



**PROJECT: FIRE SAFETY INC.**

**PRODUCT: FR-1**  
(FIRE RETARDANT ADDITIVE)

**DESCRIPTION:**

FR-1 is a state-of-the-art fire retardant that is available in emulsion form specially formulated as an additive to standard water-based acrylic non-flame retardant paints. It will not affect the characteristics or ability of the original paint. The only change will be the increased power of the flame retardancy.

**USES:**

Water based acrylic paints.

**MIXING PROCEDURES:**

Add between 8.75 and 11.65 fluid ounces of FR-1 to one gallon of water based acrylic paint. A paint with a lower acrylic content uses less Paint Additive than paints with a high acrylic content. Using a high speed (2000 rpm +) electric drill with mixing blade, blend until product is mixed homogeneously (approximately 3 to 5 minutes, dependent on speed and type of mixer). Allow to stand for 15 minutes. If any of the product floats to the top, blend for an additional five minutes.

**APPLICATION:**

FR-1 does not affect the coverage rate of the treated paint; the manufacturer's suggested coverage rates and other notes and cautions will apply.

**TEST APPROVALS:**

Testing conducted at United States Testing Company in accordance with ASTM E-84 test criteria "Standard Method Of Test For Surface Burning Characteristics Of Building Materials". Meets standards of UL 723, NFPA 255 and UBC 42-1, Class A.

For additional information on testing and approvals, please contact the Technical Department at (919) 742-5055.

**SHELF LIFE:**

Ten (10) Years. Shake well before using.

**WARRANTY:**

Project Fire Safety Inc. will not assume any liability for improper use or misapplication of this product. Any claim will be limited to the purchase price of this product.

**CAUTION:**

**Do Not Take Internally.** If contents contact eyes, flush with water for twenty minutes. See an eye doctor immediately.

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)



**PRODUCT: FR-2**  
(FIRE RETARDANT ADDITIVE)

**DESCRIPTION:**

FR-2 is a state-of-the-art fire retardant powder that can be added to both standard oil based paints and varnishes to provide a Class A flame spread rating.

**USES:**

Standard oil based paints and varnishes.

**MIXING PROCEDURES:**

Oil Based Coatings: Add ten (10) ounces of FR-2 to paint or varnish. Using a high speed (2000 rpm +) electric drill with mixing blade, blend until powder is mixed homogeneously (approximately 3 to 5 minutes, dependent on speed and type of mixer). Allow to stand for 15 minutes. If any of the product floats to the top, blend for an additional five minutes.

**APPLICATION:**

FR-2 does not affect the coverage rate of the treated paint or varnish; the manufacturers' suggested coverage rates and other notes and cautions will apply.

**SPECIAL NOTE:**

FR-2 may cause clear coating to become slightly cloudy. Conduct a trial run and let dry to determine if final coating is cosmetically acceptable.

**TESTS/APPROVALS:**

Testing conducted at United States Testing Company in accordance with ASTM E-84 test criteria "Standard Method Of Test For Surface Burning Characteristics Of Building Materials". Meets standards of UL 723, NFPA 255 and UBC 42-1, Class A.

For additional information on testing and approvals, please contact the Technical Department at (919) 742-5055.

**SHELF LIFE:**

Ten (10) Years.

**WARRANTY:**

Project Fire Safety Inc. will not assume any liability for improper use or misapplication of this product. Any claim will be limited to the purchase price of this product.

**CAUTION:**

**Do Not Take Internally.** If contents contact eyes, flush with water for twenty minutes. See an eye doctor immediately.

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)



**Project: FIRE SAFETY inc.**

“Saving lives and property with environmentally friendly solutions”

**PRODUCT DATA SHEET**

**PRODUCT: MG 702 (Liquid Flame Retardant)**

**DESCRIPTION:**

A broad application water base flame retardant for interior use which provides unsurpassed protection for home, office, factory, hospital, retirement home, vehicles, etc. It can be applied to almost any porous or semi-porous surface or textile one might desire. MG 702 is clear, non-toxic, pH-balanced, and specially formulated with a surfactant (wetting agent) for rapid penetration. It does not perceptibly change the appearance, colour, texture or flexibility of materials, nor leave any noticeable residue when properly applied. Application is very easy and readily adaptable to various methods.

**PHYSICAL CHARACTERISTICS:**

Grade: Liquid 18% active

Ph: 7-8

Specific Gravity: 1.16 @ 25°C

Surfactant: Nonionic

Surface Tension: 67.8 @ 25°C

Pounds per gallon: 9.5

Colour: Clear - transparent

Base: Chlorophosphorus base

**USES:**

1. Fabrics – Curtains, drapes, carpets, upholstery, wall coverings, etc. See NOTES.
2. Acoustical tiles.
3. Construction lumber, hardboard and plywood paneling, natural decorative woods, unfinished interior woods, etc.
4. Paper and paper products.
5. Leather and porous vinyl.
6. Most other porous materials.

