



PROPOSED AGENDA

Flame Retardant Advisory Committee Conference Call Meeting

Thursday, March 25, 2010
10:00 A.M. – 2:30 P.M.
State Fire Marshal Headquarters Office
Main Conference Room
1131 S Street
Sacramento, California
Teleconference Number: (877) 536-5793
Participant Code: 204798

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|------|---|---------------------|
| I. | CALL TO ORDER | Francis Mateo |
| | A. Introductions | Francis Mateo |
| | B. Roll Call | Helen Brockenbrough |
| | C. Announcements | Francis Mateo |
| II. | Approval of February 10, 2010 Minutes | Jeannie Smith |
| III. | OLD BUSINESS | |
| | A. Test Standards (*1176 et seq., Pgs 2-4) | Jeannie Smith |
| | 1. Large Scale Test – Where and When Required | |
| | • Report from Industry | Juli Case |
| | • Report from SFM Staff (<i>Attach 1</i>) | Jeannie Smith |
| | 2. ASTM E-84 Follow-up (<i>Attach 1</i>) | Jeannie Smith |
| | 3. Accelerated Weathering Test | |
| | • Proposed Regulatory Language | Greg Wrona |
| | B. Approval of Chemicals (*Article 3, Pg 7) | |
| | 1. Determine Criteria for Product Data Sheet
(*1210, Pg 8) | |
| | • Sample Product Data Sheet (<i>Attach 2</i>) | Ellen Atkins |
| | • Proposed Language (<i>Attach 3</i>) | Kathy Newman |
| | 2. Effect of Chemicals on Different Color Fabric
(*1216, Pg 9) | |
| | • Report from Industry | Juli Case |
| | C. Timeline for Regulations Package (<i>Attach 4</i>) | Jeannie Smith |
| | D. Certificates of Registration (<i>Attachs 5 & 6</i>) | Helen Brockenbrough |

- E. Examination Process
 - 1. Test Locations Helen Brockenbrough
 - 2. Test Revision Task Group Jeannie Smith

- IV. NEW BUSINESS
 - A. Interior/Exterior Flame Retardant Chemicals (*1230-1264, Pgs 11-21) Group Discussion

- V. Open Forum Group

- VI. Schedule Next Meeting Group
Possible date: Thursday, April 29, 2010 in Monrovia

- VII. Adjourn

FLAME RETARDANT ADVISORY COMMITTEE
Fire Engineering Division
Hand-Out – Old Business, Item III

Item III. A. 1. Large Scale Test – Where and When Required

Existing Title 19 language refers to the large scale test within:

- Section 1273.2 which specifies fabrics described in 1272(c) intended for exterior use shall meet the requirements for fire resistance outlined in 1273.3.
- Section 1273.3 the test method for unsupported film, synthetic fabrics and coated fabrics. Required specimen size is 1 foot wide by 2 ½ feet long; small scale structure is 12" wide, 12" deep, and 30" high; therefore, large scale standard is used.

Reference to the large scale test is noted in the proposed regulations under Sections 1264.5, 1264.6 and 1272(c) (Pages 19 and 22).

Item III.A.2. ASTM E-84 Follow-up

Existing language refers to ASTM E-84 in:

- Section 1216.1 – Chemicals, Other Materials. Chemicals intended for treating materials other than fabrics, such as compressed cellulose fiber, wooden and similar decorative materials, bast and leaf fibrous materials, brush and foliage, Christmas trees, etc., shall be tested as outlined in Section 1264 and its subsections.
- Section 1264.1 – Wooden and Compressed Cellulose Fiber Decorative Material. ...Approval of chemicals for the flame-retardant treatment of compressed cellulose fiber and wooden decorative materials shall be based upon tunnel test results when performed by a laboratory properly equipped and staffed to make the test.

Reference to ASTM E-84 is noted in the proposed regulations under the same sections (Pages 10 and 18).



Delta Pacific Technologies, Inc.

PRODUCT DATA SHEET

PRODUCT:

GG 702 Multipurpose (Liquid Flame Retardant CA Reg. # C-19201)

**DESCRIPTION:**

A broad application water-based 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 one might desire. **GG 702** is clear, nontoxic, pH balanced, and specially formulated with a surfactant (wetting agent) for rapid penetration. It does not perceptibly change the appearance, color, 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 Surface Tension: 67.8 @ 25°C
PH: 7-8 Pounds per Gallon: 9.5
Specific Gravity: 1.16 @ 25°C Color: Clear - transparent
Surfactant: Nonionic

USES:

1. Fabrics, curtains, drapes, carpets, upholstery, wall coverings, etc.
2. Hay, corn stalks, palm fronds and dried natural foliage.
3. Construction lumber, plywood paneling, decorative woods, unfinished interior wood, etc.
4. Paper and paper products.
5. Leather and porous vinyl.
6. Most other porous materials, including acoustical tiles.

