Developing and Protecting, Earth Life Better

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北京美斯顿科技开发有限公司
MSTN TECHNOLOGIES CO., LTD.

Product Brochure

Chemicals

Contents

Enthusiasm · Innovation · Service · Espect · Responsibility

Graphene Dispersion Liquid

Product Description: This product uses natural graphite as raw material and is treated by chemical reoxidation process to obtain reduced graphene oxide rGO. It has the advantages of high purity, large specific surface area, high stability, good compatibility with organic and inorganic materials, is easy to disperse and grind. It is suitable for polymer composite materials, coatings, coating materials and lubricating materials.

Model number	MSTN-RGOD
Active ingredient content	96%w
Import or not	No
Storage conditions	Keep closed in a cool, ventilated and dry environment
Packaging specifications	50ml/ bottle, 100ml/ bottle, 250ml/ bottle, 500ml/ bottle, 100ml/ bottle kg
Application	composite material field, biomedicine field, photocatalysis field, analysis field
Processing customization	Yes
Dispersion	deionized water, ethanol
Dispersion concentration	0.5 ~ 10mg/ml
Single-layer rate	> 98%
Thickness	0.6~1.0nm
Lamellar diameter	0.5-5 um
Origin	Beijing, Xiamen
Price	Negotiable
Color	Brown/black
pH value	5 ~ 7
Storage temperature	5~35℃
Brand	MSTN

➤ Product Attributes

Concentration
0.5mg/mL, 1mg/mL, 2mg/mL, 5mg/mL, 10mg/mL

Packaging specifications
50ml/bottle 100ml/bottle 250ml/bottle 500ml/ bottle 1000ml/ bottle

Dispersion Liquid Parameters

Dispersant	Deionized water, ethanol, NMP, etc
Colour	black
Ph Level	5 7
Dispersion Concentration	0.5 10 mg/ml
Single-Layer Ratio	> 98%
Thickness	0.6 ~ 1.0 nm
Lamellar Diameter	0.5-5 um

➤ Product Advantages

- Dispersants: Optional dispersants include water, ethanol, NMP, etc.
- Electrical conductivity: Compared with GO, reduced GO largely repaired the defects introduced by the oxidation process, and the electrical conductivity was significantly improved.
- The powder of reduced GO is treated by special process, and the powder remains fluffy with high specific surface area.
- Compared with conventional graphene, reduced GO still retains some oxygen-containing functional groups, and is significantly better than GO in terms of stability. As an adsorption material, it can adsorb heavy metals and organic dyes with very obvious effect.
- It has good dispersion stability in water and most polar organic solvents.
- Good wettability and surface activity, can be stripped by small molecules or polymer intercalation.
- It can improve the thermal, electrical, mechanical and other comprehensive properties of materials.

➤ Application Scene

Used in adsorption materials, thermal insulation materials, polymer composite materials, coating, coating materials and lubricating materials and other fields.

Used in the field of antistatic

Used in anticorrosive series.

➤ Product Standard

We can provide infrared, XPS, Raman, XRD, TGA, SEM, TEM analysis and test report of this batch of products.

➤ Disposal and Storage

Operators should wear appropriate protective clothing and gloves, avoid direct contact with skin, and immediately rinse with plenty of water once entering eyes. Store tightly in a cool, ventilated and dry environment. Use as soon as possible after unpacking. The recommended storage temperature is from 5 to 35°C. Keep away from tinder and heat source, and store separately with strong reducing agent and flammable substance.

Graphene Powder

This product uses natural graphite as raw material and processed by chemical reoxidation process to obtain reduced graphene oxide rGO. It has the advantages of high purity, large specific surface area and high stability, and has good compatibility with organic and inorganic materials, is easy to disperse and grind. It is used with polymer composite materials, coatings, coating materials and lubricating materials.

Model	MSTN-PGO
Active ingredient content	96%
Import or not	No
Storage conditions	Keep closed in a cool, ventilated and dry environment
Packaging specifications	50ml/ bottle, 100ml/ bottle, 250ml/ bottle, 500ml/ bottle, 100ml/ bottle kg
Standard	GB/T 40066
Origin	Beijing, Xiamen
Industrial grade graphene oxide	content > 96%, layer number < 5
Storage temperature	5~35℃
Product name	Graphene oxide powder
Thickness	0.6~1.0nm
Application	composite material field, biomedicine field, antiseptic field Packaging specifications :5g/ bottle, 10g/ bottle, 20g/ bottle, 50g/ bottle
Carbon content	46%
Oxygen content	46%
Sulfur content	< 1.5%
BrandProduct advantages	good hydrophilicity, adsorption and mechanical properties

➤ Product Attributes

Specifications
5g/ bottle, 10g/ bottle, 20g/ bottle, 50g/ bottle

Powder Parameters

Aspect	Black fluffy powder
Thickness	2~3nm
Carbon content	~82
Oxygen content	~10
Lamellar diameter	0.5-5 um
Ash content	1%

