



**ADVANCED
MATERIALS**

SAFETY DATA SHEET

Safire® 400

MoEL's Public Notice No. 2025-50 Standards for Classification and Labeling of Chemical Substances and Safety Data Sheet (SDS)

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Section 1: PRODUCT AND COMPANY IDENTIFICATION

A. Product name Safire® 400

Chemical Name Melamine poly(zinc phosphate)

Pure substance/mixture Substance

B. Recommended use and Limitations on use

Recommended Use Smoke suppressant. Flame retardant. No consumer use allowed.

Uses advised against None known

C. Supplier information

Company Name J.M. Huber Corporation
3100 Cumberland Boulevard, Suite 600
Atlanta, GA 30339 USA
Tel: +1 678 247-7300

E-mail www.huberadvancedmaterials.com/contact

Internet www.huberadvancedmaterials.com

Contact person CHEMTREC
Emergency phone number +1 800 424 9300 International +1 703 527 3887

Section 2: HAZARDS IDENTIFICATION

A. Hazard category/Classification

Physical Hazards Not classified.

Health Hazards Not classified.

Environmental Hazards Chronic Aquatic Toxicity, Category 2

B. Warning label items including precautionary statement

Label Elements

Symbols/Pictograms

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**Signal Words**

None

Hazard Statements

Toxic to aquatic life with long lasting effects

**Precautionary statement
Prevention**

Employ good industrial hygiene practice
Do not handle until all safety precautions have been read and understood
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
For operations where exposure to dust may occur, wear a NIOSH N95 respirator
Avoid release to the environment

Response

IF ON SKIN: Wash with plenty of soap and water
Get medical advice/attention if you feel unwell
Collect spillage

Storage

Store away from incompatible materials

Disposal

Dispose of contents/containers in accordance with local regulations

Additional Information:

None.

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard)

None known

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**Pure substance/mixture****Substance**

Chemical Name	CAS NUMBER:	S. Korea (KECL)	Korean GHS Classification	Weight-%
Melamine poly(zinc phosphate)	1271172-98-5	N	Aquatic Chronic Category 2: H411	95.0 -100.0

Section 4: FIRST AID MEASURES**A. In case of eye contact**

Rinse with water. Get medical attention if irritation develops and persists.

B. In case of skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

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- C. In case of inhalation** Move to fresh air. Call a physician if symptoms develop or persist.
- D. In case of swallowing** Rinse mouth. Get medical attention if symptoms occur.
- E. Note to physician** Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

A. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- Unsuitable extinguishing media** None known

B. Specific hazards arising from the chemical (example: hazardous combustion products)

- Explosion hazard:** None known

C. Specific methods of fire-fighting

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes. Move container from fire area if it can be done without risk.

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency measures Ensure adequate ventilation. Avoid dust formation. See section 8 for more information.

B. Environmental precautions Not considered to be harmful to aquatic life. Avoid discharge into drains, water courses or onto the ground.

C. Methods and materials for containment and cleaning up Vacuum or sweep material and place in a disposal container.

Section 7: HANDLING AND STORAGE

A. Precautions for safe handling

In case of exposure to environments exceeding the occupational exposure limit, wear a respirator in compliance with national legislation.

B. Conditions for safe storage (including any incompatibilities)

Keep container tightly closed in a dry and well-ventilated place

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limit values, biological limit values, etc

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Melamine poly(zinc phosphate)

ACGIH	< 10mg/m ³
OSHA	< 15 mg/m ³

B. Engineering Controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

C. Personal protective equipment

- **Respiratory protection** In case of inadequate ventilation wear respiratory protection.
- **Eye protection** If contact is likely, safety glasses with side shields are recommended.
- **Hand protection** For prolonged or repeated skin contact use suitable protective gloves.
- **Body protection** Wear suitable protective clothing.

Hygiene Measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid Powder
Color	White to light yellow
Odor	None
Odor Threshold	No information available
pH:	5.0 - 5.5 , < / =0.3% suspension - Water
Melting point / Freezing point	> 650 °C
Initial boiling point and boiling range	Not applicable Solid
Flash Point	Not applicable Solid
Evaporation Rate	Not applicable Solid
Flammability	Not readily flammable ----- Solid - (EU A10)
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor Pressure	No data available
Relative Vapor Density	Not applicable Solid
Relative Density	2.4 +/- 0.3 g/cm ³ (20 °C)
Bulk Density	0.51 +/- 0.3 g/ml
Water Solubility	0.1 to 100 mg/L Slightly soluble
Solubility in other solvents	No data available (25 °C)
Autoignition Temperature	> 1000 °C
Decomposition Temperature	>325 °C
Viscosity	Not applicable Solid
Kinematic viscosity	No data available.

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Explosive Properties	Not Explosible based on 1 m3 Chamber, ASTM E1226
Oxidizing Properties	Not oxidizing
Particle Characteristics	D50 = 2.5 – 4.0 microns (80% below 10 microns)
VOC Content (%)	Not applicable

Section 10: STABILITY AND REACTIVITY

A. Stability and hazardous reaction potential

Stability Stable under normal conditions

Hazardous reaction potential None known

B. Conditions to avoid (e.g. static discharge, shock or Vibration, etc) Avoid creating dust. Incompatible materials.

C. Incompatible materials Strong oxidizing agents

D. Hazardous decomposition products No hazardous decomposition products are known.

Section 11: TOXICOLOGICAL INFORMATION

A. Information on likely routes of exposure

- **Respiratory organs** Inhalation of dust may cause irritation of the respiratory system.
- **Mouth** Not an expected route of exposure
- **Eyes** Dust contact with the eyes can lead to mechanical irritation
- **Skin** Prolonged skin contact may cause temporary irritation.

