



Pyrosan™ CF2

Non-halogen High Temperature Flame Retardant

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME(S): Pyrosan™ CF2
PRODUCT NAME/CLASS: Non – halogenated flame retardant
CHEMICAL FAMILY: Phosphinate mixture
FORMULA: Registered Trade Secret
PRODUCT USE: Flame retardant for plastics such as polyesters
SUPPLIER/MANUFACTURER: JJI Technologies, LLC
ADDRESS: 1350 Bacon Road Painesville, OH. 44077
24 HOUR EMERGENCY PHONE: 800-424-9300 CHEMTREC
DATE OF PREPARATION: January 8, 2015

SECTION II - COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EC #	% W/V
Proprietary Phosphinate	Registered Trade Secret	Registered Trade Secret	75%
Synergists	Registered Trade Secret	Registered Trade Secret	25%

SECTION III – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: Fine, free-flowing White Powder

Warning: May be harmful if inhaled. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: None known

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Harmful if swallowed.

Inhalation: May cause effects similar to those described for ingestion. May cause respiratory tract irritation.

Chronic: Repeated exposure may cause sensitization dermatitis.

SECTION IV- FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.

Inhalation: Seek medical attention immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing becomes difficult, give oxygen. Do not use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a



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bag and mask.

Notes to Physician: Treat symptomatically and supportively.

SECTION V- FIRE FIGHTING MEASURES

General Information: During a fire, irritating and noxious gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Dust can be an explosion hazard when exposed to heat or flame.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or foam. Water or foam may cause frothing. Use water spray to cool fire-exposed containers.

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Explosion Limits (dust cloud): 5.3 bar

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section VI- ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in section VIII.

Spills/Leaks: Ventilate area of spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Clean up spills immediately, observing precautions in the Protective Equipment section.

SECTION VII- HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage: Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

SECTION VIII- EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eye wash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	powder	COLOR:	white
APPEARANCE:	Fine white powder	ODOR:	None reported



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BOILING POINT:	Not applicable	SOLUBILITY:	min. water solubility
VAPOR DENSITY:	Not applicable	VISCOSITY:	Not applicable
EVAPORATION RATE:	Not applicable	SPECIFIC GRAVITY:	1.87
pH:	3-5	VAPOR PRESSURE:	Not applicable
MELTING POINT:	Decomposes >315C	RELATIVE VAPOR DENSITY:	Not applicable
ODOR THRESHOLD:	Not applicable	EXPANSION RATIO:	Not applicable

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guarantee analysis of any specific lot or as specifications for the product.

Section X. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Excessive heat, temperatures exceeding temp. stability of product, strong oxidants, bases, sparks and open flames. Avoid dispersing in dust cloud as material may be combustible in dust cloud form. Avoid static accumulation/discharge.

Incompatibilities with Other Materials: Strong oxidizers, bases, catalytic initiators.

Hazardous Decomposition Products: Pyrolysis tests performed in the presence of oxygen at temperatures exceeding the product decomposition temperature have shown no formation or releases of hazardous products. Under vacuum, in the absence of oxygen, phosphine gas may be formed.

Section XI. TOXICOLOGICAL INFORMATION

Epidemiology

Teratogenicity: No data available

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Chronic Exposure

IARC: This product does not contain greater than or equal to 0.1% of a component identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: This product does not contain greater than or equal to 0.1% of a component identified as a carcinogen or potential carcinogen by ACGIH.

NTP: This product does not contain greater than or equal to 0.1% of a component identified as a known or anticipated carcinogen by NTP.

OSHA: This product does not contain greater than or equal to 0.1% of a component identified as a carcinogen or potential carcinogen by OSHA.

Section XII. ECOLOGICAL INFORMATION



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No data available.

Section XIII. DISPOSAL CONSIDERATIONS

Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Contaminated packaging

Dispose of as unused product.

Section XIV. TRANSPORT INFORMATION

DOT (US)

This product is non-hazardous for transportation purposes.

Section XV. REGULATORY INFORMATION

TSCA STATUS:	The product is under review approval for TSCA status.
Chemical Test Rule:	None of the chemicals in this product are under a Chemical Test Rule
Section 12b:	None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule:	None of the chemicals in this material have a SNUR under TSCA.

NOTE: This product is for research and development purposes only. The toxicological properties of this material have not been fully investigated and it should be treated as though it were toxic. It must be used only under the supervision of a technically qualified individual. Product is being exported in quantities that are not subject to REACH requirements.

CERCLA REPORTABLE QUANTITY: None

SARA TITLE III:

SECTION 302: None

SECTION 311/312: None

SECTION 313: None

Clean Water Act: None of the chemicals in this product are considered highly hazardous by OSHA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

State: Substance cannot be found on the following right to know lists: California, New Jersey, Pennsylvania, Minnesota, or Massachusetts.

California Prop 65

This product does not contain any chemical known to the state of California to cause cancer, birth, or any other reproductive effects.



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European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Risk Phrases:

Safety Phrases:

S22 Do not breath dust.

S7 Keep contained tightly closed

Revision number: Pyrosan CF2 1-8-15 Rev1

WARNING: By following the directions and warnings provided with this product, the risk associated with the use of this product can be greatly reduced but never entirely eliminated. JJI Technologies, LLC makes no warranties, expressed or implied, with respect to this product and EXPRESSLY DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Users assume all risks in handling, using or storing this product.

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