APPLICATION PROCEDURES/COVERAGE:

All surfaces must be clean and dry. Bear in mind that application rates depend greatly on the porosity and density of the material to which applied and that 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 application suggested here will vary with the type, quality and condition of the material and with the skills of the applicator. Good judgment 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. If more specific information is required, contact Delta Pacific Technologies, Inc.

WARRANTY:

Delta Pacific Technologies, Inc., warrants that every precaution has been taken to maintain the purity of product ingredients and high standards of manufacture; that, as packaged, sealed and shipped from our plant, the products will perform as claimed in every respect. However, because Delta Pacific Technologies, Inc., cannot retain control nor exercise supervision over trans-shippers and intermediate handlers during and after transit, and because of the degree and number of variables that may be encountered in the skills of the applicator or in the physical conditions under which the product may be applied, or in the condition of the materials to which applied, specific warranties cannot be made. Liability or claims will not be honored aside from independent testing results of the **GG 702** liquid. Any claim is limited to the replacement price of the product. No other warranties are expressed or implied.

Delta Pacific Technologies, Inc.
601 N. Poplar Street
Orange, CA 92868-1011

Phone: 714-634-3485 Fax: 714-634-3615
E-mail: info@flamesgone.com
Web: www.flamesgone.com

Product Data Sheet – GG 702 (continued)

COVERAGE:

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 backside, when there is good porosity, will usually suffice due to the excellent penetration permitted by the wetting agent. **NOTE:** Dipping can be used for treating roll yardage during batch processing. Material can be run through a dip tank utilizing padded 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.
2. **Carpet:** Coverage on back--two coats, 400-sq. ft/gallon each; coverage on front--one light coat of 200-250 sq. ft/gallon. Brush/squeegee to assist penetration, particularly in heavier pile carpet.
3. **Acoustical Tile:** Spray, brush, or roll. Normal coverage, 150-200 sq. ft/gallon.
4. **Lumber/Hardboard/etc.:** Spray, brush, roll or dip. Normal coverage, 150-200 sq. ft/gallon (dependent on thickness).
5. **Paper:** Light spray, coverage, 300-800 sq. ft/gallon (dependent on thickness).
6. **Leather/Vinyl:** Spray. Coverage, 200-400 sq. ft/gallon (dependent on thickness). Normal technique is to spray the unfinished underside only. Lay material on a flat surface and apply a light mist coat to initiate absorption. Follow up with a second light coat. Rub/squeegee the material to assist penetration and avoid crystallization. It is not necessary to penetrate to the finished side to provide adequate flame retardancy.

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, and Sections 1260-1263.9. All requirements met, including all critical factors such as pH balance, toxicity, and 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 5/8/84.)
- **Registered with the California State Fire Marshal** (No. C-19201) "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 specifications set forth in ASTM Designation E-84, "Standard Method of Test for Surface Burning Characteristics of Building Materials." Testing comparable to UL723, NFPA255 and UBC42-1. 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. GG 702 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.)

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 Scotchgard, 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. For 100% synthetic group fabrics such as polyester, nylon and polyolefin will require special treatment. Contact Delta Pacific Technologies, Inc., for more information.
5. When treating leather, the backing will appear to become slippery or slimy when rubbing in GG 702. This is caused by the Turkish red oil in the leather that keeps it soft and flexible. After the leather is dry the texture will be normal as before application.
6. Always clean equipment with soap and water after use.

CAUTION:

DO NOT take internally. If swallowed take water or milk and call a physician. DO NOT induce vomiting. If product contacts eyes, flood repeatedly with water. See eye doctor. While toxicity of GG 702 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 or cross ventilation through the use of fans, open windows, etc. This will also assist the drying process. Keep out of the reach of children.



26951 Ruether Ave. Unit D

Canyon Country, CA 91351

www.firetect.com

FLAME RETARDANT (FR)

PRODUCT DATA SHEET REQUIREMENTS (PDS) March 5, 2010

Listed below are items that we recommend should be either addressed or included in flame retardant Product Data / Instruction Sheets.

NAME AND DESCRIPTION OF PRODUCT

INDICATE WHETHER INTERIOR OR EXTERIOR

CA STATE FIRE MARSHAL BUG LOGO AND REGISTRATION INFORMATION

TECHNICAL DATA / STORAGE HANDLING INFORMATION:

Note: We only include information that is relevant to the integrity of the product. Some might argue that this information is listed on the MSDS, but MSDS is not required unless it is a hazardous or toxic chemical. We do provide MSDS, but many times the end user does not have the MSDS.

