluminium (Al)	0,009
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,007
7	Vanadium (V)	0,011
8	Chromium (Cr)	0,003
9	Manganese (Mn)	0,002
10	İron (Fe)	0,012
11	Nickel (Ni)	0,002
12	Copper (Cu)	0,009
13	Sinc (Zn)	0,001
14	Arsenic (As)	<0,001
15	Selenium (Se)	<0,001
16	Kadmium (Cd)	<0,001
17	Barium (Ba)	0,002
18	Mercury (Hg)	<0,001
19	Lead (Pb)	0,009

Si – 99,999991 %

Head of centre: N.M.Sadygov
Analytics : M.İ.Abdullayev

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Date:10.09.2018

RAPORT

Customer	Karborundas
Analysis object	powder
Customer name	Si– 4
Sample selection	*from the customer's side*
Types of analysis	*physicochemical*
Equipment	İCP MS 7700 e
Number of samples	1

Analysis of submitted sample , ppm

Ordinal number	Definable element	Si – 4
1	Boron (B)	0,004
2	Sodium (Na)	0,073
3	Magnesium (Mg)	0,027
4	Aluminium (Al)	0,041
5	Phosphorus (P)	<0,001
6	Potassium (K)	0,038
7	Vanadium (V)	0,086
8	Chromium (Cr)	0,017
9	Manganese (Mn)	0,009
10	İron (Fe)	0,094
11	Nickel (Ni)	0,008
12	Copper (Cu)	0,097
13	Sinc (Zn)	0,005
14	Arsenic (As)	<0,001
15	Selenium (Se)	<0,001
16	Kadmium (Cd)	0,002
17	Barium (Ba)	0,015
18	Mercury (Hg)	<0,001
19	Lead (Pb)	0,086