B. Information on health hazards

Acute Toxicity	Based on available data, the classification criteria are not met.
Respiratory Sensitization	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation	Based on available data, the classification criteria are not met.

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Skin Sensitization	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Reproductive Toxicity	According to the U.S. Environmental Protection Agency this substance presents a concern for hazard to the aquatic environment and reproductive toxicity.
Carcinogenicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - Single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - Repeated exposure	Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION

A. Ecotoxicity

Hazardous to the aquatic environment, acute hazard	Not classified. Avoid runoff to waterways and sewers
Hazardous to the aquatic environment, long-term hazard	Toxic to aquatic life with long lasting effects Avoid runoff to waterways and sewers
Ecologically hazardous substances	None known Avoid runoff to waterways and sewers

B. Persistence/degradability No data available

C. Bioaccumulative potential No data available

D. Mobility in soil No data available

E. Other adverse effects No data available

Section 13: DISPOSAL CONSIDERATIONS

A. Method of disposal

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.

B. Disposal considerations (including disposal of contaminated containers or packaging) Disposal should be in accordance with applicable regional, national and local laws and regulations

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Section 14: TRANSPORT INFORMATION**Mode of Transportation (Road, Water, Air, Rail)**

ADR	UN3077, Environmentally hazardous substance, solid, n.o.s. (Melaminepoly(zinc phosphate)), 9, PG III, Marine Pollutant
IATA	UN3077, Environmentally hazardous substance, solid, n.o.s. (Melaminepoly(zinc phosphate)), 9, PG III, Marine Pollutant
IMDG/IMO	UN3077, Environmentally hazardous substance, solid, n.o.s. (Melaminepoly(zinc phosphate)), 9, PG III, Marine Pollutant
ICAO	UN3077, Environmentally hazardous substance, solid, n.o.s. (Melaminepoly(zinc phosphate)), 9, PG III, Marine Pollutant

14.1. UN number UN3077**14.2. UN proper shipping name** UN3077 Environmentally hazardous substance, solid, n.o.s. (Melaminepoly(zinc phosphate))**14.3. Transport hazard class(es)** 9**14.4. Packing group** III**14.5. Environmental hazards** Toxic to aquatic life with long lasting effects**14.6. Special precautions for user** Do not handle until all safety precautions have been read and understood.**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code****Marine Pollutant**

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**A. Method of disposal**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.

B. Disposal considerations (including disposal of contaminated containers or packaging) Disposal should be in accordance with applicable regional, national and local laws and regulations

Section 15: REGULATORY INFORMATION**National Regulations**

Chemical Name	Melamine poly(zinc phosphate)
CAS NUMBER:	1271172-98-5
Weight-%	95.0 -100.0
Korean GHS Classification	Aquatic Chronic Category 2: H411
Toxic Release Inventory	Not applicable
Chemicals - Group 1	
Toxic Release Inventory	Zinc and compounds
Chemicals - Group 2	

Industrial Safety and Health Law

Occupational exposure limits (OEL) See section 8

Chemicals Control Act (CCA)

Not applicable

Dangerous Substances Safety Management Act

Not applicable

Wastes Control Act

Manage and dispose of waste in accordance with national and local regulations

Act on Registration, Evaluation, etc. of Chemicals (K-REACH)

For imports into Korea, please contact us at HEM.HAMregulatory@huber.com

Unconfirmed hazard substances

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Not applicable

Other domestic and foreign regulations

Global Inventories

Chemical Name	CAS NUMBER:	EC No	EU REACH registration number	Australia (AIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Melamine poly(zinc phosphate)	1271172-98-5	690-512-6	01-2120116104-75-xxx 04-2120862008-56-0000 (PPORD)	N	N	C1B222250023	N	N	N	N	N	N	PMN P-16-0484

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

Section 16: OTHER INFORMATION

A. Source of Information

Abbreviations and acronyms

IARC (International Agency for Research on Cancer)
 IATA (International Air Transport Association)
 IMDG (International Maritime Dangerous Goods)
 IUCLID (International Uniform Chemical Information Database)
 WHMIS (Workplace Hazardous Materials Information System)
 DOT (Department of Transportation)
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 TWA (Time-Weighted Average)
 CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))
 PPE (Personal Protection Equipment)
 NIOSH (National Institute for Occupational Safety and Health)
 TDG (Transport of Dangerous Goods) Canada
 CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
 RQ (Reportable Quantity) (RQ/% in mixture)
 STEL (Short Term Exposure Limit)
 TLV® (Threshold Limit Value)
 DNEL (Derived No Effect Level)
 SVHC (Substances of Very High Concern)
 BOD (Biochemical oxygen demand)
 COD (Chemical oxygen demand)
 ICAO (International Civil Aviation Organization)
 IMDG (International Maritime Dangerous Goods)
 ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)
 SCBA (Self-Contained Breathing Apparatus) Positive Pressure
 PNEC (Predicted No Effect Concentration)
 TSCA (Toxic Substances Control Act)
 GHS (Globally Harmonized System)

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**C. Number of revisions and Date 1.7.2
of most recent revision**

D. Other

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End of Safety Data Sheet