



Parizfan of Gahar Industrial Co.Ltd

Carbon and graphite based materials





Introduction:

PARIZFAN OF GAHAR Co. acts with its brand as PARIZFAN.

Our background in manufacture research of carbon-based products is over than 25 years and the wide field of our funding to provide raw materials for different fields includes: graphite slabs, graphite blocks, based graphite refractory materials, graphite crucibles, metallurgy coke, coal & anthracite, all grades of natural flake graphite powder, carbon black, carbon active, carbon felt and other carbon-based materials and also as a separative investment topic however that our main professional is based on above products we also can supply: IRON SPONGE and Ferro Alloys as the main raw materials for Steel industries and our customers, In addition to strong presence at native market in many different fields we have a good background to export our products to our neighbor countries. Our main reason for succeed is our serious on excellent quality of product to obey the international standards for the raw materials and production process of them. so our customer's confirmation is our main reference for this subject.





Graphite Electrode:

Our company provides this product in different grades: RP, HP, UHP, SUHP (Super Ultra-High Power) to be used at steel industries & steel alloys industries and etc as follows:

Dia: 75 / 100 / 150 / 200 / 225 / 250 / 300 / 350 / 400 / 450 / 500 / 550 / 600mm / 700mm. Length: 1000mm-2700mm.

Physical Properties		RP Grade (Dia.50-700mm)	HP Grade (Dia.50-700mm)	UHP Grade (Dia.50-700mm)	SUHP Grade (Dia.50-700mm)
Electrical Resistance (max) $\mu\Omega$ -m	Electrode	8.0	7.0	6.0	5.0
	Nipple	6.5	5.5	5.0	4.0
Bending Strength (min) Mpa	Electrode	11.0	12.0	12.0	13.0
	Nipple	14.0	14.0	16.0	16.0
Elastic Modulus (max) Gpa	Electrode	9.0	12.0	12.0	12.0
	Nipple	12.0	14.0	14.0	14.0
Bulk Density (min) g/cm ³	Electrode	1.55	1.65	1.68	1.70
	Nipple	1.60	1.70	1.78	1.80
C.T.E (max) $\times 10^{-6}/C$	Electrode	2.7	2.5	2.4	2.4
	Nipple	2.5	2.2	2.0	1.8
Ash (max) %	Electrode	0.30	0.30	0.20	0.20