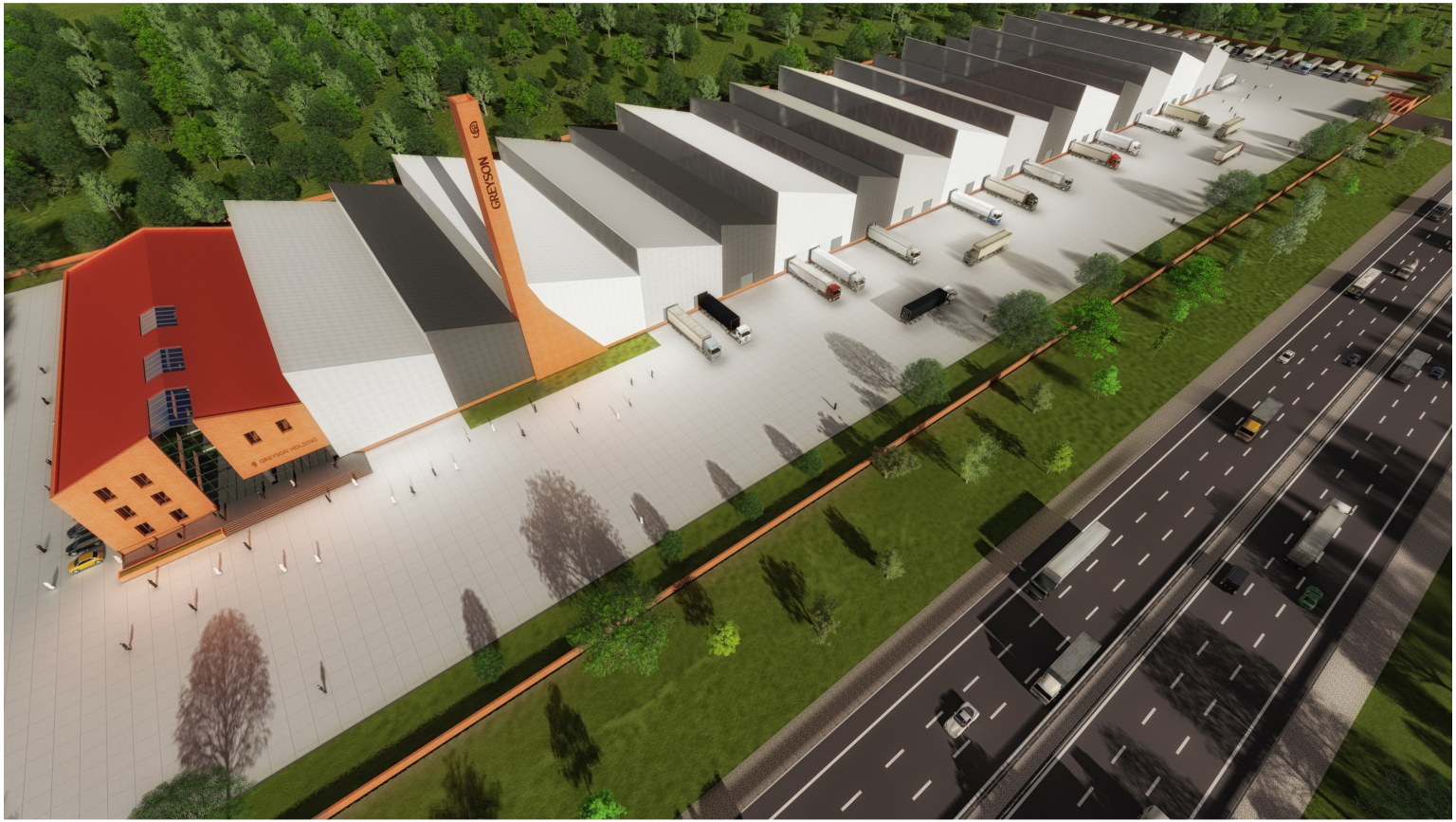
Si – 99,99994 %

Head of centre: N.M.Sadygov

Analytics : M.İ.Abdullayev


GREYSON HOLDING
GREYSON

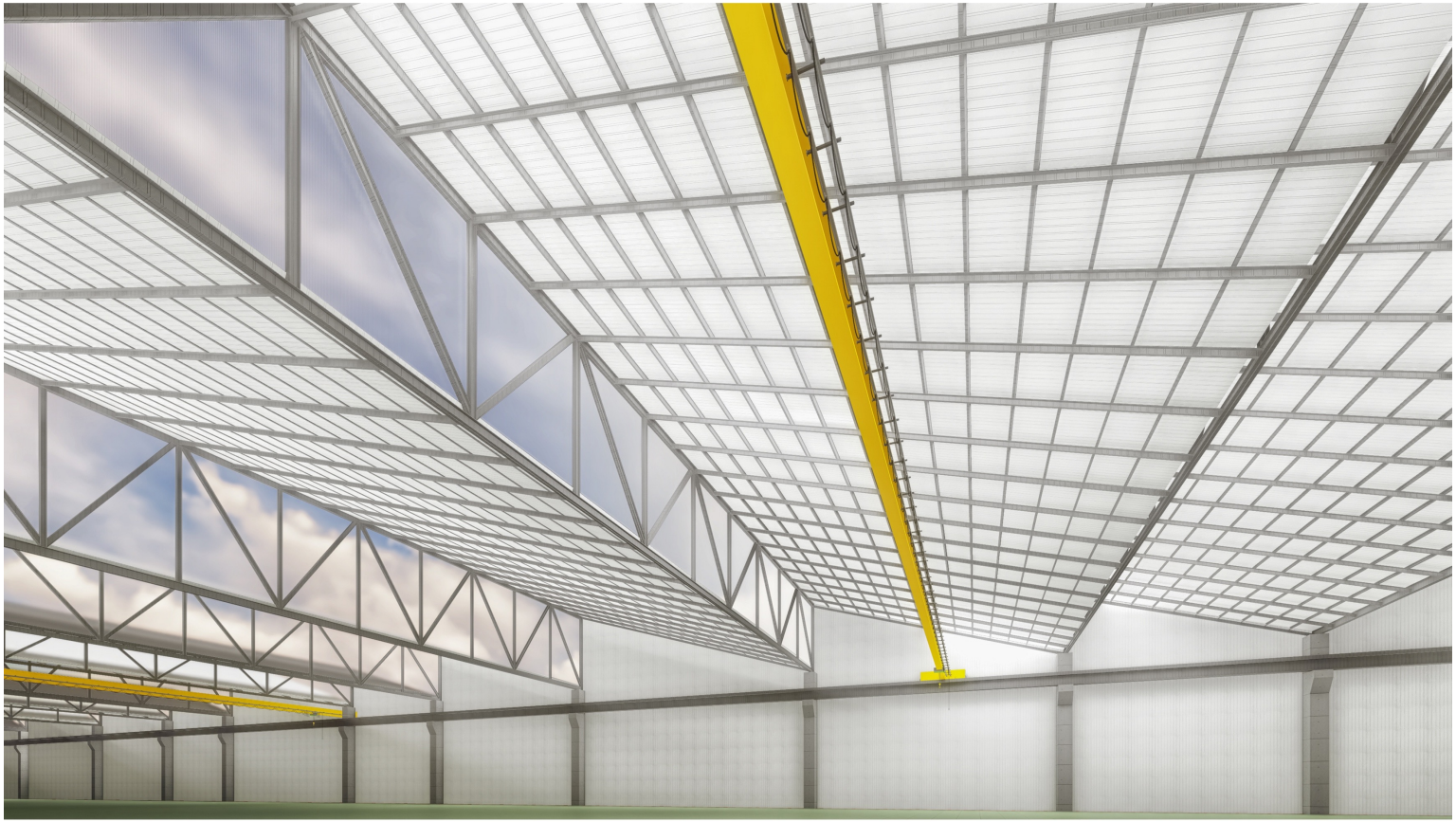

GREYSON HOLDING

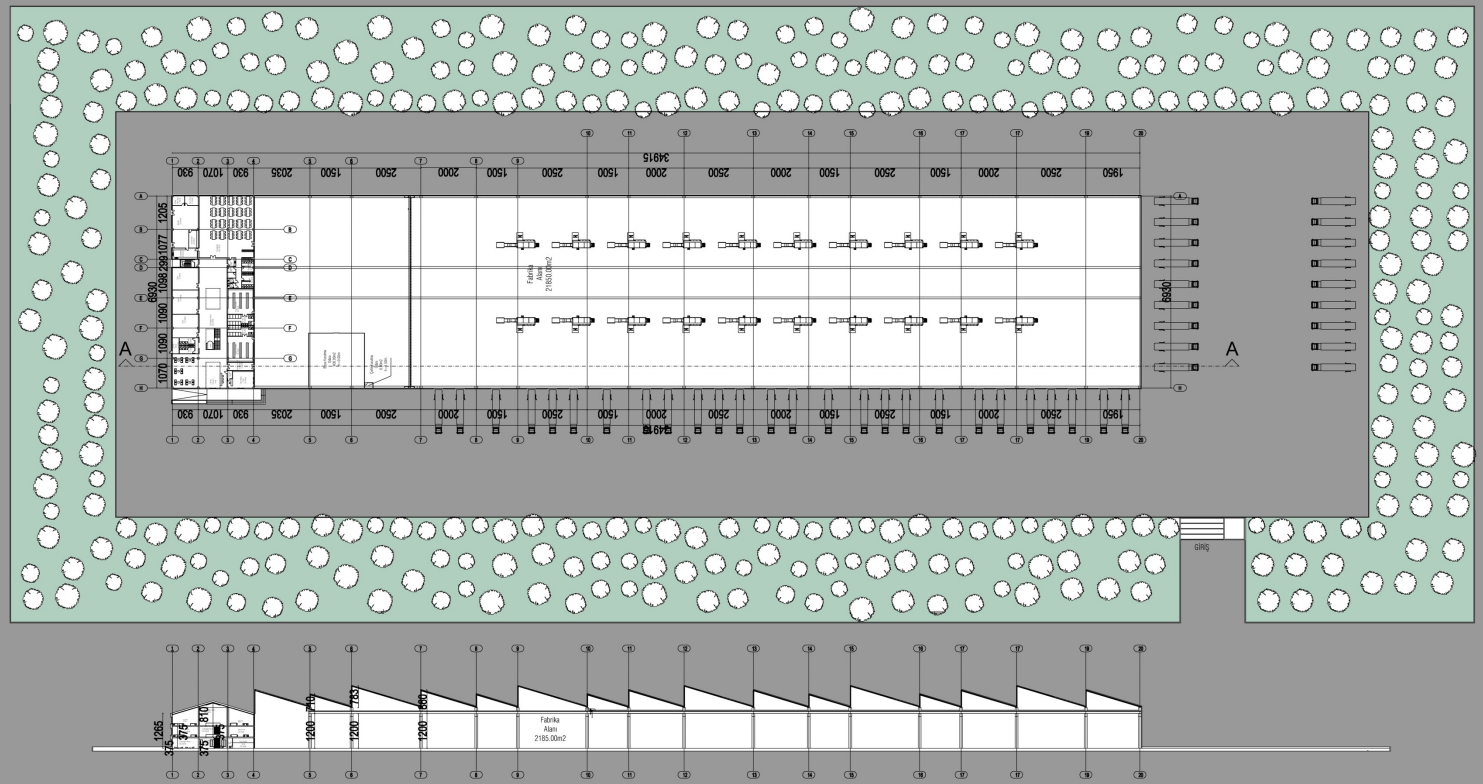

GREYSON


GREYSON


GREYSON HOLDING


GREYSON





ZEMİN VAZİYET PLANI


A
6930
1070
1090
1090
1098
299
1077
1205
ŞOFÖR ODASI 14.10m2
Depo 110.00m2
Depo 115.00m2
Depo 70.00m2
Yangın Merdiveni 4.60m2
Bay WC 15.20m2