**APPLICATION PROCEDURES/COVERAGE:**

**GENERAL:** All surfaces must be clean and dry. Application rates depend greatly on the porosity and density of the material to which applied; more is not always better, particularly on fabrics, as some loss of texture or flexibility will occur with too heavy an application. The methods and applications suggested here will vary with the type, quality and condition of the material and with the skills of the applicator. Good judgement in the use of the product must be exercised to obtain the greatest benefits. It is recommended that some trial applications and sample burn tests be conducted to assure desired overall results.

Due to the broad application/uses of MG 702, the following examples are presented to provide the user with an insight into some basic principles of application. If more specific information is required, contact the TECHNICAL DEPARTMENT. Project: FIRE SAFETY, Inc. 1-800-468-2876.

1. **Fabrics** – Finished Products should be sprayed. Normal application rate – 200-400 Sq.ft./gallon. Greater coverage with lighter fabrics. Generally both sides can accept application. However, application on the back side, when there is good porosity, will usually suffice, due to the excellent penetration permitted by the wetting agent.  
Dipping can be used for treating roll yardage during batch processing. Material can be run through a dip tank utilizing padder equipment. Variable tension rollers can be adjusted to control coverage after the dipping process. A conveyor system and oven is required for rapid drying as this system is normally used for large production runs.  
Carpet – coverage on back: Two coats, 400 Sq.ft./gallon each. Front (1) Light coat of 400-600 Sq.ft./gallon. Brush/squeegee to assist penetration, particularly in heavier pile carpet.
2. **Acoustical Tile** – Spray, brush, or roll. Normal coverage: 150-200 Sq.ft./gallon.

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)



3. **Lumber/Hardboard/Etc.:** Spray, brush, roll or dip. Normal coverage: 150-200 Sq. Ft./gallon (dependent on thickness).
4. **Paper:** Light spray. Coverage: 300-800 Sq. Ft./gallon (dependent on thickness).
5. **Leather/Vinyl:** Spray. Coverage: 200-400 Sq. Ft./gallon (dependent on thickness). Normal technique is to spray the unfinished side only. Lay material on a flat surface and apply a light mist coat to initiate absorption. Follow up with a second light coat. Rub/squeeze the material to assist penetration and avoid crystallization. It is not necessary to penetrate to the finished side to provide adequate flame retardancy. See NOTES.

**TESTS/APPROVALS:**

United States Testing Company, Inc. – Testing for interior synthetic fabrics performed in accordance with California Administrative Code. Title 19, Public Safety, Article 3, Sections 1260-1263.9. All requirements met including all critical factors such as pH-balance, toxicity, setting, flexibility, breaking strength and after-flame conditions. Tests were performed before and after accelerated aging with 0.00 seconds after-flame rating. (Report No. LA 40512-1 dated 5/18/84).

Registered with the California State Fire Marshal (C-162.01) “For Use on Interior Synthetic Fabrics” and complying with, meeting or exceeding “Test Requirements for Interior Flame-Retardant Chemicals” when applied to fabrics.

United States Testing Company, Inc. – Testing performed on Douglas Fir in conformance with specification set forth in ASTM Designation E-84, “Standard Method of Test for Surface Burning Characteristics of Building Materials”. Testing comparable to UL723, NFPA 255 and UBC 42-1. All criteria met. (Report No. LA 40485-1 dated 4/19/84).

FAA tested at the FAA Research and Development Laboratories, New Jersey, for upholstery and fire-block materials. MG602 was the only chemical fire retardant to have passed ALL established criteria with 0.00 seconds after-flame rating.

Ramtech Laboratories, Inc. – Testing performed on carpeting in accordance with Federal Aviation Regulations. Volume III, Transmittal 10, Part 25, Section 25.853, Appendix F, Subsection d, 60 second vertical test. All criteria exceeded. (Reports No. 7329-85 and 7374-85 dated 4/11/85 and 4/18/85, respectively).

**SHELF LIFE:**

Over 10 years. Agitate before use.

