



**Safire® 400**

**Japan-JIS Z 7253:2019  
Occupational Safety and Health Act  
GHS (Globally Harmonized System)**

**Issue Date** 15/Aug/2023  
**Print Date** 15/Aug/2023

**Revision Number** 1.7  
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## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Safire® 400

**Chemical Name** Melamine poly(zinc phosphate)

**Pure substance/mixture** Substance

**Melamine poly(zinc phosphate)**

**CAS Number** 1271172-98-5

**Weight-%** 95.0 -100.0

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

**Uses advised against** None known

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## 2. HAZARD IDENTIFICATION

**Japan GHS Classification**

**Physical Hazards** Not classified

**Health Hazard** Not classified

**Environmental Hazards** Aquatic Chronic 2

**GHS label elements**

**Symbols/Pictograms**



**Signal Word**

None

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H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements****Prevention**

Do not handle until all safety precautions have been read and understood  
Employ good industrial hygiene practice  
Avoid release to the environment

**Response**

IF exposed or concerned: Get medical advice/attention  
Wash with plenty of soap and water  
Collect spillage

**Storage**

Store away from incompatible materials.  
Keep in a dry place

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Additional Information:**

According to the U.S. Environmental Protection Agency this substance presents a concern for hazard to the aquatic environment and reproductive toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Pure substance/mixture**

Substance

Chemical Name	CAS Number	Weight-%
Melamine poly(zinc phosphate)	1271172-98-5	95.0 -100.0

### 4. FIRST AID MEASURES

**If inhaled:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing

**IF ON SKIN:**

Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse

**IF IN EYES:**

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Call a physician if irritation develops and persists

**If swallowed:**

Rinse mouth thoroughly with water

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves

**Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

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**Suitable Extinguishing Media** Water spray (fog)  
Foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)

**Unsuitable Extinguishing Media** None known

**Special hazards arising from the substance or mixture** Avoid dust formation

**Fire-fighting measures** In case of fire and/or explosion do not breathe fumes  
Water mist may be used to cool closed containers  
Keep unauthorized personnel away

**Special Protective Equipment for Firefighters** Wear self-contained breathing apparatus and protective suit

## 6. ACCIDENTAL RELEASE MEASURES

**Protective Equipment and Precautions for Firefighters** Avoid dust formation  
Ensure adequate ventilation  
Use personal protection recommended in Section 8  
Avoid contact with eyes and skin. Wear suitable personal protection equipment.  
Keep unauthorized personnel away

**Environmental Precautions** Keep out of drains, sewers, ditches and waterways  
Disposal considerations  
See section 13 for more information

**Methods and material for containment and cleaning up** Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust  
Small Spill: Vacuum or sweep material and place in a disposal container Minimize use of water during clean-up  
Recommended filter type: High efficiency particulate air filter (HEPA filter)

**Other Information** Not applicable

## 7. HANDLING AND STORAGE

### Handling

**Technical measures** Provide adequate ventilation as well as local exhaust at critical locations  
Ensure adequate ventilation  
Use personal protection equipment  
See section 8 for more information

**Advice on safe handling** Minimize dust generation and accumulation

**Conditions for safe storage, including any incompatibilities** Keep containers tightly closed in a cool, well-ventilated place

**Hygiene Measures** Wash hands thoroughly after handling

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**Storage****Packaging compatibilities** Keep/store only in original container

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits** Provide adequate ventilation as well as local exhaust at critical locations**Engineering Measures** Ensure adequate ventilation, especially in confined areas**Personal Protective Equipment****Respiratory Protection** In case of inadequate ventilation wear respiratory protection**Hand protection** For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn**Eye Protection** Wear safety glasses with side shields (or goggles)**Skin and Body Protection** Wear suitable protective clothing.  
Chemical resistant apron.**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice  
Wash thoroughly after handling  
Avoid contact with eyes and skin  
Do not breathe dust