Bayan WC 15.20m2
Bulaşıkhane 35.00m2
Mutfak 125.00m2
Soğuk Hava Depo 17.00m2
Servis Alanı 23.00m2
Kuru Depo 17.00m2
930
Fabrika Yönetim Girişi
Asansör
Sirkülasyon Alanı 585.00m2
Yemekhane 450.00m2
1070
Gük. Odası 7.60m2
Fabrika İşçi Girişi 63.00m2
Fabrika Yönetim Sirkülasyon 27.00m2
Soyunma Odası 90.00m2
wc-duş 40.00m2
wc-duş 40.00m2
Soyunma Odası 90.00m2
Ütü Odası 6.40m2
Ütü Odası 6.40m2
Bebek Bakım 6.40m2
Çay Ocağı 7.30m2
Bay WC 23.00m2
Bayan WC 22.00m2
930
A
FABRİKA ALANI

Z. KAT PLANI


A
7000
1070
1090
1090
1098
299
1077
1205
930
3000
1070
Açık Ofis
420.00m2
Asansör
Sirkülasyon Alanı
350.00m2
Depo
200.00m2
İdari Birim
34.50m2
Bay WC
23.00m2
Bayan WC
22.00m2
A
FABRİKA ALANI

1. KAT PLANI


A
A
7000
1070
1090
1090
1098
299
1077
1205
930
3000
1070
Sirkülasyon Alanı
350.00m2
Konferans Salonu
670.00m2
Botanik Bahçe
98.00m2
Kafe
35.00m2
Bayan WC
22.00m2
F A B R İ K A A L A N I

2. KAT PLANI