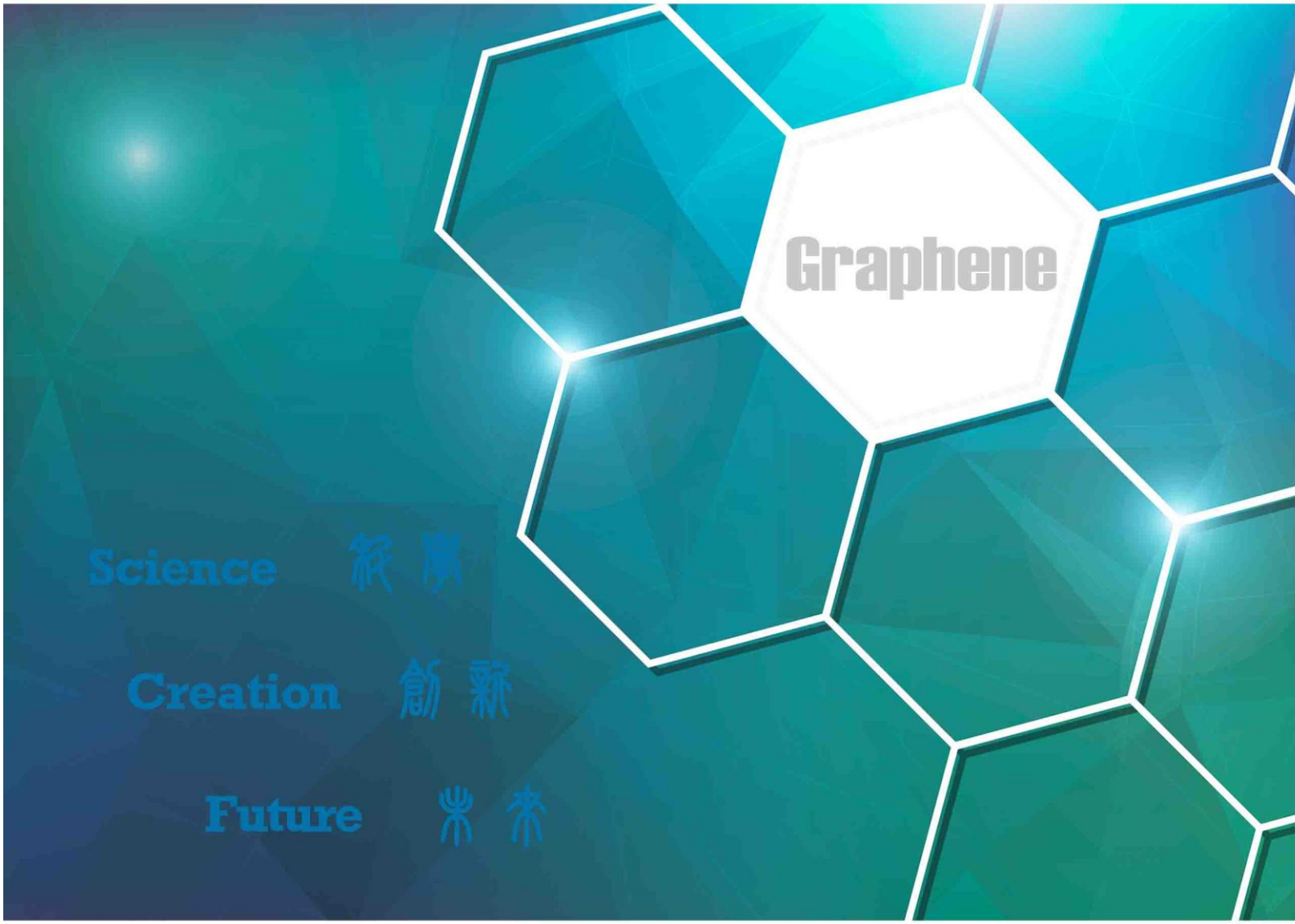
Nanotech

Graphene

Graphene Conductive Slurry

Product manual



Qingdao DT Nanotech Co., Ltd.