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid, Powder
<b>Color</b>	White to light yellow
<b>Odor</b>	None
<b>Odor Threshold</b>	No information available
<b>Melting Point / Melting Range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Freezing Point</b>	No information available
<b>Autoignition Temperature</b>	> 1000 °C
<b>Evaporation Rate</b>	Not applicable Solid
<b>Flammability (solid, gas)</b>	Not readily flammable ----- Solid - (EU A10)
<b>Explosive Properties</b>	Not Explosible based on 1 m3 Chamber, ASTM E1226
<b>Vapor Pressure</b>	No data available
<b>Water Solubility</b>	0.1 to 100 mg/L Slightly soluble
<b>Partition coefficient</b>	No data available
<b>Viscosity</b>	Not applicable Solid
<b>Specific Gravity</b>	No data available
<b>Oxidizing Properties</b>	Not oxidizing
<b>Decomposition Temperature</b>	>325 °C
<b>Flash Point</b>	Not applicable. Solid.
<b>pH:</b>	5.0 - 5.5 , < / =0.3% suspension - Water
<b>Melting point / Freezing point</b>	> 650 °C
<b>Initial boiling point and boiling range</b>	Not applicable Solid
<b>Vapor Density</b>	Not applicable Solid
<b>Bulk Density</b>	0.51 +/- 0.3 g/ml

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<b>Relative Density</b>	2.4 +/- 0.3 g/cm <sup>3</sup> (20 °C)
<b>Solubility in other solvents</b>	No data available (25 °C)
<b>VOC Content (%)</b>	Not applicable
<b>Particle Size</b>	D50 = 2.5 – 4.0 microns (80% below 10 microns)

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions
<b>Chemical stability</b>	Stable under normal conditions
<b>Possibility of hazardous reactions</b>	None known
<b>Conditions to avoid</b>	Incompatible materials Strong oxidizing agents
<b>Incompatible materials</b>	Strong acids
<b>Hazardous decomposition products</b>	None known

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
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### Information on Likely Routes of Exposure

<b>Inhalation</b>	Avoid inhalation of the product
<b>Skin</b>	Avoid prolonged or repeated contact with skin
<b>Eyes</b>	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Not applicable. Solid.

### 11.1. Information on toxicological effects

<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met
<b>Respiratory Sensitization</b>	Based on available data, the classification criteria are not met
<b>Skin Corrosion/Irritation</b>	Based on available data, the classification criteria are not met
<b>Skin Sensitization</b>	Based on available data, the classification criteria are not met

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<b>Mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b>	According to the U.S. Environmental Protection Agency this substance presents a concern for hazard to the aquatic environment and reproductive toxicity.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Based on available data, the classification criteria are not met
<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	No data available
<b>Hazardous to the ozone layer</b>	No data available

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal</b>	Dispose of in accordance with federal, state and local regulations
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal

## 14. TRANSPORT INFORMATION

### Mode of Transportation (Road, Water, Air, Rail)

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

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s. Melamine poly(zinc phosphate)
<b>14.3. Transport hazard class(es)</b>	9
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	Toxic to aquatic life with long lasting effects

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**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



## 15. REGULATORY INFORMATION

### Global Inventories

Pure substance/mixture

Substance

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	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)	Y	N	新常登 C-21104	N	N	N	N	N	N	PMN P-16-0484

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

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KECL - Korean Existing and Evaluated Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
AICS - Australian Inventory of Chemical Substances  
TSCA (Toxic Substances Control Act)  
DSL (Domestic Substance List)  
NDSL (Non-Domestic Substances List)  
Japan - ISHL Notifiable Substances  
ENCS - Japan Existing and New Chemical Substances

## 16. OTHER INFORMATION

**Prepared by**

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**Reason for Revision**

This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan)

**Bibliography**

NITE GHS Classified list  
Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.  
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

**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)  
GHS (Globally Harmonized System)  
TSCA (Toxic Substances Control Act)

**Disclaimer**

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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text



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