



FIRE RETARDANT PAPER SEAL C™ CONCENTRATE

SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY INFORMATION

1.1 Product Identifier	
Product Name	PAPER SEAL C™ CONCENTRATE
Brand	Flame Seal Products, Inc.
CAS #	NA / mixture
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Fire retardant liquid for treating synthetic fabrics and blends.
1.3 Details of the Supplier of the Safety Data Sheet	
Company	Flame Seal Products, Inc. 9420 Knight Road Houston, TX 77045 USA
Telephone	713-668-4291
Fax	713-668-1724
1.4 Emergency telephone number	
Emergency #	800-424-9300

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)	
	Reproductive toxicity (2), eye irritant (2A).
2.2 GHS Label Elements, including precautionary statements	
Hazard Statements	 WARNING
H319 : 2A	Causes serious eye irritation.
H361 : 2	Suspected of damaging fertility or the unborn child.
Precautionary Statements	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash skin thoroughly if exposed.
P280	Wear eye/face protection.
P281	Use personal protection equipment as required.
P305 + P351 + P338	In case of eye contact: rinse thoroughly with eyelid(s) held open. Remove contact lenses, if worn.
P308 + P313	If exposed or concerned, get medical advice.
P332 + 313	If skin irritation occurs: get medical advice/attention.
P337 + P313	If eye irritation persists: get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container using approved waste disposal facility.
2.3 Other Hazards	
H303	May be harmful if swallowed.
For the full text of the H-statements mentioned in this section, see section 16.	

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SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Formula	mixture of inorganic salts in water		
Hazardous Components	CAS #	Classification	Concentration
Potassium Bromide	7758-02-3	eye irrit, (2A)	5 - 10%
Boric acid	10043-35-3	repr. 2, H361	< 1 %

For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 4 FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	Move out of dangerous area. Consult a Physician. Show this Safety Data Sheet to Physician.
If inhaled	Not expected to be an issue in small quantities. Remove to fresh air.
In case of skin contact	Wash with soap and plenty of water. If irritation occurs, get medical advice/attention.
In case of eye contact	Flush eyes with plenty of fresh water while holding eyelids open. Remove contact lenses if worn. If eye irritation persists, get medical advice/attention.
If swallowed	Do not induce vomiting. Never give anything by mouth to an unconscious person. Flush mouth with water. If conscious give water to further dilute chemical. Consult physician.

4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media	Not combustible (use water spray, fog, foam, dry chemicals, CO ₂ or other agents as appropriate for material in surrounding fire).
5.2 Special hazards arising from substance or mixture	Heating and/or burning may liberate small amounts of ammonia. Oxides of nitrogen and phosphorous, hydrogen bromide
5.3 Advice for firefighters	Not combustible (use safety equipment which is suitable for materials in surrounding fire).
5.4 Further information	No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing mist. Ensure adequate ventilation. Evacuate personnel from affected area. For personal protection, see Section 8.
6.2 Environmental precautions	Prevent further leakage or spillage, if safe to do so. Keep out of drains.
6.3 Methods and materials for containment and cleaning up.	Confine spilled material and absorb with sand, sawdust, earth or other available solids. Sweep up and place in a suitable container for disposal.
6.4 Reference to other sections	See Section 13 for further disposal info.

SECTION 7 HANDLING & STORAGE

7.1 Precautions for safe handling	Wear appropriate protective equipment. Provide adequate ventilation. See Sections 2.2 and 8.
7.2 Conditions for safe storage, including any incompatibles	Keep container tightly sealed when not in use. Use good industrial practices to avoid spills. Exposure to strong bases and/or heat may liberate ammonia. Salt solution – may be corrosive to some metals.
7.3 Specified end use.	Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

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SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters	None in solution form.	
Engineering Controls	Handle in accordance with good industrial and safety practices. Wash hands after handling.	
Personal Protection Equipment	Respiratory Protection (Specify Type)	For heavy mist exposure, use a NIOSH/MSHA approved respirator suitable for use with organic vapors if proper ventilation cannot be provided.
	Protective Gloves	Wear impervious gloves as necessary to avoid excessive skin contact (i.e. rubber or neoprene)
	Eye Protection	Protective glasses or goggles in heavy mist areas.
	Other Protective Equipment	Adequate clothing to minimize direct contact with skin.
	Ventilation	Local Exhaust
	Mechanical (general)	Normal room ventilation.
	Special	NA

