

高导电石墨烯

产品说明



专注研发，只为更高品质

一、产品概述

1. 昂星新碳开发的高导电石墨烯 (Highly Conductive Graphene, 简称HCG) 具有纯度高、片径尺寸大、层数少等特点, 保持了大面积的石墨烯结构, 导电性能优异, 其本征电导率大于1000S/cm。

2. 本款产品粉体形态属于气凝胶粉末, 振实密度小, 形成导电通路的渗滤阈值极低, 是一款优异的共混导电性粉体产品, 更适合应用于复合材料。

二、产品参数

技术参数	参数值
形貌	黑色粉体
厚度 (nm)	1~5
单层片径 (μm)	5~45
碳含量 (wt.%)	~95
氧含量 (wt.%)	~3.0
灰分 (wt.%)	<1
振实密度 (g/L)	10~20
电导率 (S/m)	>60000
比表面积 (m^2/g)	20~50
D50 (μm)	~15.5
D90 (μm)	~34.6
D100 (μm)	~50



图1. 昂星HCG产品图和SEM图谱

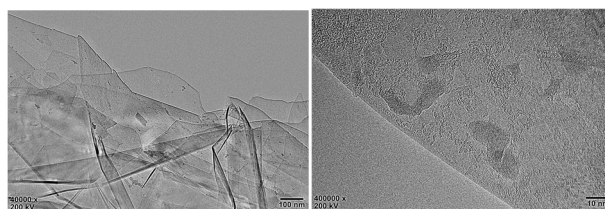


图2. 昂星HCG产品HRTEM图谱

三、应用情境举例

1. 该产品可直接在陶瓷、塑料和橡胶中通过共混使用, 可以显著提升材料的导电性能和导热性能; 且可以增强陶瓷的韧性, 和高分子复合材料的耐磨能力。

2. 该产品与小尺寸的导电剂配合使用, 可以构建多层次的导电通道。例如将适量的高导电型石墨烯与炭黑 (或者小尺寸石墨烯) 混合作为电池导电剂, 可以在减少导电剂用量的同时, 降低电池内阻。

四、注意事项

使用安全: 本款石墨烯粉体易飘散, 对人体的肺及呼吸道有害, 使用过程中请做好相应的粉尘防护。

贮存运输: 本品室温下密封保存 ($< 30^{\circ}\text{C}$)。包装瓶为PS材质, 请远离热源。请勿与有机溶剂接触。

本说明书为简要产品说明, 具体产品说明请登录公司网站 www.ashinecarbon.com 查看及下载。

如果对上述内容存在任何疑问或需要相关文献, 欢迎联系我们: Sales@ashinecarbon.com

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Highly Conductive Graphene

Product Information



I. Product Overview

1. The Highly Conductive Graphene developed by Ashine has such features as high purity, large size, few layers, large area graphene structure retention and excellent conductivity. Its intrinsic conductivity is greater than 1,000 S/cm.
2. The powder form of this product is aerogel powder. Its density is low and the percolation threshold of its conductive path is very low. It is an excellent conductive powder which is highly suitable for composite materials.

II. Product Parameters

Technical Parameter	Parameter Value
Form	Black powder
Thickness (nm)	1~5
Monolayer diameter (μm)	5~45
Carbon content (wt.%)	~95
Oxygen content (wt.%)	~3
Ash content (wt.%)	<1
Tap density (g/L)	10~20
Electric conductivity (S/m)	>100,000
BET (m ² /g)	20~50
D50 (μm)	~15.5
D90 (μm)	~34.6
D100 (μm)	~50



Fig. 1. Ashine HCG Product and SEM Images

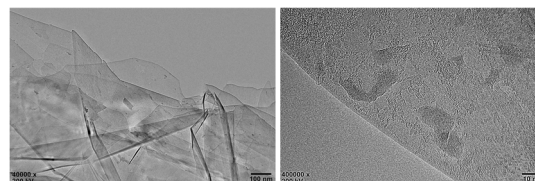


Fig. 2. Ashine HCG Product HRTEM Images

III. Application Example

1. The product can be directly blended in ceramics, plastics and rubber, which significantly improves the electric conductivity and thermal conductivity of the composite, enhances the toughness of ceramics and improves the abrasion resistance of polymer composite materials.
2. The product can be used in conjunction with a small size conductive agent to construct a multi-layered conductive channel. For example, by mixing an appropriate amount of high conduction graphene with carbon black (or small size graphene) as battery conductive agent, battery resistance can be reduced as well as the amount of added agent.

IV. Notice

Safe use: This product consists of a black powder which is prone to float. As it can be harmful to the lungs and respiratory tract, please ensure appropriate dust protection when it is used.

Storage and transportation: This product is stored at room temperature. The packing bottle is PS material. Please keep away from heat sources and any organic solvents.

This manual is a brief product description. Please visit the company's website at www.ashinecarbon.com to view and download a detailed product description. If you have any questions about the above or require the relevant literature, please contact us at Sales@ashinecarbon.com.

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