Origin- Beijing, Xiamen **Brand** -MSTN **Model-** Mstn-RGOP **Price-**Negotiable **Customizable**

➤ Product Advantages

- High specific surface energy, good hydrophilicity, adsorption and mechanical capacity.
- Good dispersion stability in water and most polar organic solvents.
- Good wettability and surface activity, can be stripped by small molecules or polymer intercalation.
- It can improve the thermal, electrical, mechanical and other comprehensive properties of materials.
- Electrical conductivity: Compared with GO, the defects introduced by the oxidation process were largely repaired by the reduced GO, and the electrical conductivity was significantly improved.
- The powder of reduced GO is treated by special process, and the powder remains fluffy and has a high specific surface area.
- Compared with conventional graphene, RGO also protects some oxygen-containing functional groups, and is significantly better than GO in terms of stability. As an adsorption material, it has a very obvious effect on the adsorption of heavy metals and organic dyes.

➤ Application Scene

Used in adsorption materials, thermal insulation materials, polymer composite materials, coating, coating materials and lubricating materials and other fields.

Used in the field of antistatic

Used in anticorrosive series.

➤ Disposal and Storage

Operators should wear appropriate protective clothing and gloves, avoid direct contact with skin, and immediately rinse with plenty of water once entering eyes. Store tightly in a cool, ventilated and dry environment. Use as soon as possible after unpacking. The recommended storage temperature is from 5 to 35°C. Keep away from tinder and heat source, and store separately with strong reducing agent and flammable substance.

Graphene Oxide Powder

Product description: Graphene oxide is the introduction of oxygen-containing functional groups, such as hydroxyl, carboxyl, epoxy, etc., on a single sheet of graphene. Therefore, it is more active than graphene and is easy to graft modification. It can be remixed with composite materials in situ, thus giving the composite materials conductive, thermal, strengthening, flame retardant, antibacterial, antibacterial and other properties, and has good hydrophilicity. After reduction, oxygen-containing functional groups can be removed, which is an important precursor of graphene.

Active ingredient content	96%
Import or not	No
Storage conditions	Keep closed in a cool, ventilated and dry environment
Packaging specifications	50ml/ bottle, 100ml/ bottle, 250ml/ bottle, 500ml/ bottle, 100ml/ bottle kg
Standard	GB/T 40066
Origin	Beijing, Xiamen
Industrial grade graphene oxide	content > 96%, layer number < 5
Storage temperature	5~35℃
Product name	MSTN high purity GO powder
Product specifications	5g/ bottle,10g/ bottle,20g/ bottle,50g/ bottle
Model	MSTN-PGO
Carbon content	46%
Oxygen content	46%
Application	anti-corrosion field, analysis and detection field, anti-corrosion field
Product advantage	It can improve the thermal, electrical, mechanical and other comprehensive properties of materials.
Hydrogen content	0-1%

➤ Product Attributes

Standard
GB/T 40066-2021 "Nanotechnology Graphene Oxide Thickness Measurement Atomic Force microscopy method"

Industrial grade graphene oxide
content > 96%, layer number < 5 layers

Specifications
5g/ bottle, 10g/ bottle, 20g/ bottle, 50g/ bottle

Product Element Content

Name	Content
Carbon Content	46%
Hydrogen Content	0-1%
Nitrogen Content	0-1%
Sulphur Content	<1.5%
Oxygen Content	46%

Origin- Beijing, Xiamen **Brand** -MSTN **Model-** MSTN-PGO **Price-**Negotiable **Customizable**

➤ Product Advantages

- High specific surface energy, good hydrophilicity, adsorption and mechanical capabilities.
- Good dispersion stability in water and most polar organic solvents.
- Good wettability and surface activity, can be stripped by small molecules or polymer intercalation.
- It can improve the thermal, electrical, mechanical and other comprehensive capabilities of materials.

