

# **FIRE** Retardants Inc.<sup>TM</sup>

*The Decision You Make May Save A Life!*

123 Columbia Court North • Suite 201 • Chaska, MN 55318

**952-448-7377 • Fax: 952-448-2613**

**Fire Retardant "HOT LINE" 1-800-913-9385**

**E-mail: [info@fireretardantsinc.com](mailto:info@fireretardantsinc.com)**

**Visit Our Web Site at [www.fireretardantsinc.com](http://www.fireretardantsinc.com)**

## **BURN BARRIER NO. 50-44 Low VOC**

### **Fire Retardant Intumescent Mastic For Structural Steel Fire Protection**

**For Hourly Ratings, Refer To  
Underwriters' Laboratories of Canada Section**

#### **DESCRIPTION:**

BURN BARRIER Fire Retardant Mastic No. 50-44 Low VOC is an asbestos free, reinforced intumescent thermal protective coating, designed for application to interior structural steel, where it is necessary or desirable to increase the steel fire endurance time.

Mastic No. 50-44 Low VOC, when applied at a wet film thickness of 3/16 inch (8.55 sq. ft./US gal.) [4.76mm (0.21 meters sq./L)], on W8 x 28 (W200 x 36 and W200 x 42), as described in ULC design Number O600 and fire tested in accordance with ASTM E-119 (UL-263, ULC-CAN 4 S101, NFPA-251) has been assigned fire resistant ratings of 1 hour. Reference Underwriters' Laboratories of Canada section, or the label on the container.

#### **RECOMMENDED USES:**

Fire protection of structural steel and wooden support members, in facilities where it is necessary or desirable to increase the structural support members fire resistant properties.

#### **PERFORMANCE INFORMATION:**

- Hourly fire ratings; refer to U/L section.
- Class "A" flame spread rating.
- Dries by solvent evaporation to form a tough, hard, durable, textured finish.
- Will not leach (lose fire retardancy) on exposure to high humidity.
- Will not dust, flake, spall or crack.
- Resistant to deterioration from flexing, impact, vibration, and temperature changes.
- Can be overcoated (topcoated) with any BURN BARRIER low-gloss or semi-gloss, solvent or latex based, Class "A" Rated Fire Resistant Overcoat Paint. (see fire hazard classification section)

#### **CHARACTERISTICS:**

**Finish** . . . Flat, textured (stucco-like finish)

**Color** . . . . . Off-White or special colors made to order

#### **Spreading**

**Rate** . . . . . 8.55 sq. ft./gal. (0.21 m<sup>2</sup>/l.)  
3/16" wet, approx. 5/32" dry,  
(4.8 mm wet, approx. 4.0 mm dry)

**Volume Solids** . . . . . 53% ± 2

**Weight Solids** . . . . . 73% ± 2

*Continued on next page...*

#### **Drying Time @ 77°F & 50% RH:**

To touch . . . . . (\*) 1 - 2 hours

To handle . . . . . (\*) 24 - 48 hours

To top coat . . . . . (\*) 4 - 5 days

Full cure . . . . . (\*) 7 - 10 days

**Type of Cure** . . . . . Solvent Evaporation

**Flash Point** . . . . . -4°F (-20°C)  
(Closed Cup)

#### **Reducer/Cleaner**

**No. 50-44 Low VOC** . . . . . Acetone

**Shelf Life** . . . . . 9 months (unopened)

**Packaging** . . . . . 1 & 5 gal. containers  
weight/gal. 10.9 / 0.2 lbs.

**Shipping weight** . . . . . 4 gals - 48 lbs.  
5 gals - 58 lbs.

**Application** . . . . . Spray or trowel

(\*) Note: This coating is flammable until thoroughly dry.

#### **SURFACE PREPARATION:**

##### **NEW SURFACES:**

Hand clean, power clean, or sandblast steel to remove mill scale, rust and other foreign matter. Apply a good quality metal primer such as BURN BARRIER No. 3004 Universal Primer. Allow to completely cure before applying No. 50-44 Mastic Low VOC.

##### **PREVIOUSLY PAINTED SURFACES:**

Mastic No. 50-44 Low VOC may be applied directly to most existing paint that is tightly adherent, and in good condition. All glossy surfaces must be dulled with sandpaper. It is strongly recommended that a few small test patch areas be applied before starting actual application. If old paint is not affected, spot prime with quality metal primer, and allow to fully cure. If old paint is affected, it will be necessary to completely remove the old paint. After the removal is completed, treat as a new surface. After proper surface preparations have been completed, mask off the immediate surrounding areas. Masking need not be extensive, since Mastic No. 50-44 Low VOC does not drift or dust beyond the immediate vicinity of the application area.

#### **APPLICATION**

##### **MIXING INSTRUCTIONS:**

Using a Jiffy double-bladed mixer, thoroughly mix to ensure material is uniform and homogeneous. For spray application; thin the material, using approximately 1 quart of reducer, per 5 gallon pail. For hopper gun application; thin the material, using approximately 3 quarts of reducer, per 5 gallon pail.

Mastic No. 50-44 Low VOC can be spray or trowel applied. For spray application use an air-hopper gun, or heavy duty spray equipment. If a trowel is used, it should be kept moist with Mineral Spirits, to avoid sticking or pulling.

