



FIRE PROTECTIVE COATING
FS-IB™ IGNITION BARRIER

SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY INFORMATION

1.1 Product Identifier	
Product Name	FS-IB™ IGNITION BARRIER
Brand	Flame Seal Products, Inc.
CAS #	NA / mixture
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Water based fire retardant paint.
1.3 Details of the Supplier of the Safety Data Sheet	
Company	Flame Seal Products, Inc. 15200 West Drive Houston, TX 77053 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)	
Skin irritant, eye irritant	
For the full text of the H-statements mentioned in this section, see Section 16.	
2.2 GHS Label Elements, including precautionary statements	
	WARNING
Hazard Statements	
H316 : 3	May causes mild skin irritation.
H320 : 2B	Causes eye irritation.
Precautionary Statements	
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P280	Wear eye/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332 + 313	If skin irritation occurs: get medical advice/attention.
P337 + P313	If eye irritation persists: get medical advice/attention.
P404	Store in a closed container.
P501	Dispose of contents/container using approved waste disposal facility.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS	
H303	May be harmful if swallowed.
For the full text of the H-statements mentioned in this section, see section 16.	

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances			
Formula	Water based latex paint with intumescent additives.		
Hazardous Components		Classification	Concentration
Acrylamide-ethylene-vinylchloride copolymer	Proprietary – Wacker Co.	eye irritation (2B), mild skin irritation (3)	<3%
Titanium dioxide	CAS # 13463-67-7	See Section 11 for hazards	
Melamine	CAS # 108-78-1	Nuisance and combustible dust in dry form	<20%
Pentaerythritol	CAS # 115-77-5	Nuisance and combustible dust in dry form	<20%

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 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.
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.

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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.
7.3	Specified end use	ICC certified Ignition Barrier alternative for tested spray applied polyurethane foam in attics and crawl spaces.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1	Control Parameters			
	Components:		ACGIH	OSHA
	Titanium Dioxide (respirable form)	CAS # 13463-67-7	EC # 236-675-5	10mg/m ³ TLV-TWA respirable fraction 1 mg/m ³ 15 mg/m ³ Total dust 8 hr TWA
	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.	
		Remediation or sanding	Contains titanium dioxide which is considered a potential human carcinogen in respirable form. Do not breath dust. Use measures to control dust to published exposure level limits. Otherwise wear NIOSH suitable respirator for hazardous dust – N100, P100, R100 filters.	
		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	Use exhaust fans if necessary to control mist or vapor.	
		Mechanical (general)	Normal room ventilation.	
		Special	NA	

SECTION 9 PHYSICAL PROPERTIES AND CHEMICAL PROPERTIES

9.1	Information on Basic Physical & Chemical Properties			
a)	Appearance	White liquid	k) Vapor pressure	No data available
b)	Odor	Slight amine	l) Vapor density	No data available
c)	Odor threshold	NA	m) Relative density	1.25 – 1.32 g/cm ³
d)	pH	7.5 – 8.5	n) Water solubility	Partially soluble
e)	Melting/freezing point	NA / ~32 °F	o) Partition coefficient n-octanol/water	No data available
f)	Initial boiling point	~212 °F	p) Auto ignition temp	None
g)	Flash point	No data available	q) Decomposition temp	No data available
h)	Evaporation rate	No data available	r) Viscosity	90 - 130 Ku
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

Acute toxicity	LD50 (rat) > 2000 mg/kg Conclusion by analogy.
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	Not established, not expected to be harmful. May be irritating with continual contact.
Skin corrosion/irritation	No data available
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	Titanium Dioxide – Respirable form

IARC
Group 2B: Possibly carcinogenic to humans.
(a) Although IARC has classified titanium dioxide as a possible carcinogenic to humans (2B), their summary concludes: **“No significant exposure to titanium dioxide is thought to occur during the use of products which titanium dioxide is bound to other materials, such as paints.”**
(b) **OSHA does not regulate titanium dioxide as a carcinogen.** However, under 29CFR 1910.1200 the SDS must convey the fact that titanium dioxide is a potential carcinogen to rats. See additional information below.
Note: Normal application procedures for this product pose no hazard as to the release of respirable titanium dioxide dust, but grinding or sanding dried films of this product may yield respirable titanium dioxide. Use appropriate protection.