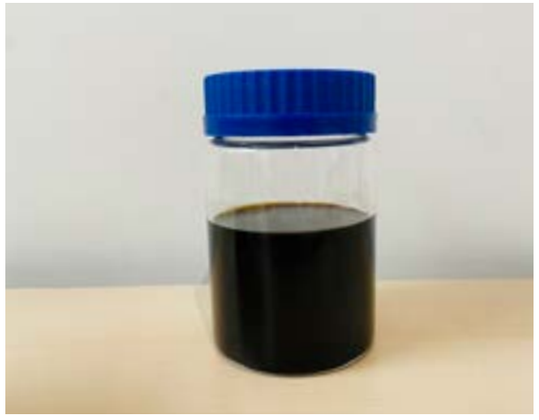
➤ Product Functions

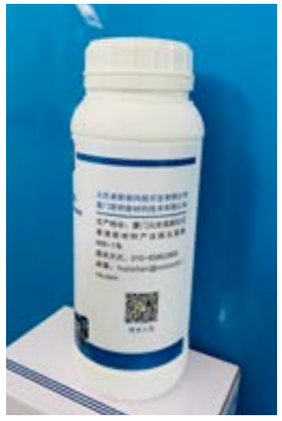
- Composite material field: graphene oxide has excellent mechanical capabilities, good thermal conductivity and large specific surface area, which can be applied to rubber, plastic, resin, fiber and other polymer composite material field;
- Biomedical field: Due to its high specific surface area and wide range of conjugate structure, GO has good application value in drug loading, especially in the aspect of anticancer drug carrier. After technical treatment, GO can be supplemented with non-water-soluble anticancer drugs.
- In the field of photocatalysis: graphene oxide has good adsorption performance. Together with nanomaterials, it can prepare catalytic materials with better performance and higher catalytic efficiency, which can be applied to the photocatalytic industry to further improve the degradation efficiency of pollutants;
- Analysis and detection field: The application of GO in PCR technology can significantly improve the specificity, sensitivity and amplification yield of PCR, eliminate primer dimers formed in amplification, and have a wide optimization range, which can be widely applied to DNA templates of various concentrations and complexity;
- Anticorrosive field: Like graphene, graphene oxide has excellent anticorrosive properties, but also has more active sites than graphene, which is easier to modify and can be well dispersed in coatings;
- In the field of conductivity: although the conjugate network is damaged in the oxidation process, graphene oxide has certain insulation properties, but after reduction treatment, part of the conductivity can be recovered, which can meet the requirements of anti-corrosion coatings on conductivity, reduce or replace the use of metal filler;
- Thermal conductivity field: High thermal conductivity and large specific surface area lay the foundation for graphene oxide as a thermal conductivity material. Meanwhile, its active site improves its serviceability. Stable conjugate structure enables it to work at high temperature and prolongs the service life of the product.

➤ Disposal and Storage

Operators should wear appropriate protective clothing and gloves, avoid direct contact with skin, and immediately rinse with plenty of water once entering eyes. Store tightly in a cool, ventilated and dry environment. Use as soon as possible after unpacking. The recommended storage temperature is from 5 to 35°C. Keep away from tinder and heat source, and store separately with strong reducing agent and flammable substance.

Graphene Oxide Dispersion Liquid





Product Description: Graphene oxide is the introduction of oxygen-containing functional groups, such as hydroxyl, carboxyl, epoxy etc., on a single sheet of graphene. Therefore, it is more active than graphene and is easy to graft modification. It can be remixed with composite materials in situ, thus giving the composite materials conductive, thermal, strengthening, flame retardant, antibacterial, antibacterial etc. functions, and it has good hydrophilicity. After reduction, oxygen-containing functional groups can be removed, which is an important precursor of graphene.

Product name	High purity graphene oxide dispersion
Model	MSTN-DGO
Active ingredient content	96%
Import or not	No
Storage conditions	Keep closed in a cool, ventilated and dry environment
Applications	composite materials, biomedicine, photocatalysis
Standard	GB/T 40066-2021
Specifications	50ml 100ml 250ml 500ml 1000ml
Concentration	0.5mg/mL,1mg/mL, 2mg/mL,5mg/mL,10mg/mL
Industrial grade graphene oxide	content > 96%, layer number < 5
Color	Brown/black
PH value	5~7
Dispersion concentration	0.05 ~ 50 mg/ml
Storage temperature	5~35℃
Origin	Beijing, Xiamen
Brand	MSTN

➤ Product Attributes

Standard
GB/T 40066-2021 "Nanotechnology Graphene Oxide Thickness Measurement Atomic Force microscopy Method"

Concentration
0.5mg/mL, 1mg/mL, 2mg/mL, 5mg/mL, 10mg/mL

Packaging specifications:
50ml/bottle,100ml/bottle,250ml/ bottle,500ml/bottle, 1000ml/ bottle

Industrial grade graphene oxide
content > 96%, layer number < 5 layers

Dispersion Liquid Parameters

Dispersant	water, ethanol, NMP, etc
Color	brown/black
PH level	5 ~ 7
Dispersion concentration	0.05-50 mg/ml
Monolayer rate	> 98%
Thickness	0.6 ~ 1.0 nm
Lamellar diameter	0.5-5 um

Origin- Beijing, Xiamen **Brand** -MSTN **Model-** MSTN-DGO **Price-**Negotiable **Customizable**

➤ Product Advantages

- The surface of GO is rich in oxygen-containing functional groups and has good dispersion stability in water and most polar organic solvents.
- Easy graft modification, it can be in-situ composite with composite materials, so as to give the composite materials conductive, thermal conductivity, strengthening functions.
- High specific surface energy, good hydrophilicity, adsorption and mechanical functions.
- Good wettability and surface activity, it can be stripped by small molecules or polymer intercalation.
- Can improve the thermal, electrical, mechanical and other comprehensive functions of the material.

