

Material Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product Name: 5018 GRAPHITE CONDUCTIVE ADHESIVE

1.2 Chemical Classification: Inorganic Aluminosilicate

1.3 Company Details:

Manufacturer/Supplier: Wuhan Double-bond Chemical Co., Ltd.

Address: Room 705, Strait Entrepreneurship IBD Building, Qixiong Rd. , Dongxihu District, Wuhan , China.

Telephone Number: (86 27) 83413681 Fax Number: (86 27) 83413679

Emergency Telephone Number: (86 27) 83413681

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Ingredients | %(w/w) | ACGIH TLV | OSHA PEL | OTHERS |
|--|--------|-----------|----------|--------|
| Al ₂ O ₃ | 5-30 | None | None | None |
| SiO ₂ | 5-30 | None | None | None |
| C | 30-70 | None | None | None |
| CaCO ₃ | 5-30 | None | None | None |
| Na ₂ O ₇ Si ₃ | 20-50 | None | None | None |

3. HAZARDS IDENTIFICATION

3.1 Overall Hazard Classification: None flammable.

3.2 Hazard Information: Harmful by inhalation.
Avoid contact with skin and eyes.
Use in well-ventilated areas.

3.3 Rote of Exposure: Inhalation, Skin Contact and Accidental Ingestion.

3.4 Possible Health Effects:

Acute

Eyes: Direct contact may cause severe irritation.

Skin: May cause moderate irritation.

Inhalation: May irritate nose and throat. Overexposure by inhalation may cause drowsiness, Dizziness, confusion or loss of coordination.

Ingestion: May cause vomiting and injure lungs.

3.5 Signs and Symptoms of Overexposure: May cause harm after excessive inhalation.

4.FIRST AID MEASURES

- 4.1 Eyes: Immediately flush with water for 15minutes, Get medical attention.
- 4.2 Skin: Remove form skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
- 4.3 Inhalation : Remove to fresh air. Get medical attention if ill effects persist.
- 4.4 Ingestion: Get immediate medical attention. Only induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person.

5.FIRE FIGHTING MEASURES

- 5.1 Flammability: None flammable.
- 5.2 Flash Point: Inapplicable.
- 5.3 Autoignition temperature: Inapplicable.
- 5.4 Lower Explosion Limit: Not determined.
- 5.5 Upper Explosion Limit: Not determined.
- 5.6 Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide(CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.
- 5.7 Special Fire Fighting Procedures and Equipment Determine the need to evacuate or isolated the area according to your local emergency plan. Use water spray to keep fire exposed container cool. Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
- 5.8 Hazardous Combustion Products: None.
- 5.9 Unsuitable Extinguishing Media: None established.

6.ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions: Avoid skin and eye contact. Keep container closed. Do not take internally.
- 6.2 Environmental Precautions: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.
- 6.3 Methods for Cleaning up: Determine whether to evacuate or isolate the area according to your local Emergency plan. Observe all personal protective equipment recommendations described in the MSDS. For large release area, keep well-ventilated. Laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which laws and regulations are applicable.

7.HANDLING AND STORAGE

- 7.1 Handling Precautions: Use with adequate ventilation. Keep container closed. Do not internally. Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
- 7.2 Storage Conditions: Keep container closed and away from sun and heat. Keep container closed and away from water and moisture.
- 7.3 Unsuitable Packing Materials: None established.

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Engineering Controls:
- Local Ventilation: Recommended.
 - General Ventilation: Recommended.
- 8.2 Respiratory protection: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can assist in judging the adequacy of existing engineering controls.
- Suitable Respirator: Dust Type.
- Skin Protection: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
- Eyes Protection: Use chemical worker's goggles.

9.PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Physical Form: Pasty
- 9.2 Color: Black
- 9.3 Odor: Facile Odor
- 9.4 Vapor Pressure 20°C (68°F) <5mmHg
- 9.5 pH: Unsuitable
- 9.6 Boiling Point: Unsuitable
- 9.7 Melting Point: None determined
- 9.8 Special Gravity: 1.65 g/cm³
- 9.9 Volatilization Speed: Unsuitable
- 9.10 Solubility in Water: None
- 9.11 Organics Volatilization: None

10.STABILITY AND REACTIVITY

| | |
|---------------------------------|--|
| 10.1 Stability : | Stable. |
| 10.2 Hazardous Polymerization : | Hazardous polymerization will not occur. |
| 10.3 Hazardous Decomposition : | None. |
| 10.4 Condition to Avoid: | None. |
| 10.5 Incompatibility: | None. |

11.TOXICOLOGICAL INFORMATION

| | |
|-------------------------------|----------------------|
| 11.1 Possible Health Effects: | Refer to Section 3.4 |
| 11.2 Sensitizing Effects: | None Known. |
| 11.3 Mutagenic Effects: | None Known. |
| 11.4 Reproductive Effects: | None Known. |
| 11.5 Carcinogenic Effects: | None Known. |

12.ECOLOGICAL INFORMATION

| | |
|-----------------------|----------|
| 12.1 Degradability: | Unknown. |
| 12.2 Bioaccumulation: | Unclear. |

13.DISPOSAL CONSIDERATIONS

| | |
|------------------------|---|
| 13.1 Product Disposal: | Disposal of in accordance with local regulations. |
| 13.2 Packing Disposal: | Disposal of in accordance with local regulations. |

14.TRANSPORT INFORMATION

| | |
|---------------------------------------|---------------------|
| Ground transportation within Domestic | Unlimited |
| Air transportation within Domestic | Unlimited |
| Dangerous levels: | None Classification |
| ID Number: | None |
| UN or ID Number: | None |

15.REGULATORY INFORMATION

Comply with the national and local laws and regulations.

16.OTHER INFORMATION

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.