**NOTES/CAUTION:**

1. Fabrics should be new or freshly cleaned and free of laundry or dry-cleaning detergent and any water repelling coating such as Scotch-gard, etc.
2. All fabrics should be colorfast. To check this, spray a piece or a hidden area until wet; wipe with a white absorbent cloth. If any color rubs off, DO NOT TREAT.
3. Will not harm foam/sponge rubber upholstery padding or wood surfaces.
4. 100% Synthetic fabrics such as polyester, nylon and polyolefin will require special treatment. Contact MOR-GARD for more information.
5. When treating leather, the backing will appear to become slippery or slimy when rubbing in MG702. This is caused by the Turkish red oil in the leather which keeps it soft and flexible. After the leather is dry the texture will be as normal as before application.
6. Always clean equipment with water after use.
7. CAUTION: Contains chlorophosphorus base, pH-adjusted. DO NOT take internally. If swallowed take water or milk and call a physician. DO NOT induce vomiting. Keep out of reach of children. If product contacts eyes, flood repeatedly with water. See eye doctor. While toxicity of MG702 is within acceptable levels, it is preferable, when spraying, to use the product in well ventilated areas which are provided with a means of air movement such as cross ventilation through the use of fans, open windows, etc. This will also assist the drying process.

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)



**Project: FIRE SAFETY inc.**

“Saving lives and property with environmentally friendly solutions”

**PRODUCT DATA SHEET**

**PRODUCT: MG 790 (Liquid Flame Retardant)**

**DESCRIPTION:**

An emulsified water base flame retardant specially formulated for exterior unfinished woods, i.e. shake or shingle roofs, sidings, patios, decks, or other wood surfaces. When followed by a light spray coating of MOR-GARD 400 preservative/sealer it provides a highly effective and long lasting flame retardant protection agent. MG 790 is non-toxic, pH-balanced. It is specially formulated with a fungicide plus a surfactant (wetting agent) for rapid and deep penetration. It does not change surface appearance nor leave any noticeable residue when properly applied.

**PHYSICAL CHARACTERISTICS:**

Grade: Liquid 21% active

Ph: 7-8

Colour: Cloudy white, clear when dry

Specific Gravity: 1.16 @ 77°F

Pounds per gallon: 9.5 - 6

Base: Chlorinated Phosphorus

Surfactant: Nonionic

Fungicide: Dowicil 75

**USES:**

1. On exterior unfinished lumber, i.e. siding, patios, decks, underdeck, plywood panels, etc.
2. Shakes and shingles (New and weathered).

**APPLICATION PROCEDURES/COVERAGE:**

**GENERAL:** All surfaces must be clean and dry. A pre-application pressure washing to remove residue accumulations should be accomplished to assure maximum and proper penetration.

**Shakes and Shingles:** Spray applied. Weathered wood – normal application – 100 Sq.ft./gallon. New Wood – application – 100-150 Sq.ft./gallon. Allow 2 hours drying time after washing or rain before applying. When spraying roofs, start at the bottom and work upward making sure that the spray also reaches the underside of shakes or shingles as far as possible. Allow approximately 2 hours drying time (dependent upon the degree of atmospheric humidity) before applying MG 400.

**Exterior Unfinished Lumber:** Can be sprayed, brushed or dipped. Spray or brush applications – coverage is the same as for shakes or shingles. When dipped, rate is 25-35 Sq.ft./gallon based on a 3 hour immersion process, utilized in an extremely successful test program where 18 test decks were subjected to numerous test variables.

**TESTS/APPROVALS:**

United States Testing Company, Inc. – Test Report LA 12290 Dated 1/26/82. Testing performed in accordance with U.B.C. Standard 32-7, and comparable ASTM Designation E-108. Exposure to 12 one week rain cycles prior to burn tests required MG 400 preservative/sealer application, following MG 790 application. Test parameters met: Burning Brands – Class B; Intermittent Flame – Class B; Spread of Flame – Class B; Flying Brand – Class C.

Ramtech Laboratories, Inc. – Test Report 7022-84 Dated 11/26/84. Test Program met provisions for existing shake and shingle roofs as specified in Los Angeles Fire Department Standard No. 52, “Test on Fire Retardant Sprayed and Weathered Test Decks”. Based on ASTM test method E-108 and UL Specification 790. MG 790 was used in conjunction with MG 400.

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)



