1. Product Identification

Chemical Name: Hydrolyzed Polymaleic Anhydride (HPMA)
General Name: HPMA
CAS No.: 26099-09-02

SUPPLIER
Company: SHANDONG YUANLIAN CHEMICAL CO., LTD.
Address: JINING, SHANDONG 272400, CHINA
In case of emergency contact: +86-537-3379963

2. Hazards Identification

Corrosive to Metals Category 1
Acute toxicity, oral Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Acute toxicity, inhalation Category 4
Hazardous to the aquatic environment, long-term hazard Category 3

GHS, Globally Harmonized System Classification in accordance with 29 CFR 1910
GHS Label Elements

Irritant
Signal Words: Caution

Hazard statements:
H290: May be corrosive to metals.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:
P234: Keep only in original container.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P330: Rinse mouth.  
P362: Take off contaminated clothing and wash before reuse.  
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.  
P332+313: If skin irritation occurs: Get medical advice/attention.  
P337+P313: If eye irritation persists: Get medical advice/attention.  
P390: Absorb spillage to prevent material damage.  
P404: Store in a closed container.  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/Information on Ingredients

Active Ingredients: HPMA  
CAS No.: 26099-09-02  
Percentage: ≥ 48%

4. First Aid Measures

Always seek medical advice after the first aid treatment.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If Hydrolyzed Polymaleic Anhydride or HPMA is swallowed induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing & shoes before reuse. Get medical attention.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

5. Fire Fighting Measures

Flammability: None  
Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire Water can be used.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Sealed containers may rupture when heated.

Hazardous Decomposition Products: Carbon Monoxide, Carbon Dioxide and unspecified complex compounds.

6. Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill: Hydrolyzed Polymaleic Anhydride or HPMA spills must be handled with due care. Stop leak if without risk. Keep Hydrolyzed Polymaleic Anhydride or HPMA damp using water spray. Do not touch spilled material. Prevent entry into sewers. Eliminate all ignition sources. Do not touch or walk through spilled material.

7. Handling and Storage

Keep Hydrolyzed Polymaleic Anhydride or HPMA in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Separate from combustibles, organic or other readily oxidizable materials. Avoid storage on wood floors. Avoid contact with eyes, skin clothing etc. Do not swallow. Containers of Hydrolyzed Polymaleic Anhydride or HPMA may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred.
Respiratory System Protection: Avoid to inhalation the vapor or gas.
Skin Protection: Wear protective gloves and clean body-covering clothing.
Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.
Other protection: After work take bath and change the clothes.

9. Physical and Chemical Properties

Appearance: Hydrolyzed Polymaleic Anhydride or HPMA is clear amber liquid.
Boiling point: N/TA
Solid content: 48-52%
PH Value(1%water solution): 2.0-3.0
Water solubility: Miscible with water with any proportion
Flash point: N/A

10. Stability and Reactivity

Stability: Hydrolyzed Polymaleic Anhydride or HPMA is stable.
Hazardous Polymerization: No.
Condition to Avoid: High temperature and frequent exposure.
Materials to Avoid: Strong acid , Strong alkaline , Strong oxidizers and Cation surface-active agent.
Decomposition Products: Water, Carbon Monoxide ,Carbon Dioxide etc.

11. Toxicological Information

Without acute toxicity.
ORAL-RAT LD50 5000 mg/ kg

12. Ecological Information
Fish Toxicity: LC50 Oncorhynchus mykiss: >100 mg/L/96 h.
Daphnia Toxicity: EC50 Daphnia magna (Big Water Flea): >1000 mg/L/48 h.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused Hydrolyzed Polymaleic Anhydride or HPMA in accordance with federal, state and local requirements.

14. Transport Information

US DOT
UN No.: 3265
Proper Shipping Name: Corrosive Liquid (Polymaleic Acid), Acidic, Organic, N.O.S.
UN Class: 8
Packing Group: III
Label: CORROSIVE
IMDG
UN No.: 3265
Proper Shipping Name: Corrosive Liquid (Polymaleic Acid), Acidic, Organic, N.O.S.
UN Class: 8
Packing Group: III
Label: CORROSIVE
IATA
UN No.: 3265
Proper Shipping Name: Corrosive Liquid (Polymaleic Acid), Acidic, Organic, N.O.S.
UN Class: 8
Packing Group: III
Label: CORROSIVE

15. Regulatory Information

TSCA USA: CAS 26099-09-2 is listed.
SARA TITLE III (EPCRA) Section 302/304: No components of this product were found to be on the hazardous chemicals list.
SARA TITLE III (EPCRA) Section 311/312: Acute health hazard.
HMIS (Perceived):
Health Hazard: 3
Fire Hazard: 0
Reactivity: 0
NFPA (Perceived):
Health: 3
Flammability: 0
Reactivity: 0
European labeling in accordance with EC directive:
Hazard Symbol: C Corrosive.
Risk Phrases: R34 Causes burns.
Safety Phrases:
S25 Avoid contact with eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately.

16. Other Information

Our company provides this Hydrolyzed Polymaleic Anhydride (HPMA) MSDS information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This Hydrolyzed Polymaleic Anhydride or HPMA MSDS sheet is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.