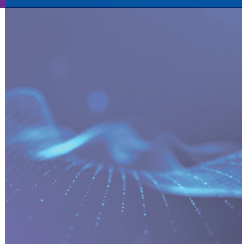
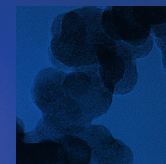


# LOW PAH CARBON BLACKS

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**ENSACO®**  
Carbon Black



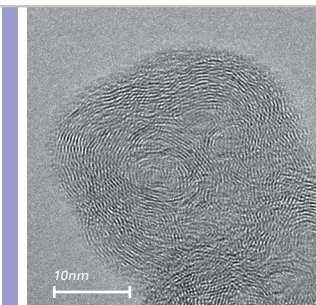
## ENSACO® CARBON BLACKS MEET THE HIGHEST PURITY REQUIREMENTS

### KEY FEATURES

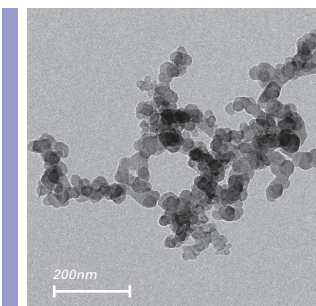
ENSACO® carbon blacks meet the highest purity requirements for low PAH (polycyclic aromatic hydrocarbons) and BAP (benzo[a]pyrene). Complying with the most stringent legislation, the primary purpose of these extremely pure carbon blacks is to give electrical conductivity to polymers at low to very low loadings. ENSACO® carbon blacks are also employed when high purity, an excellent level of dispersion or low moisture levels are specifically required.

The Imerys Graphite & Carbon proprietary manufacturing process enables the controlled production of extremely pure, easily dispersible, low surface area conductive carbon blacks as well as extra-conductive carbon blacks.

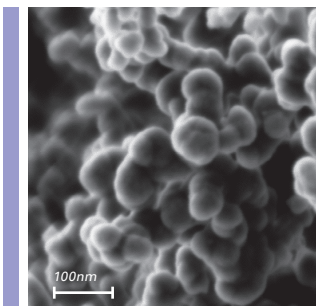
PROPERTIES	NORMS	UNITS	VERY CLEAN EASY-DISPERSIBLE CONDUCTIVE CARBON BLACK	VERY CLEAN EXTRA CONDUCTIVE CARBON BLACK
			ENSACO® 250G	ENSACO® 350G
OAN structure	ASTM D2414	ml/100g	190	380
BET surface area	ASTM D3037	m²/g	65	770
Ash content	ASTM D1506	%	0.01	0.01
Grit 45 µm/325 mesh	ASTM D1514	ppm	2	5
Total sulphur content	ASTM D1619	%	0.02	0.02
Moisture content	ASTM D1509	%	0.1	0.5
Volatiles	Int. method 02	%	0.1	0.3
Pour density	ASTM D1513	kg/m³	180	135



ENSACO® Primary particle  
– TEM picture



ENSACO® Aggregate  
– TEM picture



ENSACO® Agglomerate  
– SEM picture



## HIGH PURITY AND PRODUCT CONSISTENCY

Due to its unique combination of high structure and low surface area, **ENSACO® 250G** exhibits outstanding dispersibility in polymers leading to easy extrusion and a smooth surface finish, whilst the extra-conductive carbon black **ENSACO® 350G** will boost the electrical conductivity at a low carbon black loading. The low surface area as well as the very low surface oxygen content of **ENSACO® 250G** ensure inertness to peroxide and moisture.

The entire **ENSACO®** carbon black range exhibits a low PAH content. **ENSACO®** carbon blacks have undergone specific testing and the values measured for PAH and BAP on the standard grades are presented in the table.

Upon request, we are able to provide a certificate with the PAH values for a specific production lot. The high purity and high product consistency of the entire **ENSACO®** carbon black range enable Imerys Graphite & Carbon to accept specifications on maximum total PAH and BAP content.

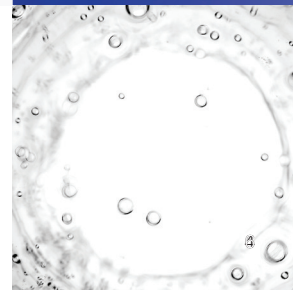


UNIT: PPM	ENSACO® 250G	ENSACO® 350G
Acenaphthene	0.060	0.509
Acenaphthylene	<0.3	0.569
Anthracene	0.060	0.490
Benz[a]anthracene*	<0.04	<0.06
Benzo[b]fluoranthene*	<0.1	<0.01
Benzo[j]fluoranthene*	<0.6	0.003
Benzo[k]fluoranthene*	<0.1	0.004
Benzo[g, h, i]perylene	<0.02	<0.001
Benzo[a]pyrene*	<0.01	0.003
Benzo[e]pyrene*	<0.06	0.003
Chrysene *	<0.1	0.090
Coronene	<0.001	<0.001
Cyclopenta[c,d]pyrene	0.001	0.001
Dibenz[a,h]anthracene*	0.001	<0.001
Dibenzo[a,h]pyrene*	<0.001	
Dibenzo[a,i]pyrene*	<0.001	
Dibenzo[a,l]pyrene*	<0.001	
Fluoranthene	<0.1	0.600
Fluorene	<0.04	0.600
Indeno [1,2,3-c,d] pyrene	0.002	0.001
Naphtalene	<0.5	22.682
Phenantrene, pyrene, anthracene, fluoranthene	<0.5	
Phenantrene	<0.3	2.471
Pyrene	<0.1	0.271

\* The table includes the 11 PAHs listed by the COMMISSION REGULATION (EU) No 1272/2013

PAH= polycyclic aromatic hydrocarbons; BAP= benzo[a]pyrene.

The results were determined by an external accredited laboratory, and the determination of the PAH profile was carried out with a toluene extract applying a stable isotope dilution methodology with GC-MS (SIM) analysis.



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