



USI CORPORATION SAFETY DATA SHEET

1. Identification of the Material and Company

Product Name: Phosphorus-Nitrogen Flame Retardant Masterbatch FRMB-601P

Application: Flame Retardants for Plastics

Supplier Name: USI Corporation

Addresses: No.37~39, JiHu Road, NeiHu Dist., Taipei City, Taiwan (R.O.C.)

Phone: +886-2-8751-6888

Emergency phone Number/FAX: +886-2-87516888

2. Hazardous Identification

GHS-classification: The product is not classified according to GHS.

GHS label elements: None.

Precautionary statement: None.

National/local information: See section 15 for regulatory information.

3. Composition/Information on Ingredients

Substance / Mixture: Mixture

Substance name:	Ingredient percent %	CAS Number
Diphosphoric acid, compd. with piperazine	45-50wt. %	66034-17-1
Melamine Cyanurate	≥5wt. %	37640-57-6
Melamine Polyphosphate	≥5wt. %	218768-84-4
Polypropylene	40wt. %	9003-07-0

Hazardous components: None

4. First Aid Measures

- In case of skin contact:
If on skin, rinse well with water. Wash thoroughly with soap and water for 15 minutes.
If skin irritation occurs, seek medical attention.
- In case of eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists. ● If swallowed : If swallowed, do not induce vomiting – seek medical advice. If conscious, give the victim plenty of water to drink. Consult a physician. Never give anything by mouth to an unconscious person. If swallowed, DO NOT induce vomiting. Do not give anything to drink. Call a physician immediately.
Most important symptoms and effects, both acute and delayed: The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.
Notes to physician : None known.
5. Firefighting Measures
Suitable extinguishing media : Foam, dry chemical powder, carbon dioxide.
Unsuitable extinguishing media: None.
Specific hazards during firefighting : During fire, gases hazardous to health may be formed. Use standard firefighting procedures and consider the hazards of other involved materials.
Further information : Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Use standard firefighting procedures and consider the hazards of other involved materials.
Special protective equipment for firefighters: Self-contained breathing apparatus.
6. Accidental Release Measures
Personal precautions, protective equipment and emergency procedures: See Section 8 of the MSDS for Personal Protective Equipment
Environmental precautions: Collect spilled material in sealed containers.
Methods and materials for containment and cleaning up: Vacuum or sweep up material and

place into a suitable disposal container. Avoid generating dusty conditions. Do not let this chemical enter the environment.

7. Handling and Storage

Handling

- No special measures necessary.

Storage

- Suitable storage conditions: Store in closed original container in a dry place.
- Safe packaging materials: Keep in original container.

8. Exposure Controls/Personal Protection

Engineering measures: Local ventilation recommended - mechanical ventilation may be used.

Personal protective equipment :

- Respiratory protection: Use NIOSH/MSHA approved respirators following manufacturer's recommendations where fume may be generated.
- Hand protection: Butyl Rubber, PVC Or Neoprene.
- Eye protection: Goggles. Safety glasses or chemical splash goggles.
- Skin and body protection: Wear suitable protective equipment.
- Protective measures: Observe the usual precautions for handling chemicals.
- Hygiene measures: Clean skin thoroughly after work; apply skin cream.

9. Physical and Chemical Properties

Appearance : White granule	Color: White
Odor : Not available	Melting Point: 150°C ~170°C
pH value: No applicable data available.	Boiling Point/ Boiling Range: >300°C
Inflammability: No applicable data available.	Flash Point: No applicable data available
Decomposition Temperature: >300°C	Test Method (Open Cup or Close Cup): No applicable data available
Autoignition Temperature: No applicable data available	Exposure Limits: No applicable data available
Vapor Pressure: No applicable data available	Vapor Density: No applicable data available

Density: 1.10-1.20 g/cm ³	Solubility In Water: Insoluble in water
Partition coefficient(n-octanol/water, log Kow): No applicable data available.	Evaporation rate: No applicable data available
10. Stability and Reactivity	
Reactivity: Stable under normal conditions of handling, use and transportation.	
Stability : Stable	
Possibility of hazardous reactions: Contact with strong bases liberates ammonia. Stable.	
Conditions to avoid: Protect from heat/overheating. Alkalis. Keep away from strong bases.	
Incompatible materials: Alkalis.	
Hazardous decomposition products: During combustion: Carbon monoxide. Carbon dioxide. Oxides of phosphorus. Ammonia.	
11. Toxicological Information	
Acute toxicity: May cause discomfort if swallowed.	
Skin corrosion/irritation: May irritate skin.	
Serious eye damage/eye irritation: May irritate the eyes. May cause redness and pain.	
Respiratory sensitizer: None known.	
Skin sensitizer: None known.	
Germ cell mutagenicity: None known.	
Carcinogenicity: None known.	
Toxic to reproduction: None known.	
Specific target organ toxicity - single exposure: None known.	
Specific target organ toxicity - repeated exposure: None known.	
Aspiration hazard : Not classified.	
Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.	
Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.	
12. Ecological Information	
Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a	

harmful or damaging effect on the environment.
Persistence and degradability: None known.
Bioaccumulative potential: None known.
Mobility in soil: None known.
Other adverse effects: None known.
13. Disposal Considerations
Waste treatment methods: Dispose of contents/container in accordance with licensed collector' s sorting instructions.
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.
14: Transport Information
In accordance with DOT: Not regulated for transport
Additional information: No supplementary information available.
ADR Transport document description: No additional information available
Transport by sea: No additional information available
Air transport: No additional information available
15. Regulatory Information
Industrial Safety and Health Act ● Specified substances regulation: Not regulated. ● Organic solvent regulation Not: regulated. ● Notifiable substances Not regulated. ● Labeling substances Not regulated.
Poisonous and Deleterious Substances Control Act: Not regulated
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. ● Class I specified chemical substances Not regulated. ● Class II specified chemical substances Not regulated. ● Monitoring chemical substances Not regulated.
Law concerning Pollutant Release and Transfer Register ● Specified class 1 substances (substance name, ordinance number and content): Not

regulated.

- Class 1 substances (substance name, ordinance number and content): Not regulated.
- Class 2 substances (substance name, ordinance number and content): Not regulated.

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.

Air Law, Enforcement: Rule Not regulated.

Explosives Control Act: Not regulated.

High Pressure Gas Safety Act Not regulated.

Act on Prevention of Marine Pollution and Maritime Disaster: Not regulated.

Water Pollution Control Act: PHOSPHORUS

16. Other Information

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

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