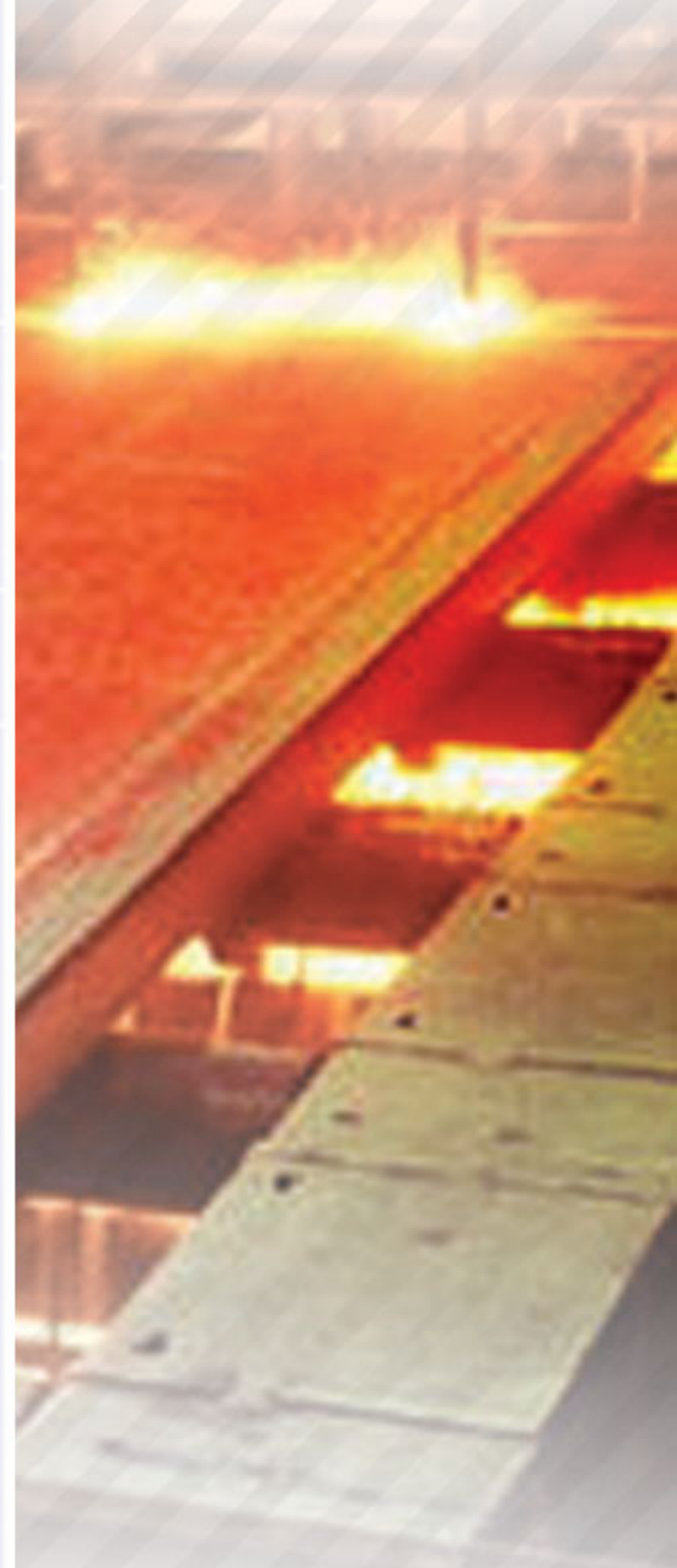




Graphite Blocks:

Graphite blocks with the following specifications are used in manufacturing of molten molds with high temperature and pressure, as well as superconductivity and making heat exchangers. their specifications are as follow:

Grade	Physical Properties					
	Particle Size mm	Flexural strength Mpa	Compressive strength Mpa	Electrical resistance $\mu\Omega$ -m	CTE $^{\circ}\text{C}/6-10\times$	Ash %
ZI_A3	0.2 \geq	18.0 \leq	68 \leq	10 \leq	2.8 \geq	0.1 \geq
ZI_A2	0.3 \geq	16.0 \leq	50 \leq	12 \leq		0.1 \geq
ZI_A1	0.5 \geq	16.0 \leq	45 \leq	14 \leq	2.6 \geq	0.1 \geq
ZI-A3	0.8 \geq	14.0 \leq	35 \leq	8.0 \leq	2.5 \geq	0.3 \geq
ZI-A2		13.5 \leq	30 \leq	8.5 \leq		
ZI-A1		13.0 \leq	28 \leq	9.0 \leq		
ZI-B3	2.0 \geq	13.5 \leq	32 \leq	5.5 \leq		
ZI-B2		13.0 \leq	30 \leq	6.5 \leq		
ZI-B1		12.0 \leq	25 \leq	7.0 \leq		
ZI-C2	4.0 \geq	13.0 \leq	30 \leq	7.5 \leq		
ZI-C1		12.0 \leq	25 \leq	8.0 \leq		





Graphite Crucibles:

Graphite Crucibles, are used in various metal smelting and casting industries, which are diverse in terms of the geometry and dimensions of this product, and our Company supply and make this product with the following specifications.

Size BN-ALUS	H (mm)	D (mm)	d (mm)	PTh (mm)	PLh (mm)	Water brimful capacity (L)
150	490	525	230	290		65.1
175	550	525	230	350		74.2
200	600	527	230	400		82.9
204	700	525	230	500		99.8
210	500	615	245	250		87.1
250	630	615	245	680		118.1
300	700	615	245	450		133.8
350	800	615	245	550		154.1
400	600	715	305		260	143.5
410	700	715	305		360	176.8
420	800	714	305		460	207.2
500	750	775	310	450		219.3
600	900	780	310	600		280.1
687	900	830	285			318.2
690	1000	830	285			362.2
750	880	875	350			330.1
750h900	900	880	350			339.5
800	1000	865	350	580	580	392.1
900	1100	880	350	680		440.7
1100	1170	880	350	750		475
1200	1250	880	350	830		514.1
1500h1300	1300	880	350			643.2





Calcined Petroleum Coke, GPC, Natural Flake Graphite(NFG):

Graphite Based products by granule shape are used in cast iron plants and Steel alloys industries, steelmaking, paint industries, brake pads industries, polymer industries & etc:
above products which are: GPC, CPC & Natural flake Graphite are Supplied by PARIZFAN CO.

