


**MSDS No: 20231101**

## SECTION 1: NAME OF CHEMICALS AND DOSSIER OF SUPPLIERS

Name of chemicals : Functional additive MVT-1020
Manufacturer: Xiamen Minta Sci. & Tech. Co., LTD.
Address: Floor3, No.670 Hong'an Road, Xiamen Torch High-tech Zone
Tel: 0592-5172326
Fax: 0592-5172176
National Chemical Emergency Center Tel: 0532-3889090
Recommended use: Industrial use. Battery process additives. Our company recommends using this product according to the listed usage methods. If you attempt to use it outside of the stated method of use, please contact the Customer Information Department (see Part 1 of this information sheet)
Publishing date : 2023-11-01

## SECTION 2: SUMMARIZE OF HAZARD IDENTIFICATION

Labelling according to Regulation (EC) No.1272/2008 [CLP]	
Hazard Pictograms (CLP):	
	
GHS07 GHS08 GHS05	
signal word (CLP):	danger
Hazard Statement (CLP):	
H302 - Harmful if swallowed. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H361 - Suspected of damaging fertility or unborn child. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure (liver, bone marrow, nervous system, and lungs).	
precautionary statements (CLP):	
Prevention	P201 - Obtain special instructions before use. P210 - Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P302+P352 - IF ON SKIN: Wash with plenty of water/... P332+P313 - If skin irritation occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



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Storage	P337+P313 - If eye irritation persists: Get medical advice/attention. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/doctor if you feel unwell. P308+P313 - IF exposed or concerned: Get medical advice/ attention. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up.
Disposal	P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.international regulations.
Other hazards which do not result in classification : None.	

## SECTION 3: COMPOSITION/INFORMATION OF INGREDIENTS

component	CAS.No.	content
N-methylpyrrolidone	872-50-4	63.0% - 67.0%
active substance	proprietary	33.0% - 37.0%

## SECTION 4: FIRST-AID MEASURES

Inhalation: Transfer personnel to fresh air, and if breathing is difficult, administer oxygen; If breathing stops, immediately engage in artificial respiration. Seek medical attention.
Skin contact: Immediately rinse the skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If symptoms or irritation persist, seek medical attention. Wash clothes thoroughly before reusing them. Appropriate emergency safety shower facilities should be immediately available.
Eye contact: Immediately rinse with flowing water for at least 30 minutes. After rinsing for 5 minutes, remove the contact lenses and continue rinsing. Consult a doctor immediately, preferably an ophthalmologist. Appropriate emergency eye handling facilities should be immediately available.
Ingestion: Please seek medical attention immediately. Do not induce vomiting. If possible, please give the patient a glass (8 ounces or 240 milliliters) of water or milk and transfer to a medical institution. Do not feed the patient anything unless they are conscious.
The most important symptoms and health effects: Except for the information described in the first aid measures (as mentioned above) and instructions for immediate medical attention and special treatment required (as described below), any other important symptoms and effects will be recorded in Part 11: Toxicological Information.
Advice on protecting rescuers: Participants in first aid should pay attention to their own protection and use recommended protective clothing (chemical protective gloves, splash protection). If there is a possibility of exposure, see specific personal protective equipment in Section VIII.
Special tips for doctors: Chemical burn of the eye needs prolonged flushing. Consult a doctor immediately, preferably an ophthalmologist. If a burn occurs, remove the contamination and treat it as a general heat burn. The treatment for contact should be tailored to the patient's symptoms and clinical situation. There is no specific antidote. Due to its irritating nature, swallowing may cause burns or ulcers in the mouth, stomach, or lower digestive tract, which may subsequently narrow. Inhaling vomit may cause lung damage. If gastric lavage is performed, protective control of the trachea/esophagus is recommended.



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## SECTION 5: MEASURES OF EXTINGUISHING FIRE

Suitable extinguishing media:

Water mist or fine spray. Carbon dioxide fire extinguishers. Dry powder fire extinguisher. Foam. Alcohol resistant foam (ATC type) is preferred. General purpose synthetic foam (including AFFF type) or protein foam may have a role, but the role is relatively small.

Special danger:

Directly adding water flow to a hot liquid can generate intense steam or ejecta.

Hazardous combustion products:

During combustion, the generated smoke may contain raw materials and various toxic and/or irritating components composed of combustion products. Combustion products may include but are not limited to: carbon dioxide. carbon monoxide. Nitrogen oxide.

Special fire extinguishing methods:

Evacuate personnel away from the fire. Isolate the fire site and prohibit unnecessary entry. Do not use direct water flow. May cause the fire to spread. Directional drainage of combustion liquid can be carried out by flushing with water to protect workers and minimize property damage. Burning liquids can be diluted with water and extinguished.

