FlameOFF®

FlameOFF® IX2

IX2- Intumescent System Technical Data Sheet

Selection & Specification Data

Generic Type

A 2 part cross-linking polymeric intumescent coating

Description

A fire resistant liquid polymer formulation designed for up to 2 hour fire protection of steel and other materials requiring extreme durability and environmental resistance.

Performance Advantages

- **Versatile:** FlameOFF IX2 bonds effectively to multiple substrates, simplifying application.
- **Moisture Resistant:** Unlike water based products, FlameOFF IX2 is impervious to damage from rain, dew, or other moisture exposure. This makes it highly reliable in diverse climates.
- **Exterior Grade:** Its inherent moisture resistance and durability make it perfectly suited for outdoor applications and harsh environments.
- **Temperature Resistant:** IX2 will not freeze, simplifying storage and application in colder conditions.
- **Chemical Resistant**: It demonstrates strong resistance to various fluids and chemicals, ensuring long-term integrity in challenging settings.
- **Durable:** Its foundation in proven road striping chemistry ensures exceptional long term durability.
- **Lasting Finish:** Does not chalk or fade like epoxies.
- **Rapid Cure:** The quick 1-hour cure time significantly reduces project timelines, allowing for efficient top-coating and faster completion.
- **Dual Function:** Provides fireproofing and waterproofing in one product, reducing application time and costs for clients.
- **Factory Application:** Perfectly suited for controlled manufacturing environments, allowing for consistent quality and high throughput.
- **Solvent Free**

Selection & Specification Data (continued)

Fire Protection Capabilities

- **Intumescent Action:** Similar to water based intumescents, IX2 creates a protective char layer when exposed to fire.
- **Compact Expansion:** This product features a more compact expansion profile (5-7 cm) compared to the traditional expansion of other intumescents, providing efficient protection with less bulk.
- **Continuous Protection:** It has the ability to re-form and re-build the protective char layer during prolonged fire exposure, offering continuous defense.

Primary Industries

- **Aerospace,** Passes demanding aerospace-grade environmental testing, proving its resilience.
- **Transportation**, including ships, trains, and aircraft manufacturing
- **Heavy Equipment**
- **Modular Construction,** ideal for factory applied panels and components, where rapid curing and consistent quality are critical
- **Marine,** including ship building and general maritime applications
- **Mil-Spec**

Specific Applications

- Aircraft panels and components
- Ship interior surfaces
- Train car panels
- Metal building components
- Modular building panels
- SIPS (Structural Insulated Panels)
- Exterior surfaces requiring robust fire protection.

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Physical Properties

Type	FlameOFF IX2 Intumescent System. Methyl-Methacrylate (MMA) 98:2 Thick Film Two-Component Intumescent Coating
Color	White
Finish	High-gloss, smooth, plasticized finish
Primer	Primer recommended for steel substrates, optional for others.
Topcoat	Topcoating not required, but can be done for aesthetic purposes. For compatibility, a sample and crosshatch test is recommended.
Mil Thickness Per Coat	Recommended 40-80 Mils. *Maximum thickness per coat depends upon applicator experience, substrate, and job site conditions.
Volume Solids Content	98% Minimum
Theoretical Coverage Rate	1572 sq ft/gallon at 1 mil DFT 39 sq ft/gallon at 40 mils DFT
VOC Values	As Supplied 0.00 lbs/gal (0 g/l), 0%
Minimum Shore D Hardness	60
Activant	Benzoyl Peroxide

Packaging, Handling & Storage

Handling	CAUTION. ALL USERS MUST BE HAZMAT CERTIFIED BEFORE HANDLING THIS PRODUCT.
Ship Weight	65 lbs per 5 gallon pail
Shelf Life	6 Months *When kept at recommended storage conditions and in original unopened containers.
Storage	All components must be kept below 80F (27C) at all times to prevent decomposition and ensure product stability. This requires temperature controlled storage. Product must be stored in original container. Product is flammable due to the monomers it contains. See IX2 material SDS for full storage and chemical incompatibilities.
Packaging	5 gallons, steel pail
	This product is proudly manufactured in the USA.

Substrate & Surrounding Surface Preparation

General	All surfaces must be primed and must be clean, dry, and free of oil, grease, loose scale, dirt, dust or other material that would impair the bonding of the intumescent coating to the substrate.
Overspray	As with all spray-applied coatings, care should be taken to mask off areas not intended to be coated with intumescent paint. All adjacent and finished surfaces should be protected from damage and overspray. Overspray must be cleaned with acetone.

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Application Equipment Guidelines

General

General equipment guidelines may need to be modified depending on individual jobsite conditions in order to achieve the desired results. Contact FlameOFF with any questions.