➤ Product Functions

- **Composite material field:** graphene oxide has excellent mechanical capacity, good thermal conductivity and large specific surface area, which can be applied to rubber, plastic, resin, fiber and other polymer composite material field;
- **Biomedical field:** Due to its high specific surface area and wide range of conjugate structure, GO has good application value in drug loading, especially in the aspect of anticancer drug carrier. After technical treatment, GO can be supplemented with non-water-soluble anticancer drugs.
- **In the field of photocatalysis:** graphene oxide has good adsorption performance. Together with nanomaterials, it can prepare catalytic materials with better performance and higher catalytic efficiency, which can be applied to the photocatalytic industry to further improve the degradation efficiency of pollutants;
- **Analysis and detection field:** The application of GO in PCR technology can significantly improve the specificity, sensitivity and amplification yield of PCR, eliminate primer dimers formed in amplification, and have a wide optimization range, which can be widely applied to DNA templates of various concentrations and complexity;
- **Anticorrosive field:** Like graphene, graphene oxide has excellent anticorrosive properties, but it also has more active sites than graphene, which is easier to modify and can be well dispersed in coatings;
- **In the field of conductivity:** although the conjugate network is damaged in the oxidation process, graphene oxide has certain insulation properties, but after reduction treatment, part of the conductivity can be recovered, which can meet the requirements of anti-corrosion coatings on conductivity, reduce or replace the use of metal filler;
- **Thermal conductivity field:** High thermal conductivity and large specific surface area lay the foundation for graphene oxide as a thermal conductivity material. Meanwhile, its active site improves its serviceability. Stable conjugate structure enables it to work at high temperature and prolongs the service life of the product.

➤ Disposal and Storage

Disposal And Storage: Operators should wear appropriate protective clothing and gloves, avoid direct contact with skin, and immediately rinse with plenty of water once entering eyes. Store tightly in a cool, ventilated and dry environment. Use as soon as possible after unpacking. The recommended storage temperature is from 5 to 35°C. Keep away from tinder and heat source, and store separately with strong reducing agent and flammable substance.

Graphene Based Oil Absorbing Sponge

By combining the lipophilic and hydrophobic graphene with ordinary commercial porous sponges, the graphene-based oil absorbing sponge is obtained. The graphene composite sponge not only has the high strength and high resilience of sponges, but also has the hydrophobicity of graphene. It can be used to deal with the oil leakage accidents in the process of oil exploitation, refining and transportation, as well as the organic solvent pollution used and discharged in the chemical industry. Graphene-based oil sponge can absorb 100 times its own weight of various oil and organic solvent pollutants. When the sponge is treated with oil spill pollution instead of oil absorbing felt, it can still float on the water surface after absorbing oil, which is easy to salvage and recycle, and it can be reused more than thousands of times.

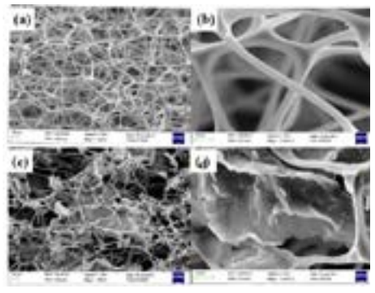
Pictured above is a new graphene-based oil sponge with a graphene-based oil sponge that has been reused more than 1,000 times

Product Attributes

Function
Can be used for oil slick, organic solvent recovery, which can be recycled by extrusion or negative pressure, after regeneration it can be reused.

Specification
Size and shape can be customized.

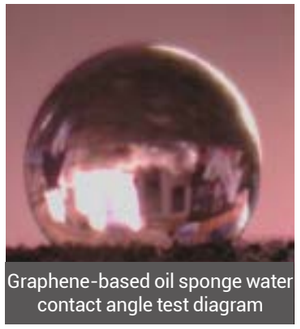
Specification	20x10x3orΦ20	Origin	Beijing, Xiamen
Purpose	Oil slick recovery	Brand	MSTN
Length	Non-standard, customizable	Model	MSTN-GS
Diameter	Non-standard, customizable	Price	Negotiable
Material	graphene, sponge	Processing customization	Yes
Model	MSTN-GS	Color	Brown/black
Dimensions	Non-standard, customizable	Density	15~50kg/m3
Size	Non-standard, customizable	shape	Non-standard,customizable
Properties	Non-standard, customizable		



The above is the electron microscope scanning of the corresponding microstructure of blank sponge and graphene-supported sponge magnified 500 times (left) and 3000 times (right) respectively. Figure a and b show that the skeleton of blank melamine sponge is smooth and interwoven, forming multistage micropore structure with pore size ranging from tens to hundreds of microns. Therefore, oil or organic solvents can freely pass through the internal pores; The cross-linked skeleton structure of the sponge can also effectively support the weight of the adsorbed oil, giving the sponge a larger oil absorption capacity. According to the surface wetting theory, the material surface wettability is related to surface roughness and chemical properties. Because the blank sponge skeleton surface is smooth and flat, and contains a large number of hydrophilic groups, the oil-water separation selectivity is poor. As can be seen in Figure c and d, a large number of clumped and irregularly distributed graphene coatings appeared on the surface of the skeleton structure of the graphene loaded sponge. After local amplification, it could be clearly seen that there were crumpled protrusions with micro or nano size attached to the pore wall, which greatly increased the roughness of the sponge.