General Specifications of GPC

Moisture	s	Ash	C	Size
0.5%Max	0.05%Max	0.3%Max	%98	0.5-1 mm 1-3 mm 1-5 mm

General Specifications of CPC

Fixed Carbon	wt%	92% Min	96% Min	98% Min
Sulfur	wt%	2% Max	0.6 Max	0.5% Max
Ash	wt%	2% Max	1% Max	0.5% Max
V.M	wt%	2% Max	2% Max	0.5% Max
Moisture	wt%	2% Max	0.5% Max	0.15 Max
Fe	wt%	0.05 Max	0.05 Max	0.05 Max
Si	wt%	0.02 max	0.02 max	0.02 max

Grain Size : 0-1 mm ,1-3mm ,1-5 mm

Specifications of Natural Flake Graphite Powder (NFG)

C	S	Ash	Moisture	Size
85-90% Min	5% Max	10% Max	1% Max	80 Mesh 100 Mesh 200 Mesh 250 Mesh 325 Mesh 400 Mesh





Carbon Black:

Among other carbon-based products, we can mention to carbon black, which Parizfan Co. supplies this product in 9 categories with the following standard specifications for various industries such as rubber, polymer, refractory industries, etc:

Grade	Iodin Number (mg/g)	D.B.P Absorption (ml/100g)	Tint Strength (ITRB)%	Toluene discoloration (min%)	Ash (max%)	Heating loss (max%)	Pour Density (gr/lit)	Pellet Crosh Strength (cn)	V.M%	PH
N220	116-126	109-119	111-121	80	1	2	320-370	10-40	1	7-9
N234	115-125	120-130	111-121	80	1	2	320-350	10-40	1	7-9
N326	77-87	97-107	99-109	80	1	2	430-480	10-40	1	7-9
N330	85-95	115-125	106-116	80	1	2	360-410	10-40	1	7-9
N339	85-95	100-110	100-110	80	1	2	330-380	10-40	1	7-9
N375	85-95	109-119	109-119	80	1	2	330-380	10-40	1	7-9
N550	38-48	116-126	58-68	80	1	2	340-400	10-40	1	7-9
N660	31-41	85-95	53-67	80	1	2	410-490	10-40	1	7-9
N772	24-36	67-77		80	1	2	520	10-40	1	7-9





Metallurgical Coke:

Among other carbon-based products that are obtained through the processing of coal tar and are mainly used in steelmaking and cast-iron industries, we can mention metallurgical coke, which is supplied by Parizfan Co. according to the following specifications:

Specifications:						
Fixed Carbon	Sulfur	Ash	Volatile matter	Moisture	P	Size
	max	max	max	max	max	mm
75	5.0	15.0	2.0	2.0	1.0	0-5,5-15,10-30,20-40
78	5.0	14.0	2.0	2.0	1.0	0-5,5-15,10-30,20-40
80	5.0	12.0	2.0	1.0	1.0	0-5,5-15,10-30,20-40





Thermal coal, Coal coke, Anthracite:

According to the diversity of the country's coal mines, Parizfan Co. supplies these goods according to the standard specifications for thermal and coal coke types based on the needs of different industries.

Coal coke Specifications	
C	55% Min
Plastometry	21 mm
V.M	25% Max
Ash	20% Max
Calorific value	5500 Kcal/Kg
Size	0-150 mm

Thermal Coal Specifications	
C	45-55%
S	2% Max
V.M	30-40%
Ash	15-20% Max
Calorific value	4200-5500 Kcal/Kg
Size	0-5 mm 5-25 mm 25< mm

Anthracite Specifications	
CALORIFIC VALUE (KCAL/KG)	6500 Min
C	75.0%
Moisture	5.0%max
Ash	10%max
Volatile matter	7.0%max
size	0-10mm , 10-30mm , 30-150mm





Carbon Active:

Carbon active is a natural coal which is applicable in water purification to delete the bad taste and chlorine smell and it is produced by our company from Organic charcoal in granule shape with high absorption Area, and standard porosity to absorb gases and chemical materials.

And our company is honor to provide for our customers their need for carbon active at the excellent quality.