Reproductive toxicity
No chemicals present in the product are known to cause fertility issues.

Specific organ toxicity (single exposure)
No data available

Specific organ toxicity (repeated exposure)
No data available

Aspiration hazard
No data available.

Additional Information
In lifetime inhalation studies rats were exposed for 2 years to Titanium Dioxide Pigment – **Dry Grades** at 10, 50 and 250 mg/m³ of **respirable** TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumors were also observed in 13 percent of the rats exposed to 250 mg/m³, an exposure level that caused lung overloading and impairment of rat lung’s clearance mechanisms. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO₂ particles exposure was also found to be much more severe in rats than in other rodent species.

In February 2006, IARC re-evaluated Titanium dioxide as pertaining to Group 2B: “possibly carcinogenic to humans”, based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumors, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence.

The conclusions of several epidemiology studies on more than 20000 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ **dust** on the human lung. Mortality from other chronic diseases, including other respiratory diseases was also not associated with exposure to TiO₂ dust.

Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

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SECTION 12 ECOLOGICAL INFORMATION

12.1	Toxicity	<p>Toxicity to fish LD50 – Rainbow trout (<i>Oncorhynchus mykiss</i>) > 150 mg/l - 96h LD50 – Fathead minnow (<i>Pimephalas promelas</i>) > 150 mg/l - 96h Conclusion by analogy</p> <p>Toxicity to daphnia & other aquatic invertebrates No data available. Conclusions drawn from relevant literature and documentation from similar products.</p>
12.2	Persistence & degradability	Polymer component not readily biodegradable. Elimination by activated sludge. Separation by flocculation is possible.
12.3	Bioaccumulation potential	No adverse effects expected.
12.4	Mobility in soil	No adverse effects expected.
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	<p>Liquid – Collect and reclaim or dispose in sealed containers at licensed waste disposal site.</p> <p>Dried product – Should be disposable as non hazardous solid waste. Check local regulations.</p>
	Contaminated packaging	Empty containers may retain product residue and should be handled accordingly. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use containers.

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	Chronic health hazard.	
New Jersey, Pennsylvania, Massachusetts	Melamine	CAS # 108-78-1
Right to Know Components	Titanium Dioxide	CAS # 13463-67-7
California Prop. 65	WARNING! This product contains a chemical known to the state of California to cause cancer in respirable form. Titanium Dioxide. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.	
WHMIS	D2A – Carcinogen as respirable dust. Titanium Dioxide.	
IARC	Group 2B – Possible human carcinogen – as respirable dust. Titanium Dioxide.	
RTECS #	XR 2275000 – Titanium Dioxide	
HAPS	No HAPS are present in this product at reportable levels.	
Clean Water Act	Section 311 lists phosphorous as a hazardous substance, which if discharged into or upon water, will present an imminent and substantial danger to public welfare. Spills of >= 5000 pounds (approx. 50,000 pounds of FSTB) must be reported to the National Response Center @ 1-800-424-8802.	

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SECTION 16 OTHER INFORMATION

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

H316 : 3 Cause mild skin irritation.

H320 : 2B Causes eye irritation.

Hazard pictograms not required per Tables 3.2.5, 3.2.5.1, 3.3.5, 3.3.5.1 of the GHS of Classification and Labeling of Chemicals Fifth Revised Edition.

Hazard conclusions drawn from relevant literature and documentation from similar products.

Titanium dioxide included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation(EC) No. 1907/2006(REACH) – Respirable form.

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

The information in this document is based on the present state of Flame Seal Products' knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantees to the properties of the product. Flame Seal Products shall not be held liable for any damage from handling or from contact with the above product.