Product Advantages

- Super hydrophobic, contact angle can be more than 150°
- The adsorption rate is high, the adsorption capacity of crude oil can reach 120 times of its own weight
- High desorption rate, up to 95%
- After repeated use, the adsorption rate remains high after up to thousands of adsorption-desorption



Graphene-based oil sponge water contact angle test diagram

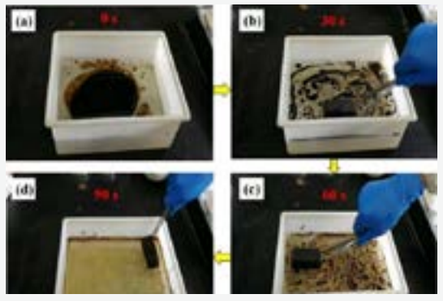
Graphene-based oil sponge square

A graphene-based oil sponge ball with a diameter of 6cm

A graphene-based oil sponge ball with a diameter of 4cm

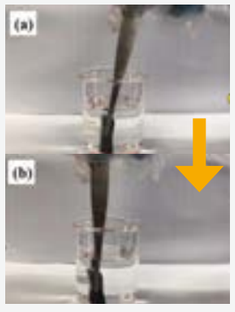
A graphene-based oil sponge ball with diameter of 2cm

Product Advantages



As shown in the figure above, add a simulated sea water containing 3.5% NaCl and pour 10 mL crude oil into the tank. A graphene-based oil sponge is held with tweezers and the oil on the water surface is absorbed back and forth. Under the action of the sponges' lipophilic and capillary forces, the crude oil from the water surface quickly penetrates into the sponges' pores. With the recovery process, the oil storage space of sponge gradually decreases, and the oil absorption rate decreases compared with the beginning. After 90s, most of the oil is recovered, and the sponge can continue to float on the water surface, which is conducive to salvage and recovery.

The water bottom of the beaker is trichloromethane stained with Sudan Red III. Dip the graphene-based oil sponge into the water bottom, and the trichloromethane is immediately adsorbed without absorbing water. It can be seen that in addition to oil recovery on the water surface, graphene-based oil absorbing sponge also has good selective adsorption for underwater oil or organic solvent leakage, and can be applied in the field of underwater oil and water separation. Sponges are good at oil philicity and hydrophobicity, and have strong selective absorption for heterogeneous oil-water mixing systems. They have great advantages in waters where large mechanical recovery equipment is difficult to operate, such as shoals and riverbanks.

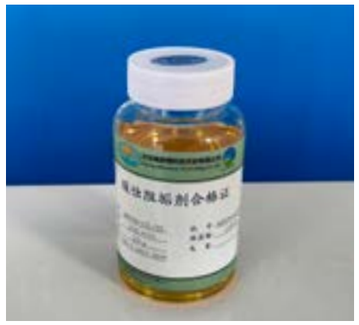


Corrosion and Scale Inhibitor

MSTN CI-22 Industrial Circulating Water Treatment Agent

Product Features

- Low corrosion rate
- Strong scale inhibition
- Good stability
- Green environmental protection of products, no pollution to the environment;



Product Attributes

Name	Corrosion and Scale Inhibitor	Brand	MSTN
Mode	MSTN CI-22	Packing Specification	25kg/Bucket
Aspect	light yellow transparent liquid	Customization of processing	Yes
Density 20g/cm3	1.10±0.05	Use	Industrial Circulating Water Treatment
solid content	≥22%	Application Fields	Power generation, steel, chemical, petroleum, coking, central air conditioning, etc
pH Valve(1%)	3.0±1.5		
Main Ingredient	Organic Polymer		
Origin	Hebei		

Instructions for Usage

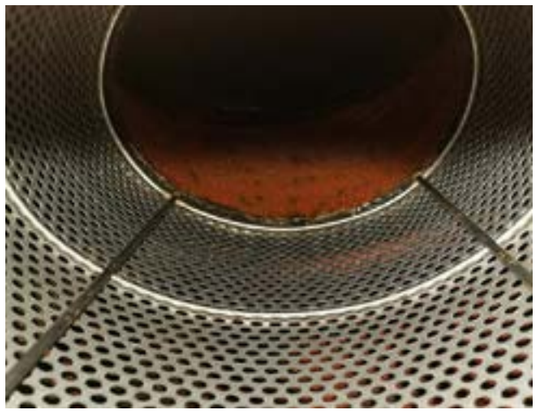
- Usually the content of the agent in the system should be 20-40mg/L, but when the system cycle is abnormal and the amount of sewage discharged is large, the amount of the agent can be increased, and the most suitable amount should be determined by the local water quality.
- It can be added directly or after dilution in the medicine cylinder. Automatic dosing requires a timer and metering pump. It is recommended to use stainless steel or PVC equipment during dosing.