Special protective equipment for firefighters:

Wear positive pressure, self-contained air breathing equipment, and firefighting clothing (including firefighting helmets, jackets, pants, boots, and gloves). During the firefighting process, avoid contact with this material. If there is a possibility of contact, please replace with fully chemical protective firefighting clothing with a self-contained air breathing device. If there is no such fire-fighting clothing, please use fully chemical protective clothing with self-contained air breathing devices and extinguish the fire from a distance. For protective devices used for post fire or non fire cleaning, please refer to the relevant sections.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Personnel protection measures, protective equipment, and emergency response procedures:

Keep upwind of the spill area. Maintain ventilation in areas of leakage or overflow. Smoking is prohibited in the area. Only personnel who have been trained and wear appropriate protective equipment can carry out cleaning operations. Use appropriate safety equipment. For more information, please refer to Section 8, Exposure Control and Personal Protection. Please refer to Section 7 for other preventive measures.

Environmental Protection Measures:

Prevent it from flowing into soil, ditches, sewers, drainage ditches, and/or underground water systems. See Section 12, Ecological Information.

The storage and removal methods of leaked chemicals and the disposal materials used: Small leakage:

Absorb with sand or other non combustible materials. Use clean, non-sparking tools to collect absorbing materials. Massive leakage: Build embankments or dig pits for containment. Cover with insoluble foam to reduce evaporation. For more information, please refer to Section 13, Waste Disposal.

## SECTION 7: OPERATING PROCEDURES AND CONTAINING METHODS

Precautions for safe disposal:

When the spilled organic material encounters hot fiber insulation material, it may lower its self ignition temperature and cause self ignition. Even if the container is empty, there will still be steam. Therefore, do not cut, drill, grind, weld, or perform similar operations on or around empty containers.

Stay away from heat sources, sparks, and flames. Do not swallow. Thoroughly clean after operation. Prevent inhalation of vapors or mist. The workplace should have a ventilation system and equipment. Take measures to prevent electrostatic discharge. When filling, attention should be paid to the flow rate and there should be a grounding device to prevent the accumulation of static electricity. Don't let it get in your eyes, on your skin, or on your clothes. Please refer to Section 8- Exposure Control and Personal Protection.

Safe storage conditions:



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Store in original containers. Keep the container sealed when not in use. Store in a cool, ventilated, and dry environment. Keep away from sparks and heat sources, and prevent direct sunlight exposure. Keep upright to avoid leakage. It should be stored separately from strong acids, oxidizing agents, and reducing agents. Sensitive to moisture. Store under inert gas. The storage area is equipped with corresponding types and quantities of fire-fighting equipment, emergency response equipment for leaks, and appropriate storage materials. Do not store in: zinc. Galvanized container. aluminium Copper. copper alloy. Brass.

## SECTION 8: CONTROL OF EXPOSURE AND SELF-PROTECTION

### Engineering Control:

Some operations may require local exhaust ventilation. Adopt local ventilation or other engineering control measures to maintain the concentration in the air below the specified exposure limit. If there are no current exposure limits or specified values for reference, conventional ventilation conditions can meet the requirements for most operating situations.

### Personal protective equipment:

#### respiratory system protection:

In most cases, respiratory protection is not required; However, when substances are heated or splashed, please use an approved air purification respirator. When it is possible to exceed the exposure limit requirements or specified values, respiratory protective equipment should be worn. If there are no applicable exposure limits or specified values, respiratory protective devices should be worn when adverse reactions such as respiratory irritation or discomfort occur, or when a risk assessment proves the existence of hazards.

#### Eye protection:

Use chemical protective glasses. The eyewash should be located close to the work area.

#### Skin and body protection:

Use anti-static and chemical resistant protective clothing. Select specific tools based on the task, such as masks, boots, aprons, or a complete set of clothing.

#### Hand protection:

Use chemical protective gloves suitable for this material. The preferred protective material for gloves includes polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol composite material ("EVAL"). Suitable glove protective materials include Viton (a type of fluororubber). Butyl rubber. Neoprene rubber. Natural rubber ("rubber"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/polybutadiene rubber ("nitrile" or "nitrile rubber"). Avoid gloves made of the following substances:

polyvinyl alcohol ("PVA"). Attention: When selecting specific gloves in the workplace for specific applications and usage periods, all factors related to the workplace should be considered, but not limited to, such as other chemicals that may need to be treated, physical requirements (cutting/piercing protection, flexible operation, heat protection), possible reactions of the body to glove materials, and usage instructions and specifications provided by the glove supplier.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Appearance, Color	colorless or light yellow liquid
Density/relative density	0.900-1.100g/cm <sup>3</sup> (25°C)
Smell	Slightly odorous.
PH	10-12
Flash point (closed)	75.0°C—85.0°C
Boiling point/boiling range	170°C-210°C
saturation vapor pressure	5.5 KPa—8.0 KPa
Water conten	≅ 0.3%
Refractive index	1.4570-1.4610(25°C)
metal content	Fe: ≅ 10ppm, Co、 Ni、 Cu、 Zn: ≅ 5ppm
auto-ignition temperature	No experimental data.



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## SECTION 10 : STABILITY AND REACTIVITY

Stability: Moisture absorption, stable in recommended storage environment. Refer to Section 7.
reactiveness: No dangerous reactions observed under normal use conditions
Conditions to avoid: Exposure to high temperatures can cause product decomposition. The product will absorb carbon dioxide from the air. The reaction with carbon dioxide may form carbonates.moisture-proof.
Prohibited compound: Avoid contact with strong acids. Strong oxidant.Avoid contact with this type of metal: zinc. Galvanized metal. aluminium Copper. copper alloy. Brass.Avoid unintentional contact with such substances: haloalkane.
Hazardous decomposition products: Oxides of carbon monoxide, carbon dioxide, and nitrogen.The decomposition products depend on temperature, air circulation, and the presence of other materials.

