

Av-PLAT

Av-PLAT family is a Graphene Nanoplatelets structure, they are 2D structure of carbon atoms. Its Oxygen content is below 1% and their average size is from 40 to 2 microns. The average thickness is 3 nm in case of Av-PLAT-7 and less than 10 nm for the Av-PLAT-2. These products have been specially designed to be introduced in different types of matrix such plastics, rubbers, lubricants, oils, resins, etc. to impart improvements thermal conductivity, electrical conductivity and mechanical properties, at the same time that can act like a lubricant.

	<i>Physical-chemical features of a discrete particle</i>		
	Av-PLAT-40	Av-PLAT-7	Av-PLAT-2
Lateral Size (LD50)	40 μm	7.2 μm	2 μm
Average thickness	3 nm	3 nm	<10 nm
Oxygen Content (XPS)	< 1%	< 1%	< 1%
BET	35 m ² /g	70 m ² /g	>200 m ² /g
Average number of layers	Multilayer (5-10)	Multilayer (5-10)	Multilayer (<20)

The use of **av-PLAT2**, **av-PLAT7**, **av-PLAT40** allow to improve the lubricating capacity of technical oils when used at moderate or low concentrations.

The graphene of smaller lateral size allows to improve the lubricating characteristics at low percentages of weight, however, an increase in the concentration does not allow to improve the lubricating capacity. On the other hand, in the case of **av-PLAT-7** the graphene of greater lateral size, an increase in the concentration allows to improve its lubricating capacity, obtaining better characteristics. At higher percentages, a decrease occurs due to the increase in viscosity.

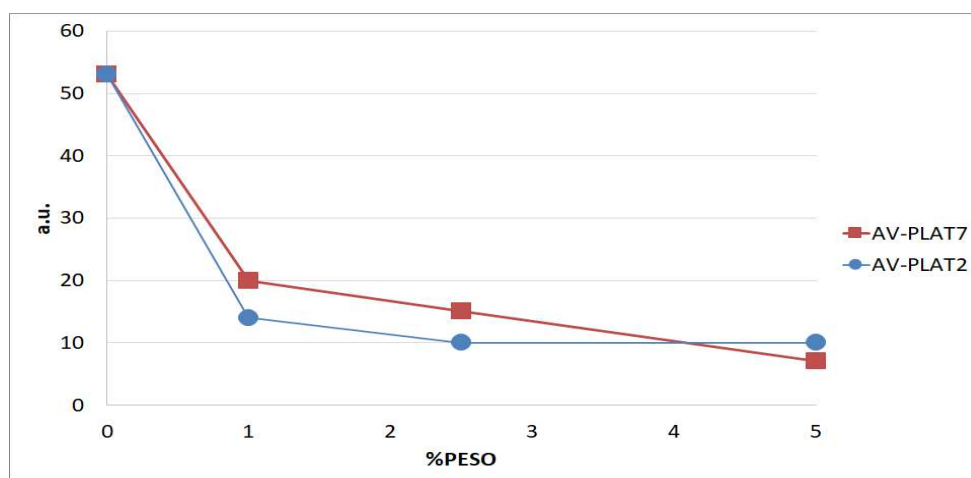


Figure 1 **av-PLAT2** and **av-PLAT7** lubricating capacity as a function of concentration (u.a.: arbitrary units).

Another difference to take into account is the improvement in the thermal conductivity of the lubricants

to which **av-PLAT7** has been added. In the case of **av-PLAT2** this improvement is not observed.

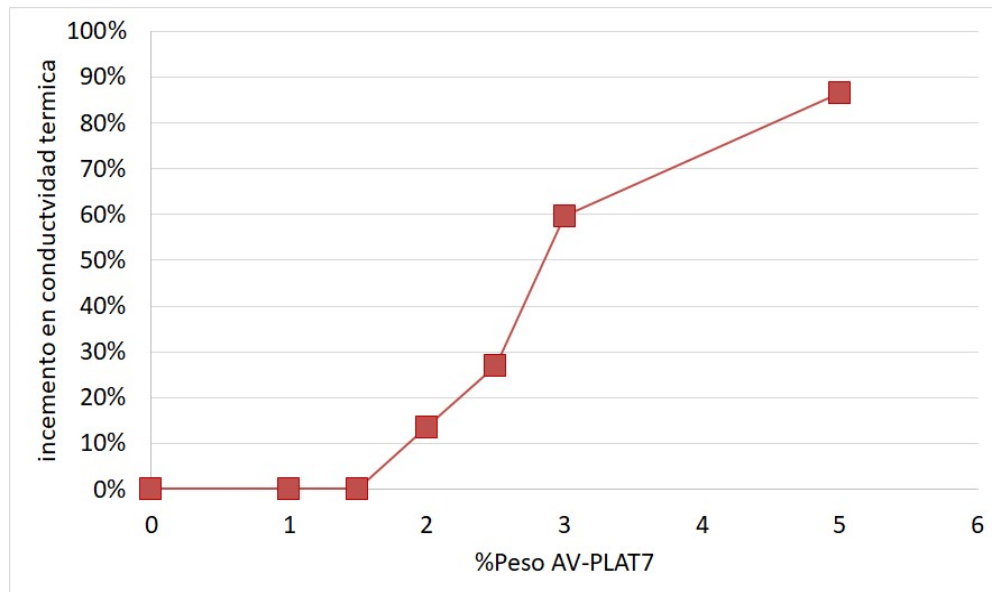


Figure 2 **av-PLAT7** thermal conductivity increase as a function of concentration.

STORAGE INSTRUCTIONS

Av-plat-2 and **Av-PLAT-40** are packed in 8 kg bag.

av-PLAT-7 is packed in 8 kg bag.

These products can be stored in its original packaging for at least 24 months without losing its properties.

Other information

The implementation of lubricating capacity preliminary tests is recommended to determine the most appropriate concentration of this product to be used.

Before using this product please read the product safety data sheet and follow the instructions and rules to apply it.

For more information contact AVANZARE Innovacion Tecnologica SL: Tel: +34 941587027, sales@avanzare.es

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