Packing, storage and precautions

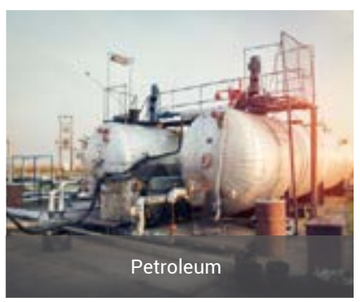
- The corrosion and scale inhibitor is packed in plastic drum, 25kg per barrel. Stored in a cool indoor place, storage period of 12 months.
- Corrosion and scale inhibitor is weakly acidic. Pay attention to labor protection during operation, avoid contact with skin and eyes, and rinse with plenty of water after contact.

Case Study Sharing

- A central air conditioning project, circulating water 1000m3, system operation from May to September.



Application Fields



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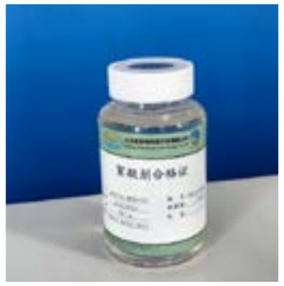
Flocculant

MSTN WY-01 industrial sewage treatment agent

➤ Product Features

- High efficiency of TSS removal
- Fast reaction time
- Wide application field
- Small dosage
- Good stability
- No corrosion effect on equipment



➤ Product Attributes

Name	Flocculant
Mode	Mstn Wy-01
Aspect	Colorless Transparent Or Light Yellow Liquid
The Mass Fraction Of Alumina	≥3.0%
Density 20	1.05-1.45g/Cm3
Ph	3.0-6.0
Molecular Weight	≥10000
Water Insoluble	<1%
Main Ingredient	Aluminum Sulfate Polymer
Application	Industrial Sewage Treatment
Application Fields	Power Generation, Steel, Chemical, Petroleum
Brand	Mstn
Origin	Beijing
Packing Specification	25kg/Barrel
Customization Of Processing	Yes

➤ Instructions for Usage

Product dosage:
according to the water quality, through the test to determine the dosage of the product, so that it can give full play to its role;

Accelerated mixing:
after adding the product, the mixing with the treated liquid should be accelerated to facilitate the growth and settlement of floccules.

➤ Packing, storage and precautions

First aid measures

Eye contact Rinse immediately with water and seek medical attention immediately.

Ingestion Induce vomiting, seek medical attention immediately.

Operation, disposal and storage

Operation precautions sealed operation, anti-leakage.

Storage precautions Store in a cool, ventilated place, moisture-proof and rainproof.

The product is packed in 25kg plastic drum

➤ Case Study Sharing

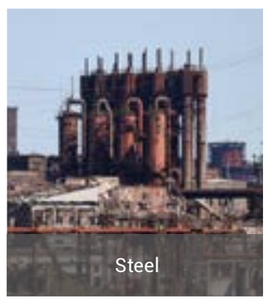
4.5 million tons/year heavy oil catalytic cracking unit flue gas desulfurization wastewater treatment of a petrochemical plant

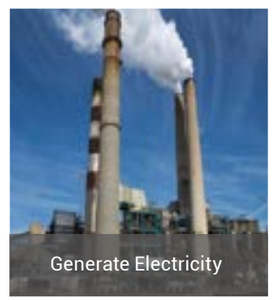
Comparison of wastewater before and after treatment

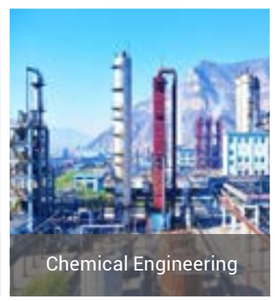
Desulfurization waste liquid treatment of 1.6 million tons/year MCP combined plant flue gas purification project of a refining and chemical plant in Shandong

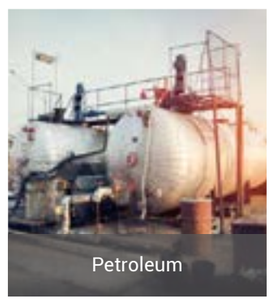
Waste liquid treatment

➤ Application Fields







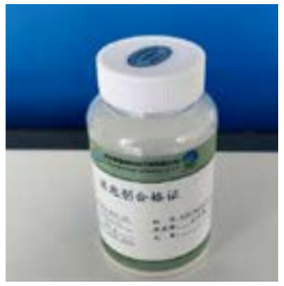


Defoamer

MSTN-DF-22 Industrial Water Treatment Agent

➤ Product Features

- Fast defoaming speed
- Long bubble suppression time
- Less consumption, low cost
- Green Environmental Protection of Products, no pollution to the environment
- Wide Range Of Application