**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

<b>IDENTITY</b> (As Used on Label and List) Mor-Gard 702		<i>Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.</i>	
<b>Section I</b>			
<b>Manufacturer's Name</b> Project Fire Safety, Inc.		<b>Emergency Telephone Number</b> 1-919-742-5055	
<b>Address</b> (Number, Street, City, State and ZIP Code) PO Box 14342		<b>Telephone Number for Information</b> 1-800-468-2876	
Research Triangle Park, NC 27709		<b>Date Prepared</b>	
		<b>Signature of Preparer (optional)</b>	
<b>Section II – Hazardous Ingredients/Identity Information</b>			
<b>Hazardous Components</b> (Specific Chemical Identity: Common Name(s))		OSHA PEL	ACGIH TLV
		Other Limits Recommended	
The OSHA 8-hour Time Weighted Average (TWA) for this product mixture is calculated to be 15 Mg/M <sup>3</sup> . It is recommended that these products should also be treated as nuisance dusts for which the OSHA 8-hour TWA is 15 Mg/M <sup>3</sup> (total dust) and 5Mg/M <sup>3</sup> (respirable dust). AOGIH recommends a nuisance dust limit of 10 Mg/M <sup>3</sup> (total dust) 5Mg/M <sup>3</sup> (respirable dust), Acute oral LD <sub>50</sub> – 3900 mg/kg.			
<b>Section III – Physical/Chemical Characteristics</b>			
<b>Boiling Point</b>		<b>Specific Gravity</b> (H <sub>2</sub> O = 1)	
Decomposes Above	320 F	Bulk Density	70 lb/ft <sup>3</sup>
<b>Vapor Pressure</b> (mm Hg.)	Negligible	<b>Melting Point</b>	N/A
<b>Vapor Density</b> (AIR = 1)	N/A	<b>Evaporation Rate</b> (Butyl Acetate = 1)	0
<b>Solubility in Water</b> 60% at 24 C (75 F) (approximately)			
<b>Appearance and Odor</b> Small White Crystals – Odorless			
<b>Section IV – Fire and Explosion Hazard Data</b>			
<b>Flash Point</b> (Method Used)	<b>Flammable Limits</b>		<b>LEL</b> <b>UEL</b>
None	N/A		
<b>Extinguishing Media</b>	Non-combustible; if product involved in a fire, any extinguishing media appropriate for the fire may be used.		
<b>Special Fire Fighting Procedures</b>	Use protective clothing and self-contained breathing equipment.		
<b>Unusual Fire and Explosion Hazards</b>	Not flammable, but may release ammonia and sulfur oxide gases if product is involved in a fire.		

(Reproduce Locally)

OSHA 174, Sept. 1985

(604) 854-6776  
Customer Service (800) 663-8898

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992  
[www.twinmaple.com](http://www.twinmaple.com)



<b>Section V – Reactivity Data</b>			
<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>
	<b>Stable</b>	X	N/A
<b>Incompatibility (Materials to Avoid)</b> Nitrate, Nitrite, Chlorate.			
<b>Hazardous Decomposition or Byproducts</b> Ammonia and Sulfur Oxide gases can occur above 160 C (320 F).			
<b>Hazardous Polymerization</b>	<b>May Occur</b>		<b>Conditions to Avoid</b>
	<b>Will Not Occur</b>	X	N/A
<b>Section VI – Health Hazard Data</b>			
<b>Route(s) of Entry:</b>	<b>Inhalation?</b> YES	<b>Skin?</b> YES	<b>Ingestion?</b> YES
<b>Health Hazards (Acute and Chronic)</b> N/A			
<b>Carcinogenicity:</b> N/A	<b>NTP?</b>	<b>IARC Monographs?</b>	<b>OSHA Regulated?</b>
<b>Signs and Symptoms of Exposure</b> Irritating to eyes.			
<b>Medical Conditions Generally Aggravated by Exposure</b> N/A			
<b>Emergency and First Aid Procedures</b> Eye contact: Immediately flush with plenty of water for at least 15 minutes. Call a physician if irritation persists.			
<b>Section VII – Precautions for Safe Handling and Use</b>			
<b>Steps to Be Taken in Case Material is Released or Spilled</b> Clean up promptly.			
<b>Waste Disposal Method</b> Comply with Federal, State and Local Regulations. If buried, use area away from desirable plants, and not close to water supply.			
<b>Precautions to Be Taken in Handling and Storing</b> Keep in a dry, tightly closed container and store in a cool dry area. Use only clean dry utensils in handling.			
<b>Other Precautions</b> N/A			
<b>Section VIII – Control Measures</b>			
<b>Respiratory Protection (Specify Type)</b>			
<b>Ventilation</b>	<b>Local Exhaust</b> Good practice to minimize exposure.	<b>Special</b> N/A	
	<b>Mechanical (General)</b> N/A	<b>Other</b> N/A	
<b>Protective Gloves</b> Rubber gloves suggested.		<b>Eye Protection</b> Chemical splash goggles if there is reasonable probability of exposure.	
<b>Other Protective Clothing or Equipment</b> Eye bath and safety shower.			
<b>Work/Hygienic Practices</b> Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure.			

(604) 854-6776

32351 Huntingdon Road, Abbotsford, BC, V2T 5Y8

Fax (604) 854-1992

Customer Service (800) 663-8898

[www.twinmaple.com](http://www.twinmaple.com)