## SECTION 11 : TOXICOLOGICAL INFORMATION

Acute toxicity:LD50 (Rat, Oral, Male): 3914 mg/kg LD50 (rabbit, percutaneous, male and female): 8000 mg/kg
Skin corrosion/irritation:Causes skin irritation.
Serious eye injury/eye irritation: causing serious eye irritation.
Respiratory or skin sensitization: no data available.
Mutagenicity of germ cell: no data available.
Carcinogenicity: no data available.
Reproductive toxicity: may cause damage to the reproductive capacity or fetus.
Specific target organ toxicity - single exposure: May cause respiratory irritation. May cause drowsiness or dizziness
Specific target organ toxicity - repeated exposure: Long term or repeated exposure may cause damage to organs: liver, bone marrow, nervous system, lungs
Inhalation hazard: no data available.

## SECTION 12 : ECOLOGICAL INFORMATION

Toxicity to fish: LC50 (Lepomis macrochirus): 4000 mg/l Exposure time: 96.0 hours Test type: static test LC50 (Leuciscus idus):>500 mg/l Exposure time: 96.0 hours
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Test type: static test
Toxicity to Daphnia and other aquatic invertebrates: LC50 (Daphnia magna):>1000.00 mg/l Exposure time: 24.0 hours Test type: static test
Bacterial toxicity: LC50 (bacteria):>9000mg/l
Persistence and degradability:Biodegradability result: 90% - easily degradable
Bioaccumulation potential:no data available.
Mobility in soil:no data available.
Other harmful effects:no data available.

## SECTION 13 : WASTE DISPOSAL

Waste chemicals: Do not pour into any sewer, ground, or any water body. Consider recycling as much as possible. If it cannot be recycled, it is recommended to use an incinerator or other hot selling device for treatment under supervision.
Contaminated packaging: Return the emptied container to the manufacturer or bury it in a designated location. Dispose of according to national and local regulations.
Disposal precautions: Before disposal, relevant regulations of the local environmental protection department should be consulted. It is recommended to hand it over to a qualified chemical waste treatment department for disposal.

## SECTION 14 : TRANSPORT INFORMATION

United Nations Dangerous Goods Number (UN Number): None
United Nations hazardous transportation name:None
United Nations Hazard Classification:None
Packaging category: None
Packaging identification: None
US Department of Transportation (DOT): Flammable liquid, number NA1993
Transportation precautions: It is strictly prohibited to mix and transport with strong acids, strong oxidizing agents, strong reducing agents, flammable substances, chemicals, etc. The exhaust pipes of transportation vehicles must be equipped with flame arresters. When using tank trucks for transportation, there should be a grounding chain, and holes and partitions can be installed inside the tank to reduce vibration and generate static electricity. It is prohibited to use mechanical equipment and tools that are prone to sparks for unloading. It is best to transport in the morning and evening in summer. During transportation, it is necessary to prevent exposure to sunlight, rain, and high temperatures. When stopping midway, stay away from sparks, heat sources, and high temperature areas. Transport vehicles should be equipped with corresponding types and quantities of fire-fighting equipment and leakage emergency response equipment

## SECTION 15 : LEGISLATION INFORMATION



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This product production, packaging, storage, use and waste in China shall comply with the production safety law of the People's Republic of China (the President of the People's Republic of China order no. 70), the dangerous chemicals safety, all management regulations (state order no. 591), the safety production license regulations (the state order of the People's Republic of China (no. 397)), the dangerous chemicals operating license management measures (the original state economic and trade commission order no. 36) and other laws and regulations

This product is classified according to GB 13690-2009 General Rules of Chemical Classification and Risk Publicity:

Flammable liquids category 4

Acute toxicity-Oral category 5

Skin corrosion / Stimulation Category 5

Severe Eye injury / Eye irritation 2A

Reproductive toxicity Category 1B

Specific Target organ toxicity-Primary Contact Category 3

Specific Target organ toxicity-Repeated Contact Category 2 (liver, bone marrow, neurological, lung)

In GB 12268-2012 Name List of Dangerous Goods: None

In the List of Railway Dangerous Goods (2009 edition): None

In the Catalogue of Hazardous Chemicals (2015 edition): None

## SECTION 16: OTHER INFORMATION

According to standards: This MSDS is prepared in accordance with GB/T 16483-2008 "Content and Project Sequence of Chemical Safety Technical Instructions" (Compilation Guide: GB/T 17519-2013 "Guidelines for the Compilation of Chemical Safety Technical Instructions")

Disclaimers: The information provided in this safety technical manual is accurate and accurate as of the date of its publication. The information provided is only for guidance on safe handling, storage, transportation, handling, etc., and cannot be used as a guarantee or quality indicator. This information is only used for the specified substance and cannot be used for other related substances, unless otherwise specified.

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