➤ Product Attributes

Name	Defoamer	Main Ingredient	Polyepoxy Silane
Mode	MSTN-DF-22	Use	Industrial Water Treatment
Aspect	Milky white/transparent	Brand	MSTN
Effective Constituent	≥50% (customizable)	Packing Specification	25kg/Bucket
pH	6.0-8.0	Application Fields	▸ Circulating Water Treatment; ▸ Sewage Treatment; ▸ Textiles; ▸ Water Based Coating; ▸ Industrial Cleaning; ▸ Paper Making; ▸ Building Materials; ▸ Daily Chemical And Other Industries
Viscosity (25°)	300-800mPa.s		
Water Solubility	Dissolve In Water		
Origin	Hebei		
Customization of processing	Yes		

➤ Instructions for Usage

- MSTN-DF-22 Defoaming Agent was added to the foaming system to ensure uniform dispersion. If diluted, the diluent should not be stored for more than 24 hours. The Defoamer has excellent anti-foaming and antifoaming performance, which can be added after the foam is generated or added to the product as an antifoaming component. According to the different usage systems, the addition amount of antifoaming agent can be 10~1000ppm, and the optimal addition amount is determined by the customer according to the specific situation of the test.

➤ Packing, storage and precautions

- The product is packed in 25kg plastic drum. This product should be stored in a ventilated, cool and dry environment.
- From the date of production, the storage period is 12 months. This product is stored and transported as non-dangerous goods.

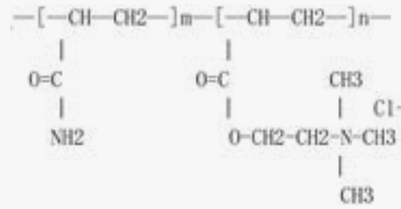
➤ Field of application

- Circulating water treatment; Sewage treatment; Textiles; Water based coating; Industrial cleaning; Paper making; Building materials; Daily chemical and other industries.

Cationic Polyacrylamide

Cationic polyacrylamide is a linear polymer compound formed by the copolymerization of cationic monomers and acrylamide. Due to its various active groups, it can form hydrogen bonds by affinity and adsorption with many substances.

➤ Molecular Structure



➤ Functional Features

Cationic polyacrylamide is a polymer that is soluble in water. At appropriate low concentrations, cationic polyacrylamide solution can be seen as a network structure, where mechanical entanglement and hydrogen bonding between chains jointly form network nodes; When the concentration is high, the PAM solution is in gel shape because the solution contains many chain link contacts. PAM aqueous solution has good solubility with many water-soluble organic compounds, which can effectively reduce the frictional resistance of fluids. Adding trace amounts of PAM to water can reduce the frictional resistance by 50-80%.

➤ Specification Parameters

Molecular Mass	8-12
Solid Content %	89
Hydrolysis %	50-55
Appearances	White granular

Type	Hyhydrolysis %	Molecular Mass Million
MSTN-C20	17.5%	≥10.5
MSTN-C40	32.5%	≥11.5
MSTN-C60	48%	≥9.5
MSTN-C70	58%	≥10

➤ Application

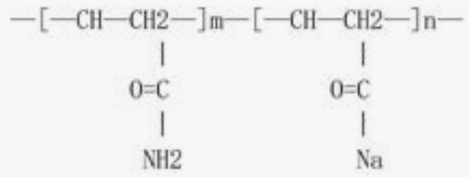
It is mainly used in solid-liquid separation process in industry, including sedimentation, clarification, thickening and sludge dewatering, etc. The main industries in which it is applied are: oilfield drilling, urban sewage treatment, paper industry, petrochemical industry, metallurgical industry, mineral processing industry, dyeing industry, sugar industry and wastewater treatment of various industries.

In the purification of phosphoric acid, it helps to separate gypsum in the wet phosphoric acid process. Used in fiber slurry (asbestos-cement products), it can improve the drainage of molded asbestos-cement products and increase the strength of asbestos sheet blanks; in insulating boards, it can improve the combining ability of additives and fibers.

Anionic Polyacrylamide

Anionic polyacrylamide is a linear polymer compound made of acrylamide and neutralized acrylic acid copolymerization.Due to its various active groups, it can form hydrogen bonds by affinity and adsorption with many substances.

➤ Molecular Structure



➤ Functional Features

Anionic polyacrylamide is a kind of water-soluble polymer. Due to its clarifying and purifying effects, sedimentation promotion, filtration promotion, thickening and other effects, it has advantages in waste liquid treatment, sludge thickening and dewatering, etc., and can fully meet the requirements of various fields.

➤ Instructions for Use

When treating different sewage or sludge, suitable products should be selected according to the treatment process and water quality, and the feeding amount of the agent should be determined according to the concentration of the treated water or the water content of the sludge. Reasonable selection of the placement point and stirring speed, is not only to ensure that the polyacrylamide dilute solution is placed uniformly, but also to avoid floc fragmentation. The equipment in contact with the solution should be made of stainless steel, plastic, glass fiber reinforced plastic or carbon steel coated with resin on the surface.

➤ Application

Mainly used in industrial solid-liquid separation process, including sedimentation, clarification, thickening and sludge dewatering process, the main industries are: petrochemical industry, metallurgical industry, mineral processing industry, dyeing industry and sugar industry and a variety of industrial wastewater treatment.