Carbon Active Specifications

Lodine Number	700-1100	m2/g
Ash	8%	Max
Size	8 - 50	mesh
	0.5 - 3	mm
PH	7.0(min)	w/w
Moisture	5%	Max





Electrode Paste:

This product is used as a raw material in the feed of Arc furnaces at ferroalloys Production line, and our company provides this product with the followed Specifications:

Grade	TDH1	TDH2	TDH3	TDH4	TDH5
ASH(Max)	4%	5%	6%	7%	8%
Volatile Matter	12-15.5%	12-15.5%	9.5-13.5%	11.5-15.5%	11.5-15.5%
Compressive Strength(min)	17Mpa	15.7Mpa	19.6Mpa	19.6Mpa	19.6Mpa
Resistivity(max)	68 $\mu\Omega$ m	75 $\mu\Omega$ m	80 $\mu\Omega$ m	90 $\mu\Omega$ m	90 $\mu\Omega$ m
Bulk Density(min)	1.36gr/cm ³	1.36gr/cm ³	1.36gr/cm ³	1.36gr/cm ³	1.36gr/cm ³

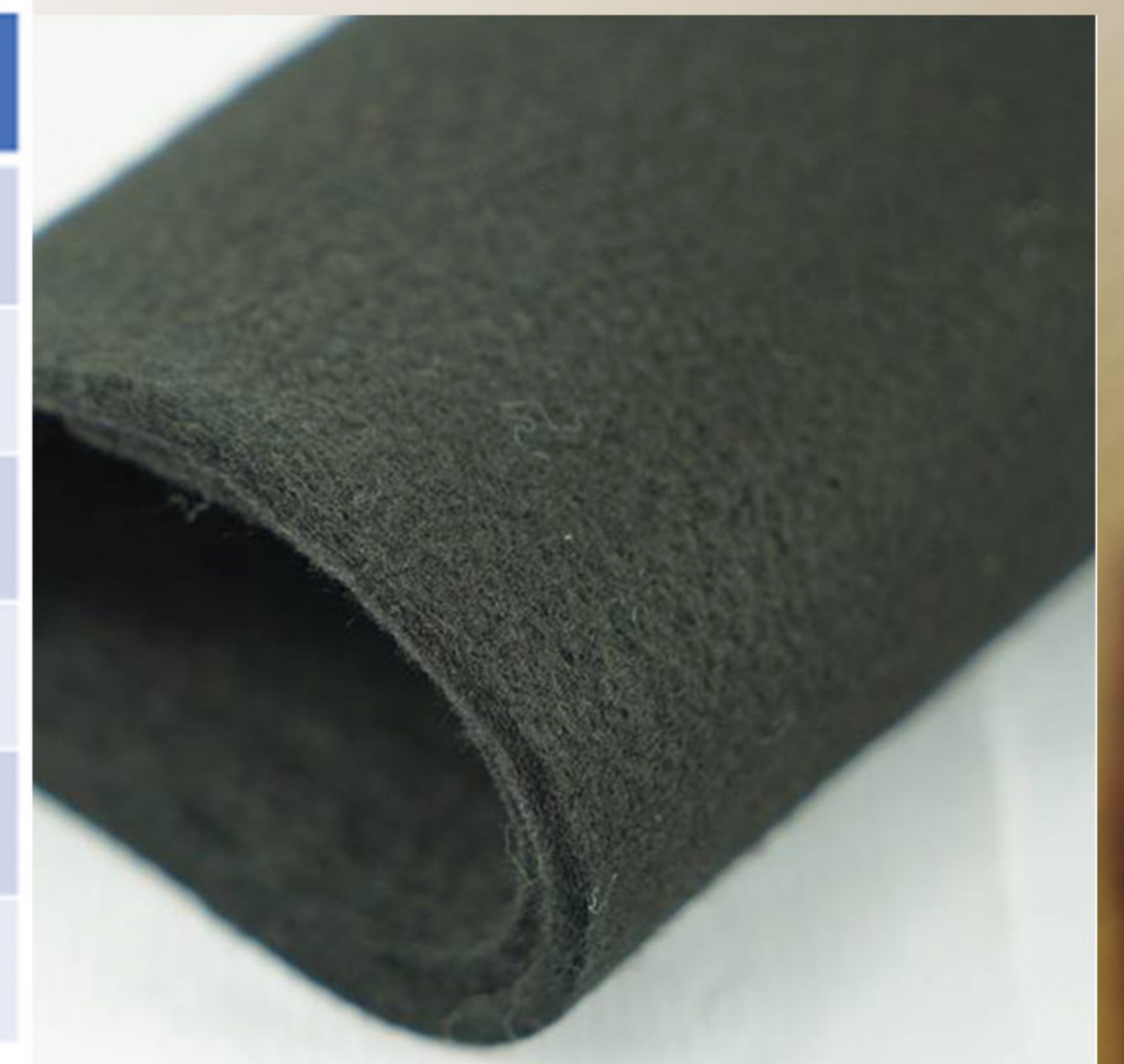




Carbon Felt & Graphite Based Lubricants:

Graphite-based lubricants are used in environments where the working temperature is high and our goals are to reduce friction between wheels and tools and also if we decide to have a refractory surface we can use these products as a primer coating. Furthermore, in cases such as mineral materials electrolyzing, carbon felts with the following standard specifications can be used:

Carbon Felt Specifications:	
FC	98.5-99%
Ash	0.2% Max
Porosity	85-90%
Surface Electrical resistance(mΩ/cm ²)	0.15-2.0
Internal Electrical resistance (mΩ)	15-27
Thickness(mm)	1.0~2.0





Ferroalloys:

Ferroalloys are used as additives for the deoxygenation of molten metals and also for the production of steel alloys and stainless steels in the following categories: ferrosilicon, ferromanganese (high and medium carbon) and ferrosilicomanganese. Our company is one of the lead suppliers of these products.

Ferro Silico Manganese		
Products	Grade	Specifications
Ferro Silico Manganese (FeSiMn)	% 65/68/70 % 15/16/17	Manganese - 65/68/70% min
