

Carbon Black

Carbon Black is made of fine particles of amorphous carbon and is produced by partial combustion of petroleum or natural gas.

The modification of an elastomer by carbon black reinforcement and vulcanization transforms the soft elastomer into a strong, elastic product. A rubber compounder must select the right polymer, the right carbon black grade/loading level combination, and the right vulcanization system to give a rubber compound with the desired properties at the lowest possible cost.

ISOELAST supplies carbon black from Russia and Ukraine. We sell all of the most common ASTM grades in three modes: Furnace (N220 to N774), Thermal (N990/N991), and Channel (K354). The specification chart below highlights some of the more popular grades of Carbon Black. If the grade you are looking for is not listed below, please [contact us](#).

Typical Characteristics

	Unit	K-354	N-220	N-330	N-339	N-550
Iodine Adsorption	g/kg	65 - 75	121 +/- 5	82 +/- 5	90 +/- 5	43 +/- 5
CTAB Surface Area	m ² /g	-	111 +/- 7	83 +/- 6	95 +/- 6	42 +/- 5
DBP Absorption	cm ³ /100g	90 - 108	114 +/- 5	102 +/- 5	120 +/- 5	121 +/- 5
pH Value		3.7 - 4.5	6 - 9	6 - 9	6 - 9	6 - 9
Heating Loss at 125°C	% max	1.5*	1.0	1.0	1,0	1.0
Ash Content	% max	0.05	0.45	0.45	0.45	0.45
Sieve Residue	% max	0.1 - 0.001	0.1 - 0.001	0.1 - 0.001	0.1 - 0.001	0.1 - 1.001
Sulfur Content	% max	-	1.1	1.1	1.1	1.1
Toluene Discoloration	% min	-	90	90	90	85
Pour Density	kg/m ³	-	330	340	320	330
Fine Content	% max	6	15	15	15	15
Nitrogen Surface Area	m ² /g	150	-	-	-	-
Physical Form		Granule	Dry Pellet	Dry Pellet	Dry Pellet	Dry Pellet

• indicates Heating Loss at 105°C

	Unit	N-660	N-762	N-765	N-772
Iodine Adsorption	g/kg	36 +/- 5	30 +/- 5	25 - 35	28 +/- 4
CTAB Surface Area	m ² /g	36 +/- 5	25 - 33	-	29 - 37
DBP Absorption	cm ³ /100g	90 +/- 5	65 +/- 4	110 - 120	65 +/- 5
pH Value		6 - 9	9 - 11	7 - 9	9 - 11
Heating Loss at 125°C	% max	1.0	0.3	0.9	0.3
Ash Content	% max	0.45	0.5	0.45	0.4
Sieve Residue	% max				
35 mesh		0,1 - 0,001	0.0001	0.001	0.0001
325 mesh			0.005	0.1	0.005
Sulfur Content	% max	1.1	0.1	-	0.1
Toluene Discoloration	% min	80	70	-	70
Pour Density	kg/m ³	375	480	365 - 395	460
Fine Content	% max	15	7	-	7
Nitrogen Surface Area	m ² /g	-	30 +/- 5	-	30 +/- 5
Physical Form		Dry Pellet	Dry Pellet	Wet Pellet	Dry Pellet

	Unit	N-774	N-990	N-991	P-803
Iodine Adsorption	g/kg	29 +/- 4	8 +/- 4	8 +/- 4	-
CTAB Surface Area	m ² /g	25 - 33	7	7	-
DBP Absorption	cm ³ /100g	72 +/- 4	35 +/- 5	35 +/- 5	76 - 90
pH Value		9 - 11	7 - 11	7 - 11	7 - 9
Heating Loss at 125°C	% max	0.3	0.01	0.01	0.5*
Ash Content	% max	0.5	0.5	0.5	0.45
Sieve Residue 35 mesh 325 mesh	% max	0.0001 0.005	0.0001 0.002	0.001 0.02	0.001 0.08
Sulfur Content	% max	0.1	0.1	0.1	-
Toluene Discoloration	% min	70	80	80	-
Pour Density	kg/m ³	490	550	550	320 - 400
Fine Content	% max	7	8	-	6
Nitrogen Surface Area	m ² /g	30 +/- 5	9 - 11	9 - 11	14 - 18
Physical Form		Dry Pellet	Granule	Powder	Granule

* indicates Heating Loss at 105°C

	Unit	P-705	P-803	P-805E	P-805S
Iodine Adsorption	g/kg	-	-	-	-
CTAB Surface Area	m ² /g	-	-	-	-
DBP Absorption	cm ³ /100g	115 - 125	86 - 100	110 - 140	76 - 92
pH Value		7.5 - 9.5	7.5 - 9.5	7.5 - 9.5	7.5 - 9.5
Heating Loss at 105°C	% max	0.5	0.5	0.2	0.5
Ash Content	% max	0.2	0.2	0.1	0.2
Sieve Residue 35 mesh 325 mesh	% max	0.001 0.08	0.001 0.08	0.001 0.08	0.001 0.08
Sulfur Content	% max	-	-	-	-
Toluene Discoloration	% min	-	-	-	-
Pour Density	kg/m ³	-	-	-	-
Fine Content	% max	-	-	-	-
Nitrogen Surface Area	m ² /g	20 - 26	14 - 18	13 - 17	25 - 30
Physical Form		Powder	Powder	Powder	Powder

These figures are typical values. Specific values may vary by producer.