

## Technical Data Sheet

### Graphene Multi Layer Powder P-PG20

**P-PG20** is multi layer graphene sheet which is stacked by 10 to 15 layers of graphene. Multi layer graphene is much more suitable for industrial applications to enhance electrical conductivity, thermal management, mechanical strength, anti-corrosion, lubrication and anti-wear.

#### Physical Property

- Appearance : Gray fluffy powder
- Oxygen Content :  $\leq 3\text{wt}\%$
- Tap Density :  $0.030\pm 0.016 \text{ g/cm}^3$
- Specific Surface Area :  $25\pm 15 \text{ m}^2/\text{g}$
- Average Thickness (Z axis) :  $\sim 5 \text{ nm}$
- Average Lateral Size (X-Y plane) :  $D_{50} 11\pm 4 \mu\text{m}$  ,  $D_{95} \leq 30 \mu\text{m}$
- Oil Absorption :  $250\pm 30 \text{ ml}/100 \text{ g}$
- Electrical Conductivity :  $\geq 1,000 \text{ S/cm}$
- Shelf Life: Sealed for 1 Year

#### Recommended Operation Condition

- Multi layer graphene powders are hydrophobic.
- Pre-dry at  $100^\circ\text{C}$  for 1 hr before handling is recommended.
- Graphene powder shows low compatibility with most systems. Please contact Enerage Inc. for more information about dispersion.

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Please note that partial of the analysis data are also conveniently available online at [www.graphene.com.tw](http://www.graphene.com.tw)

## Storage

- Graphene powder should be stored in a clean and stable environment at room temperature.
- Storage in high temperature ( $>30\text{ }^{\circ}\text{C}$ ) or freezers ( $<0\text{ }^{\circ}\text{C}$ ) is NOT recommended.

## Safety Issue

- Products are intended for use in an industrial environment by trained personnel. Please follow proper health/safety processes regarding storage, handling and processing of the products. For Safety and Handling information pertaining to this product, refer to Safety Data Sheet (SDS).

## Package

- The standard package is 1Kg/bag.



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