Add: The Graphite New Material Industrial Park, Nanshu Town, Laixi City, Qingdao, Shandong Province, China

Tel: 0532-83433388 http: www.dtnano.com

Graphene Conductive Slurry

【Product Introduction】

Lu Xi - Graphene Conductive Slurry series is a new product developed by Qingdao DT Nanotech Co., Ltd. Graphene. Conductive slurries are widely used in energy storage and power battery, new energy, solar energy, electronic components, electronic process engineering, printing, antistatic, and electromagnetic shielding. Graphene has well-known super strength and ultra-thin physical characteristics, which are excellent in areas of conductivity, lubrication, anticorrosion, sealing and high temperature resistance.

【Main Components】

SGS-H2O-5G : **Graphene 、 H_2O**

SGS-NMP-5G : **Graphene、 NMP**

【Technical Data Sheet】

Table 1: Technical Data Sheet

Performance indicators	Unit	Specification		Test method
		SGS-H2O-5G	SGS-NMP-5G	
Appearance		Uniform gray slurry	Uniform gray slurry	Visual
Solid content	wt%	5.00 ± 0.20	5.00 ± 0.20	Enterprise Standard Q/02 NMK 001-1997
Graphene		4.00 ± 0.10	4.00 ± 0.10	
Water content	wt% ppm	95.00 ± 1.00	≤1000	SGS-H2O-5G: Q/02 NMK 001-1997 SGS-NMP-5G: Karl Fischer Moisture Titrator
Viscosity	mPa.s	≤2500	≤2500	GB/T 10247-2008
Thickness	Number of layers	≤10	≤10	TEM
D50	μm	5±1	5±1	SEM 5000x
Acidity and alkalinity	PH	6.5-8.5	6.0-8.0	pH meter
Sieving	%	100	100	250 mesh, 100% screen
Stability at normal temperature	wt%	≤0.10	≤0.10	25℃ -30 days seal Change of slurry solid content above the top layer M=Mb-Ma

High temperature stability	wt%	≤0.20	≤0.20	60℃ -48h seal Change of slurry solid content above the top layer M=Mb-Ma
Element content	ppm	Fe≤20	Fe≤20	ICP-AES
		Co≤5	Co≤5	
		Ni≤5	Ni≤5	
		Mn≤5	Mn≤5	
		Cu≤5	Cu≤5	
		Zn≤5	Zn≤5	
Resistivity (ρ)	Ω●cm	≤1.0 x 10^{-2}	≤1.0 x 10^{-2}	Pressing pellet method 5MPa GB/T 15064-2008

【Applications】

Suitable applications of this product includes(but not limitted to): functional composits, energy storage and power battery, new energy, solar energy, electronic components, electronic process engineering, printing, antistatic, electromagnetic shielding and so on.

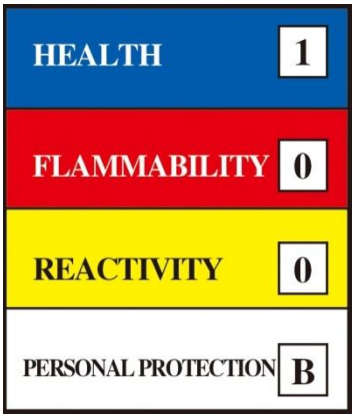
【Notes on usage】

1. When using the product, please read the material safety data sheet of the company's products(MSDS) and hazardous materials identification system (HMIS).
2. Over time the product may have a small amount of solid precipitate, but can be restored to a uniform state of the original suspension after shaking and does not affect its uses.
3. Users can decide whether to dilute and the ratio of diution to the original liquid according to their own requirements.
4. Be sure to keep a well-ventilated room when using this product.
5. Container of the graphene conductive slurry should be sealed when not in use and stored in a cool and dry environment. In a low temperature environment, if frozen, it can be used normally after thawing.
6. This content is based on the data and information that can be obtained at present.

【Instructions on safety, health, and environmental protection】

1. The slurry should be sealed tightly and handled gently during transportation, and should not be stored upside down.
2. When the product is used in high temperature, avoid direct contact with the skin. Wear goggles and gloves when in use.
3. Please comply with the relevant laws, rules, and regulations when disposing of waste.

【**HMIS**(Hazardous Material Identification System)】



Rank classification：

0= None
1= Mild
2=Moderate
3=High
4=Extreme

Personal protective equipment：
A= Glasses; B= Glasses + Gloves

【**MSDS**(Material Safety Data Sheet)】

See the appendix for more details.

【**Appendix Ⅰ**】

All related data in this description was obtained in a laboratory setting. The actual use of the measured data may be slightly different due to changes in the environment. If the above data are changed, the latest instructions are subject to the company's latest instructions.