SECTION 9 PHYSICAL PROPERTIES AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a) Appearance	Clear liquid	k) Vapor pressure	No data available
b) Odor	None	l) Vapor density	No data available
c) Odor threshold	NA	m) Relative density	1.19 – 1.23 g/cm ³
d) pH	5.5 - 6.5	n) Water solubility	Completely soluble
e) Melting/freezing point	NA / ~30 °F	o) Partition coefficient n-octanol/water	No data available
f) Initial boiling point	~212 °F	p) Auto ignition temp	None
g) Flash point	None to boiling	q) Decomposition temp	No data available
h) Evaporation rate	No data available	r) Viscosity	12-18 cP Brookfield
i) Flammability	None	s) Explosive properties	No data available
j) Upper/lower flamm limits	No data available	t) Oxidizing properties	No data available

SECTION 10 STABILITY & REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical Stability	Stable under recommended storage conditions
10.3 Possibility of hazardous reactions	None known
10.4 Conditions to avoid	Evaporation – Keep container sealed tightly when not in use
10.5 Incompatible materials	Strong bases and alkalis
10.6 Hazardous decomposition products	Ammonia, nitrous oxides

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SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Undiluted Chemicals)

Acute toxicity	LD50 Oral (rat) > 2000 mg/kg LD50 Dermal (rat) > 5000mg/kg Conclusions drawn from relevant literature and documentation from similar products.
Inhalation	Not established. Not expected to be harmful. If necessary, use respirator if adequate ventilation is not possible to keep exposure to particulate matter at a minimum in heavy mist areas when spraying.
Dermal	May be irritating with continual contact.
Skin corrosion/irritation	No available data
Serious eye damage/eye irritation	May cause moderate eye irritation if exposed.
Respiratory or skin sensitization	Prolonged exposure may cause skin reddening.
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by IARC.
NTP	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by NTP.
OSHA	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by OSHA.
Reproductive toxicity (Ingredients)	In animal testing, risk of impaired fertility was shown only after administration of very high doses of Boric Acid.
Specific organ toxicity (single exposure)	No data available
Specific organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available
Additional Information	RTECS: ED4550000 Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams. Liver – irregularities – Based on Human Evidence.

For more information on the toxicological and environmental effects of Boron compounds, see The Optibor® Boric Acids SDS.

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity (Undiluted Chemicals)

Toxicity to fish	LC50 – Ptychocheilus Lucius – 279 mg/l - 96h Rainbow trout - > 85.9 mg/l – 96h OECD Test 203 LC0 – Lepomis macrochirrus (Bluegill) -> 1021 mg/l - 96h
Toxicity to daphnia & other aquatic invertebrates	LC50 – Daphnia Magna (Bluegill) – 53.2 mg/l - 21d EC50 – Daphnia Magna (Water flea) – 133 mg/l - 21d

12.2 Persistence & degradability	No data available
12.3 Bioaccumulation potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvP assessment	Not required. Not conducted.
12.6 Other adverse effects	No data available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Incinerate or bury in a suitable land fill where permitted by local regulations- or contact a licensed disposal facility.
Contaminated packaging	Dispose of a unused product

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SECTION 14 TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

SECTION 15 REGULATORY INFORMATION

SARA 302 Components	No chemicals in this product are subject to the reporting requirements of SARA Title III, section 302.
SARA 313 Components	This product does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, section 313.
SARA 311/312	Not classified
California Prop. 65 Components	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
REACH	Boric Acid is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No 1907/2006 (REACH).

SECTION 16 OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3

H319 : 2A	Causes serious eye irritation.
H361 : Repr. 2	Suspected of damaging fertility or the unborn child.

Hazard declaration not required on product label per Table 3.7.1, Note 3 of the GHS of Classification and Labeling of Chemicals – Fifth Revised Edition

HMIS Rating	Health hazard	1
	Chronic health hazard	*
	Flammability	0
	Physical hazard	0
NFPA	Health hazard	0
	Fire hazard	0
	Reactivity hazard	0

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