



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

FlamePro-Dry

Product Use

Fire retardant additive for pressure treatment of wood

Restrictions on Use

None known.

Details of the supplier of the safety data sheet

Koppers Performance Chemicals Inc.

1016 Everee Inn Rd.

Griffin, GA 30224

Phone: 770-233-4200

Emergency Phone #: CHEMTREC 1-800-424-9300

E-mail: KPCmgrsds@koppers.com

Regulatory Manager, KPC Inc.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Reproductive Toxicity - Category 1B

Specific target organ toxicity - Single exposure - Category 3 (Respiratory system)

Hazardous to the Aquatic Environment - Acute - Category 3

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Causes skin irritation.

Causes serious eye irritation.

May damage fertility or the unborn child.

May cause respiratory irritation.

Harmful to aquatic life.

Precautionary Statement(s)

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Avoid release to the environment.

Response

If exposed or concerned: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Call a POISON CENTER or doctor if you feel unwell.

Storage

Store in a well-ventilated place.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

None known.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7783-28-0	Diammonium phosphate	62-66
7722-76-1	Monoammonium phosphate	20-22
10043-35-3	Boric acid	14-16

Section 4 - FIRST AID MEASURES

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin

Take off contaminated clothing. Wash skin thoroughly with soap and water. Seek medical attention.

Eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Then get immediate medical attention.

Ingestion

Rinse mouth. If swallowed, get medical attention.

Most Important Symptoms/Effects

Acute

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Delayed

May damage fertility or the unborn child.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable Extinguishing Media

Do not scatter spilled material with high-pressure water streams.

Special Hazards Arising from the Chemical

Avoid dust generation and accumulation.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen, oxides of phosphorus.

Fire Fighting Measures

Move material from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas. Keep unnecessary people away, isolate hazard area and deny entry.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Eliminate all sources of ignition. Wear personal protective clothing and equipment, see Section 8. Avoid dust formation. Avoid breathing dust.

Methods and Materials for Containment and Cleaning Up

Collect material in appropriate container for disposal. Collect using a vacuum cleaner with a HEPA filter or wet and scoop up dry spills. Eliminate all sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Never return spills in original containers for re-use.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing dust. Avoid contact with skin and eyes. Wash thoroughly after handling. Wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Store and handle in accordance with all current regulations and standards. Avoid heat, flames, sparks and other sources of ignition. Store containers in a cool, dry, well-ventilated place. Store away from incompatible materials (see Section 10, Stability and Reactivity).

Incompatible Materials

strong oxidizing agents, strong reducing agents, strong acids, strong bases, magnesium.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Boric acid	10043-35-3
------------	------------



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

ACGIH:	2 mg/m3 TWA inhalable particulate matter
	6 mg/m3 STEL inhalable particulate matter
Mexico:	2 mg/m3 TWA [VLE-PPT] inhalable fraction

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses with side shields or chemical safety goggles.

Skin Protection

Wear appropriate work clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a negligible level, an approved respirator must be worn. A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white granular solid	Physical State	solid
Odor	none	Color	white
Odor Threshold	Not available	pH	Not applicable
Melting Point	Not applicable	Boiling Point	Not applicable
Boiling Point Range	Not available	Freezing point	Not applicable
Evaporation Rate	Not applicable	Flammability (solid, gas)	not flammable
Autoignition Temperature	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not applicable
Vapor Density (air=1)	Not applicable	Specific Gravity (water=1)	Not available
Water Solubility	(soluble)	Partition coefficient: n-octanol/water	Not available
Viscosity	Not applicable	Kinematic viscosity	Not available
Solubility (Other)	Not available	Bulk Density	0.866 g/cm3



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Density	Not available	Physical Form	solid
Molecular Weight	Not available		

Other Information

No additional information is available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials. Avoid direct sunlight.

Incompatible Materials

strong oxidizing agents, strong reducing agents, strong acids, strong bases, magnesium.

Hazardous decomposition products

oxides of carbon, oxides of nitrogen, oxides of phosphorus.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause respiratory irritation, May cause coughing and shortness of breath.

Skin Contact

Causes skin irritation. May cause redness and itching.

Eye Contact

Causes serious eye irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing.

Ingestion

Ingestion of harmful amounts is unlikely.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diammonium phosphate (7783-28-0)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Monoammonium phosphate (7722-76-1)

Oral LD50 Rat 5750 mg/kg

Dermal LD50 Rabbit >7940 mg/kg

Boric acid (10043-35-3)

Oral LD50 Rat 2660 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >0.16 mg/L 4 h (no deaths occurred)



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Delayed Effects

May damage fertility or the unborn child.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

Prolonged or repeated exposure may result in hypersensitivity.

Dermal Sensitization

Repeated exposure may result in contact or sensitization dermatitis.

Component Carcinogenicity

Boric acid	10043-35-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

respiratory system

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

respiratory disorders, skin disorders and allergies

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life.

Component Analysis - Aquatic Toxicity

Diammonium phosphate	7783-28-0
Fish:	LC50 96 h Oncorhynchus mykiss 26.5 mg/L; LC50 96 h Oncorhynchus mykiss 24.8 - 29.4 mg/L [flow-through]; LC50 96 h Pimephales promelas 3.3 mg/L; LC50 96 h Pimephales promelas 33 mg/L [static]



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Monoammonium phosphate	7722-76-1
Fish:	LC50 96 h Oncorhynchus mykiss >85.9 mg/L [static]
Boric acid	10043-35-3
Invertebrate:	EC50 48 h Daphnia magna 115 - 153 mg/L EPA

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility

No data available.

Other Toxicity

No data available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated.

IATA Information:

UN#: Not regulated.

TDG Information:

UN#: Not regulated.

IMDG Information:

UN#: Not regulated.

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Diammonium phosphate	7783-28-0
IBC Code:	Category Z (solution)



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 313 (40 CFR 372.65)

This product contains monoammonium phosphate (CAS 7722-76-1) and diammonium phosphate (CAS 7783-28-0) at maximum concentrations of 22% and 66% respectively. These chemical components are considered water dissociable ammonium salts. When this product is dissolved in water, reporting under EPA Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 may be required for aqueous ammonia.

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Reproductive Toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Not listed under California Proposition 65.

Component Analysis - Inventory

Diammonium phosphate (7783-28-0)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Monoammonium phosphate (7722-76-1)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Boric acid (10043-35-3)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
Yes	Yes	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 0 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Preparation Date

New: 10/12/2017

Updated: 5/14/2020

Revision number: 3

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).



Safety Data Sheet

Material Name: FlamePro-Dry

SDS ID: 359-KPC

Other Information

Disclaimer:

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.