➤ Specification Parameters

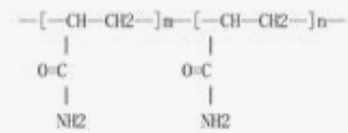
Molecular Mass	9-27 million
Solid Content %	89
Hydrolysis %	8.0-24
Appearances	White Granular

Type	Hyhydrolysis %	Molecular Mass Million
MSTN-GS6517	24%	1600-1850
MSTN-GA6519	25%	1800-2100
MSTN-G5517	17.5%	1600-1800
MSTN-6525	20%	2700
MSTN-G2510	8%	900-1200

Nonionic Polyacrylamide

MSTN-N632 nonionic polyacrylamide is a polymer or polyelectrolyte, and its molecular chain contains a certain amount of polar groups which can adsorb the suspended solid particles in the water, so that the bridge between the particles can form a large floc, and accelerate the suspension of the particles in the settlement of the suspension of turbid liquids, which brings a very obvious acceleration of the clarification of turbid liquidsto promote the filtration of such effects.

➤ Molecular Structure



➤ Functional Features

Because the molecular chain of MSTN-N632 nonionic polyacrylamide contains amide groups or ionic groups, its distinctive feature is high hydrophilicity, and can be dissolved in water in various proportions.Polyacrylamide aqueous solution has a very good tolerance for electrolytes, not sensitive to such as amine chloride, sodium sulfate, etc., , and also soluble with surfactants.

➤ Specification Parameters

Molecular Mass	8-12
Solid Content %	89
Hydrolysis %	50-55
Appearances	White Granular

➤ Application

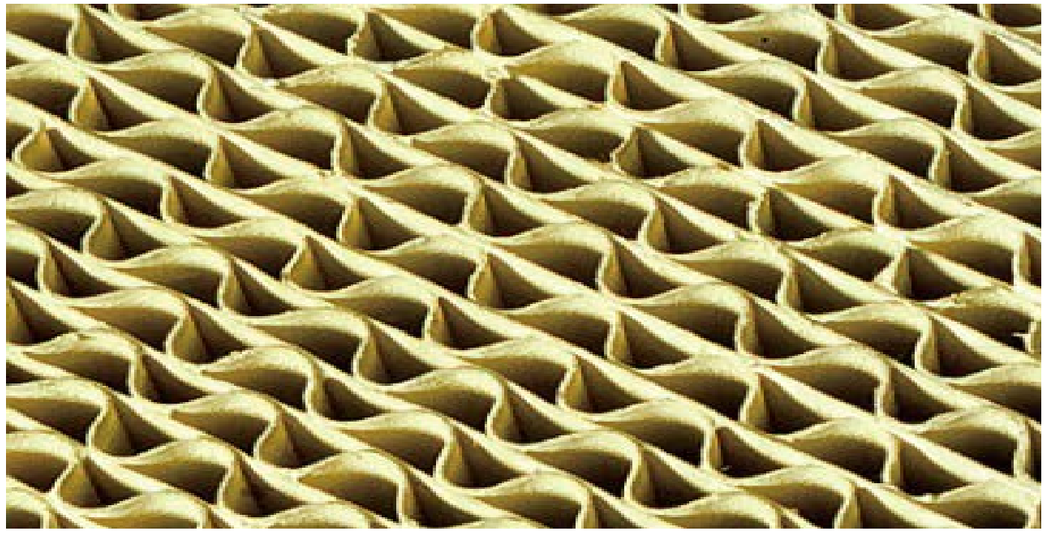
Sewage treatment agent: when the suspended sewage is acidic, the use of non-ionic polyacrylamide as a flocculant is more appropriate. This is its role in adsorption and bridging, so that the suspended particles produce flocculation and precipitation, so as to achieve the purpose of purifying sewage. It also can be used for tap water purification, and especially with inorganic flocculantscan make the best effect in water treatment.

Textile industry auxiliaries: to add some chemicals can be formulated into chemical raw materials for textile sizing.

Sandproof and sand-fixing: non-ionic polyacrylamide dissolved into 0.3% concentration to join the crosslinking agent, sprayed on the desert can play the role of sandproof and sand-fixing.

Soil moisturizing agent: used as soil moisturizing agent and the basic raw material of various modified polyacrylamide.

SCR Catalyst



It has a unique corrugated plate structure and undergoes two impregnation and two baking processes to ensure the uniformity of the active substance. In addition, it has "large, medium and small sized" micropores, greatly improving its specific surface area.

➤ Product Features

- Its specific surface area is twice that of the traditional honeycomb catalyst;
- It has a superior poison tolerance, doubling the chemical lifetime
- Its weight per unit (by volume) is about 50% of the traditional honeycomb catalyst
- It is produced domestically, making the lead time guaranteed.

Our business covers both domestic and international markets, such as America, Europe, Middle East, Southeast Asia, etc.