【**Appendix Ⅱ**】

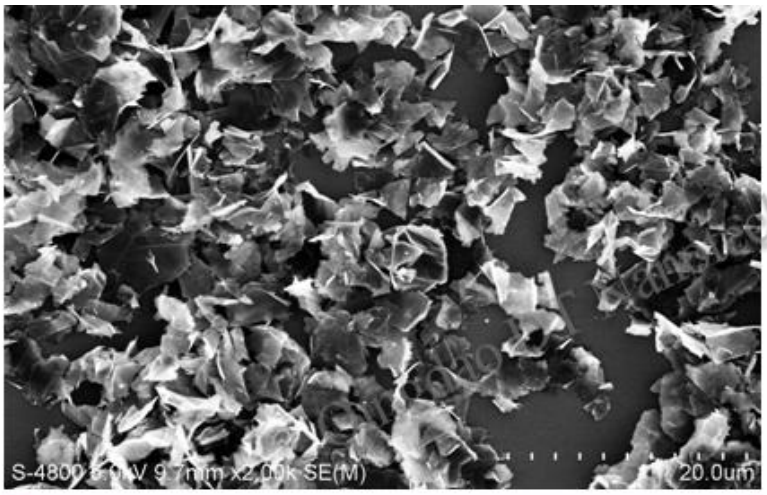
Scanning electron microscope photograph、Transmission electron microscope photograph

（SGS-H2O-5G）

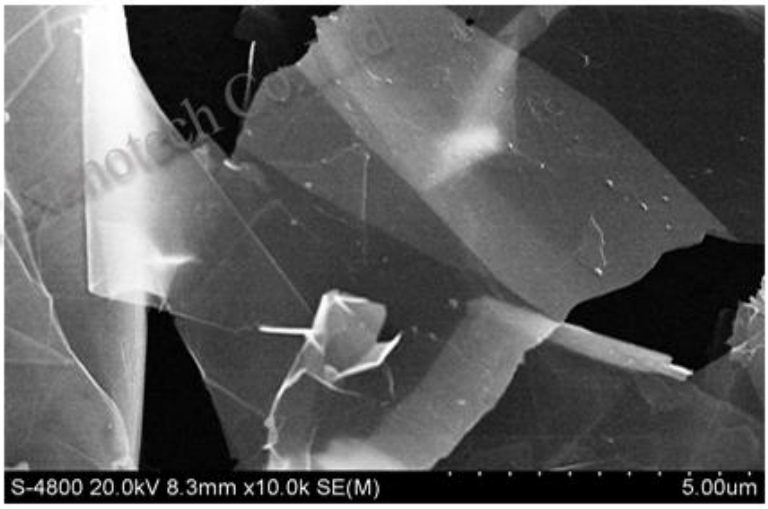
6 970471 496364

（SGS-NMP-5G）

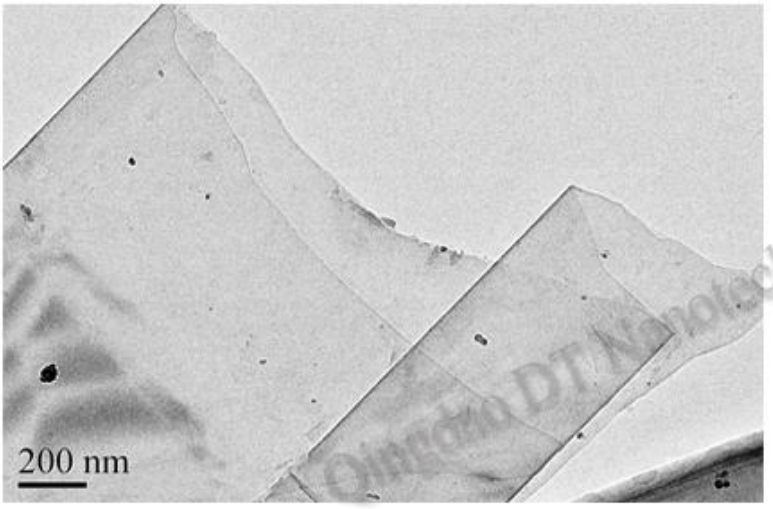
6 970471 496241



Scanning electron microscope photograph



Scanning electron microscope photograph



Transmission electron microscope photograph