		Silicon - 15-16-17% min
		Carbon - 2.2-2.0-1.8% max
		Phosphorous - 0.30/0.25 % max
		Sulphur - 0.03/0.04 % max
Size - as per customer requirements		

Ferro Silico Manganese		
Products	Grade	Specifications
Ferro Silico Manganese (FeSiMn)	%60 – 14	Manganese - 60% min
		Silicon - 14-15 % min
		Carbon - 2.0-2.5 % max
		Phosphorous - 0.30 % max
		Sulphur - 0.03% max
Size - as per customer requirements		

Low Carbon Silico Manganese		
Products	Grade	Specifications
Low Carbon Silico Manganese (LC SiMn)	%55	Manganese - 55% min
		Silicon -25.00 % min
		Carbon - 0.5 % max
		Phosphorous -0.10 % max
		Sulphur - 0.02% max
Size - as per customer requirements		

Medium Carbon Ferro Manganese		
Products	Grade	Specifications
Medium Carbon Ferro Manganese (MC FeMn)	% 78-70	Manganese - 70/75/78% min
		Silicon - 2 to 4/2/1.5 % max
		Carbon - 1.5/1.5/0.8 to 1.5% max
		Phosphorous - 0.35/0.30/0.25 % max
		Sulphur - 0.03% max
Size - as per customer requirements		

Ferro Silicon		
Products	Grade	Specifications
Ferro Silicon(FeSi)	%75-70	Silicon -70-75 %
		AL:1-2.0%
		Carbon - 0.15 % max
		Phosphorous -0.5 % max
		Size - as per customer requirements





Iron Sponge:

This product is used in steel casting due to its high purity of iron, in addition to porous pellets. Also, Our Company provides soft sponge iron, to be used as briquettes and other applications.

Iron sponge Specifications	
Fe Total	88%-87%
Fe Metal	84%-82%
Metallization	91.50%
C	2.2%-1.7%
S	0.01% Max
P	0.1% Max
SiO ₂	5.5% Max
AL ₂ O ₃	1% Max
CaO	1.1% Max
MgO	2.5% Max
Sizing	0-6.3% Max
Bulk Density	1.6-1.9t/m ³





Head office:

Add: Unit 12. No.339 Sepah ave EmamReza Blv _ Pardis New City_ TEHRAN . IRAN

Tel: +98 2176281285, +98 2176482967 Fax: +98 217629292369 Cell: +98 9106768531

www.parizfan.com