Please see our information under, "Technical Data" on our Product Data Sheets as an example:

[http://www.firetect.com/PDFS/SAFE-T-GUARD%20RTU %204-08%20With%20Red%20Logo.pdf](http://www.firetect.com/PDFS/SAFE-T-GUARD%20RTU%204-08%20With%20Red%20Logo.pdf)

SURFACE PREPARATION:

MIXING INSTRUCTIONS:

APPLICATION DIRECTIONS:

Include square feet per gallon and/or mil thickness referenced on test report (currently not a requirement of the labs to include any information) (my recommendation to the CA State Fire Marshal is to require laboratories to include specific information on the reports, such as; substrate, application information, square footage, sample preparer information)

APPROVALS: (This is a discussion that needs to be considered seriously and discussed)

ISSUE:

Most FR manufacturers test 100% of the same fiber content and blends of fibers.

However, there is a big difference in outcome when the fiber is blended with various fibers with different percentages of content.

FOR EXAMPLE:

A polyester / spandex may work with 90% poly, 10% spandex, but when the percentage of spandex increases, the flammability increases.

Note definition of spandex:

Spandex, Lycra or elastane, is a [synthetic fibre](#) known for its exceptional [elasticity](#). It is stronger and more durable than [rubber](#), its major non-synthetic competitor. ^{[citation needed](#)} It is a [polyurethane-polyurea copolymer](#) that was [invented](#) in 1959 by chemist [Joseph Shivers](#) at [DuPont's](#) Benger Laboratory in [Waynesboro, Virginia](#). When first introduced, it revolutionized many areas of the [clothing industry](#). Spandex is not derived from the chemical name of the fibre, as are most manufactured fibres; but an anagram of the word expands.^[1] Spandex is the preferred name in [North America](#); in many European countries it is referred to as "elastane". Other brand names associated with Spandex include Lycra ([Invista](#), previously a part of DuPont), Elasthan (also Invista's), Creora ([Hyosung](#)), ROICA and Dorlastan ([Asahi Kasei](#)), Linel ([Fillattice](#)), and ESPA ([Toyobo](#)).

PROBLEM:

End user may assume that the flame retardant product will be effective on ALL poly/spandex or ALL poly/lycra blends of fabrics. Since other states do not require a, "Licensed Applicator" to apply the flame retardant product and the end-user assumes that it is a safe product on fibers listed, they are solely relying upon the instructions that is listed on the Product Data Sheet. The end user may have a false sense of security.

SOLUTION:

A knowledgeable flame retardant manufacturer will know many of the fibers on the market that may cause increased flame-spread. Those are; nylon, acetate, acrylic, plastic, spandex, lycra, elastic, metal, tent material. With increased technology, this list may increase. If a textile is woven with those materials, the flame retardant company must have testing on the fiber content blends and understand their product limits and list them on the Product Data Sheet.

ADDITIVES:**ISSUE:**

Many end users buy an, "additive" and assume that it will work in all like products. They do not use the additive as directed; usually, because they did not read that part; or they did not know.

SAFETY HAZARD:

End user assumes they are in compliance, but if an accident were to happen, they would find out that they did not use the fr product correctly; therefore increasing risk.

SOLUTION:

1. If the fr product is an additive, and it was tested with a specific type of paint formulation, then there should be minimum font requirements on the PDS referencing that the product can only be used in conjunction with the other products name. For Example: "THIS PRODUCT MUST ONLY BE ADDED TO FIRETECT WT-102 LATEX COATING". This should be clearly stated in the upper right hand corner of the page.
2. The label of the additive should also be state clearly, "THIS PRODUCT MUST ONLY BE ADDED TO FIRETECT WT-102 LATEX COATING". This should be clearly stated in the upper right hand corner of the label with minimal font size.

LIMITATIONS

A statement should be listed, such as, "Surfaces with other coatings, glue or ink can change flame-spread ratings (or increase flammability). Substrate must be approved for the service conditions encountered in actual use. Sizing, water and stain repellent, and other coatings not visual may also change flame spread.

TOXICITY /HAZARDOUS INFORMATION, if any;

WARRANTY

DISCLAIMERS

STORAGE AND HANDLING

I have added the information below as there was a question whether or not we should use the term, "Chemical". In my opinion, our products are chemicals and we should not be afraid of the word, "chemical".