For spray application, first apply a thin uniform scratch coat (approximately 1/16" thick) onto the substrate. Allow the material to dry (approximately 1 hour) until firm. After the scratch coat is dry, apply an additional coat to achieve the minimum film thickness desired. Care must be taken to ensure that all edges and surfaces are properly coated. Maintenance and repairs can be made with putty knife or trowel.

See "Characteristics" section for drying and clean-up information.

For complete spray equipment and application procedures, refer to "Suggested Application equipment for BURN BARRIER Mastic No. 50-44 Low VOC sheet".

#### **PRECAUTIONS:**

**WARNING! FLAMMABLE.** The liquid coating contains XYLENE, ACETONE and VM&P NAPHTHA, which are FLAMMABLE liquids. Due care must be exercised during and after application until the coating is dry. Keep away from heat, sparks, and flame. Avoid contact with skin. Avoid breathing vapors or spray mist. Open windows and doors or use other means to ensure fresh air entry during application and drying.

# **FIRE** Retardants Inc.™

*The Decision You Make May Save A Life!*

123 Columbia Court North • Suite 201 • Chaska, MN 55318

**952-448-7377 • Fax: 952-448-2613**

**Fire Retardant "HOT LINE" 1-800-913-9385**

**E-mail: info@fireretardantsinc.com**

**Visit Our Web Site at [www.fireretardantsinc.com](http://www.fireretardantsinc.com)**

## **BURN BARRIER NO. 50-44 Low VOC**

**Fire Retardant Intumescent Mastic**

**For Hourly Ratings, Refer To**

**For Structural Steel Fire Protection Underwriters' Laboratories of Canada Section**

If you experience eye watering, headaches or dizziness, increase fresh air or wear respiratory protection (NIOSH/MSHA TC 23C or equivalent) or leave the area. Do not take internally. Close container after each use. Use with adequate ventilation.

**NOTICE:** Reports have associated repeated and prolonged occupational over-exposure to solvents with permanent, brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Consult the material safety data sheet for this product, prior to opening container.

**FIRST AID:** If swallowed, do not induce vomiting. Call a physician immediately. In case of skin contact, quickly flush with plenty of water, then soap and water. For eyes, flush immediately with large amounts of water, especially under eye lids, for at least fifteen minutes. Obtain emergency medical treatment.

**Read MSDS before opening containers.**

**KEEP OUT OF REACH OF CHILDREN**

As we cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used, we accept no responsibility for results obtained by the application of this information or the safety or suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. We sell the products without warranty or guarantee, and buyers and users assume all responsibility and liability for loss or damage from the handling and use of our products, whether used alone or in combination with other products.

### **UNDERWRITERS' LABORATORIES OF CANADA SECTION**

**UNDERWRITERS' LABORATORIES OF CANADA LISTED**



**MASTIC COATING**

**TYPE NO. 50-44 Low VOC**

FOR USE AS A COMPONENT IN THE FOLLOWING FIRE RATED ASSEMBLIES

O600

For details of Fire Rated Assemblies, see ULC List of Equipment and Materials, Volume III Fire Resistant Ratings (and Supplements thereto)

**FLASH POINT (CLOSED Cup), -4°F (-20°C)**

TO CONFORM WITH THE ULC FIRE RATINGS ESTABLISHED FOR THIS MASTIC, DILUTION OF THE MASTIC SHOULD BE COMPENSATED FOR WITH REDUCED COVERAGE RATES

#### **HOURLY RATINGS FOR DESIGN NOS.**

1 HOUR - O600

#### **FLAME SPREAD CLASSIFICATION OR RATING**

Classified as to surface burning characteristics, in accordance with the standard test method for fire hazard classification of building materials, ULC-723 (ASTM E-84, NFPA No. 255, ULC/CAN-S102). When applied to a noncombustible surface, at the specified thickness, the coating exhibited the characteristics of a material having a Class "A" flame spread of less than 25 (actual flame spread 12.8), with no smoke being reported.

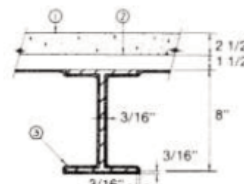
**Materials** - Applied at an average wet film thickness of 3/16 inch (4.8 mm) to a W8 x 28 [18 inch (203 mm) steel beam, weight approximately 28 lbs. per lineal foot (41.66 kg/meter)].

**Loading** - Prior to the fire exposure, the assembly was loaded with a linear load of 1600 lb. per foot achieved by means of hydraulic jacks so as to theoretically develop the full working stress of 24,000 psi in the intermediate beam.

**Fire Exposure** - The furnace was fired in accordance with the time-temperature curve shown in the Standard for Fire Tests of Building Construction and Materials, ASTM E-119 (UL-263, ULC101, NFPA-251) and obtained the following ratings;

Restrained beam rating - 1 hr.  
Unrestrained beam rating - 1 hr.  
Beam - W8 x 28 Minimum size

- 1 Concrete - Ready Mixed
- 2 Steel Floor Units
- 3 Intumescent Fire Retardant Mastic



Revised 01/10