Equipment must be matched to the coating being applied in order to achieve the proper film thickness and coverage. This coating requires specialized application equipment and should never be applied using standard equipment. Equipment recommendations are available upon request.

Product may be screed or sprayed. It is not recommended to apply with a roller. Spray application is recommended for the optimum appearance.

Application Rates

Spray: 40-80 Mils

Mixing & Thinning

Thinning

DO NOT THIN or alter in any way.

Tinting

DO NOT TINT. If a different color is required, use a topcoat.

Mixing

Use specialized spray equipment for 98:2 mixing ratio or a high-torque drill with a clean mixing paddle for manual applications.

Pot life

Approximately 15 minutes at 72°F

Maintenance

General

If coating becomes damaged, rebuild the required mil thickness. When dry, smooth, and finished, topcoat may be applied. The repair area must follow all surface preparation requirements before reapplying the coating. The coating must be built back to the original thickness.

Application Conditions and Curing Schedule

	Condition	Material	Humidity
Application Temperature & Humidity	Minimum	40 F (5 C)	0%
	Maximum	90 F (32 C)	85%

Surface Temp & 50% Relative Humidity	Gel Time	Cure Time	Handle	Recoat/ Topcoat
70 F (21 C)	14 min	1 hour	1 hour	1 hour

Cleanup, Safety, & Disposal

Disposal

Containers may still present a chemical hazard when empty.

Waste disposal requirements may differ by location. User must refer to legislation requirements in their area.

Do not allow wash water from cleaning to enter drains.

Safety

Follow all safety precautions on the product SDS. THESE PRODUCT COMPONENTS ARE FLAMMABLE. ALL USERS MUST BE HAZMAT CERTIFIED BEFORE HANDLING THIS PRODUCT.

Proper PPE: Personal Protective Equipment (PPE) is mandatory during application and cleanup to protect against chemical exposure. Specific PPE requirements are detailed in full safety/training documentation.

Cleanup

- **Equipment Purging:** All application equipment must be purged with acetone immediately after use to prevent hardening and ensure longevity.

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Cleanup, Safety, & Disposal (continued)

Spills

For large spills (more than 1 liter), or if you are not trained in hazardous material cleanup, immediately evacuate the area and contact emergency services.

For small spills (<1 L)

Pre-cleanup preparations

1. Stop the leak or right the container to prevent more material from spilling.
2. Ventilate the area, if it does not risk spreading flammable vapors.
3. Eliminate ignition sources, including open flames, sparks from electrical equipment, and hot surfaces. Use only explosion-proof tools and equipment during cleanup.
4. Protect drains, use socks or booms to prevent the spill from entering sewers or waterways. Never wash down the drain with water.
5. Don PPE before beginning cleanup.
    - Nitrile (for short term exposure) or PVA (for sustained exposure) gloves.
    - Chemical splash goggles
    - Full body protection in the form of a lab coat or chemical resistant coveralls.
    - Respiratory protection. Use a NIOSH-approved respirator with an organic vapor cartridge.

Cleanup Procedure

1. Cover the spill: Spread an inert, non-combustible absorbent material like sand, earth, or vermiculite over the entire spill. Do not use combustible materials like towels or sawdust.
2. Use non-sparking tools: Use a plastic shovel and broom to collect the absorbed material.
3. Place in container: Transfer the spill into a heavy-duty plastic bag or a sealable, labeled hazardous waste container.

Cleanup, Safety, & Disposal (continued)

Spills (cont'd)

4. Add inhibitor: If you are dealing with an unpolymerized product, add an inhibitor (Topanol O) to the waste to prevent polymerization, which can raise the temperature and rupture the container.
5. Wash the area: After removing the bulk of the spill, use soap and water to wash the contaminated area. Absorb the wash water with more absorbent material and add it to the waste container.

Disposal of Spill

All contaminated cleanup materials, including used absorbent, PPE, and residual liquid, must be treated as hazardous waste.

1. Seal and label: Place all contaminated materials into a suitable hazardous waste container and label it with a hazardous waste tag.
2. Schedule disposal: Arrange for hazardous waste pickup through your EH&S department or a certified hazardous waste disposal contractor.
3. Proper storage: Store the hazardous waste in a cool, well-ventilated area, away from heat and direct sunlight, while awaiting disposal.

First aid and emergency contacts

- For skin contact: Immediately wash the affected area with soap & water for a minimum 15 minutes.
- For eye contact: Flush the eyes with water for at least 15 minutes while holding the eyelids open. Remove contact lenses if applicable.
- For inhalation: Move to fresh air immediately. If breathing is difficult, seek medical attention.
- Emergency services: For any hazardous material incident, call 911.
- Medical advice: Contact a poison control center for medical advice related to exposure.

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