Chemical Definitions:

<http://www.ilpi.com/msds/ref/chemical.html>

MSDS Requirements:

[http://www.ilpi.com/msds/osha/1910_1200.html#1910.1200\(g\)\(2\)](http://www.ilpi.com/msds/osha/1910_1200.html#1910.1200(g)(2))

Trade Secret Info. for MSDS:

[http://www.ilpi.com/msds/osha/1910_1200.html#1910.1200\(i\)](http://www.ilpi.com/msds/osha/1910_1200.html#1910.1200(i))

TIMELINE FOR T 19 FLAME RETARDANT REGULATIONS REVISION

Goal: Have proposed regulatory package ready for submission to OAL by December 31, 2010 with effective date 07/01/2011

Or: Try for effective date 03/01/2011 – before renewal period

Objectives	Proposed Completion Date	Date Completed
Objective 1 – Rewrite/review: <input type="checkbox"/> Article 1. Title, Purpose and Scope (Pg 1-5) <input type="checkbox"/> Article 2. Definitions (Pg 5-7)	04/05/2010	
Objective 2 – Rewrite/review: <input type="checkbox"/> Article 3. Registration & Labeling of Chemicals (Pg 7-21) <input type="checkbox"/> Article 4. Registration of Flame-Retardant Fabric or Material (Pg 21-25)	06/01/2010	
Objective 3 – Rewrite/review: <input type="checkbox"/> Article 5. Registration of Flame-Retardant Application Concerns and Certified Flame-Retardant Applicators (Pg 25-29) <input type="checkbox"/> Article 6. Flame-Retardant Application Requirements (Pg 29-32)	07/01/2010	
Objective 4 – Rewrite/review: <input type="checkbox"/> Article 7. Field Testing for Fire Resistance (Pg 32) <input type="checkbox"/> Article 8. Flameproofing Certification, Labeling and Installation (Pg 32-35) <input type="checkbox"/> Article 9. The Seal of Registration (Pg 35-37) <input type="checkbox"/> Article 10. Approval of Testing Laboratories (Pg 37-38) <input type="checkbox"/> Article 11. Violations and Penalties (Pg 38-39)	08/01/2010	
Objective 5 - SFM Staff Review	09/15/2010	
Objective 6 - SFM Code Development Review	10/1/2010	



CALIFORNIA DEPARTMENT OF FORESTRY and FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL

REGISTERED FLAME RESISTANT PRODUCT

Product:

GG 702

Registration No.

C-19201

Product Marketed By:

DELTA PACIFIC TECHNOLOGIES
601 N POPLAR STREET
ORANGE, CA 92868

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code.

The scope of the approved use of this product is provided in the current edition of the **CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS** published by the California State Fire Marshal.


Deputy State Fire Marshal

Expire: 06/30/2010

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING – FLAME RETARDANT AND CHEMICALS PROGRAM



CHEMICAL REGISTRATION CERTIFICATE

Registration No.: C-19201

Category: Flame Retardant Chemical

Marketed By: DELTA PACIFIC TECHNOLOGIES, 601 N. Poplar Street, Orange, California 92752-1011

Contact: Ellen Atkins (714) 634-3485 FAX (714) 634-3615

Product Description: GG 702, a multipurpose liquid water-based flame retardant which is clear, nontoxic, pH balanced, and specially formulated with a surfactant for rapid penetration.

Application: Finished products: spray – 200-400 sq. ft./gallon; carpet: brush or squeegee – 400 sq. ft./gallon; acoustical tile: spray, brush, or roll – 150-200 sq. ft./gallon; lumber/hardboard: spray, brush, roll or dip – 150-200 sq. ft./gallon; paper: light spray – 300-800 sq. ft./gallon; leather/vinyl: spray – 200-400 sq. ft./gallon. Follow manufacturer's application instructions.

Duration: N/A

Labeling: Concern's name, SFM Seal of Registration and Registration Number, the percentage of solids, the flame-retardant chemical name exactly as approved and registered, and the words "For Interior Use Only" below the registered name.

Precautions: Toxicity is within acceptable levels. Apply in well-ventilated areas with a means of air movement; irritating to eyes. Avoid contact with nitrate, nitrite, and chlorate.

Approval: A broad application water-based flame retardant for interior use only, which can be applied to almost any porous or semi-porous surface.



This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code.

The scope of the approved use of this product is provided in the current edition of the California Approved List of Flame Retardant Chemicals and Fabrics, General and Limited Applications Concerns published by the California State Fire Marshal.

Date Issued: **March 25, 2010**

Registration Expires: **June 30, 2010**

Authorized By: **JEANNIE SMITH, Program Coordinator**
Fire Engineering Division