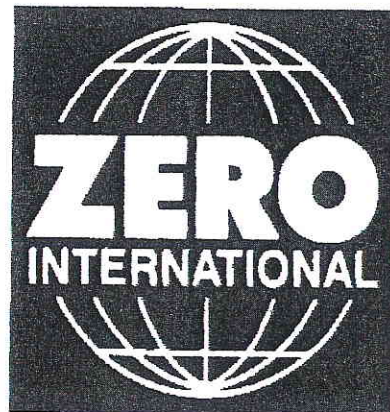




Prepared for:
Alprokon Aluminum
Attn: Henk Van Herpen

CERTIFICATE OF COMPLIANCE**CLIENT CERTIFICATE NUMBER: W1311200-981029-1****ISSUE DATE: September 13, 2000****ISSUED TO:**

ZERO INTERNATIONAL
415 Concord Avenue
Bronx, New York 10455

REPORT REFERENCES:

Intertek Testing Services Reports:

495-1212, 495-1370, 495-PSV-1298, J98009164-231, 495-1441, J99005829-231

This is to certify that representative samples of:

Intumet FS2002

Intumet FS3003

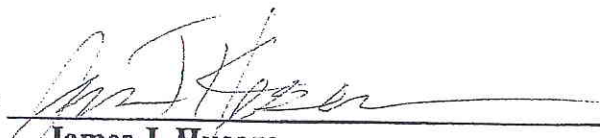
have been investigated by ITS-Warnock Hersey in accordance with the standard(s) indicated on this certificate.

Standards: UBC Standard 7-2-1997 Part I; UL10C; UBC Standard 7-2-1994; UL 10B
UBC Standard 7-2-1997 Part II; UL 1784

Additional Information:

- Intumet FS2002 is listed for use as glazing tape in metal light kits used in labeled doors, between the glass and the metal light kit.
- Intumet FS3003 is listed for use in Zero International's "Zero 339FS" Door Sweep, "FS820" and "FS821" Kerf Applied Edge Seal Systems, "FS 850" Dado Edge-Seal System, and in metal light kits between the labeled door and the metal light kit.

Only those products bearing the Warnock Hersey registered certification mark should be considered as being covered by ITS-Warnock Hersey Listing and Follow-up Services.

By: 

James J. Husom
General Manager



8431 Murphy Drive, Middleton, Wisconsin 53562, Tel: 608-836-4400, Fax: 608-831-9279

ENGINEERING EVALUATION

ITS REPORT #: J20020509 – 231e

CLIENT: Mr. Elias Wexler, Zero International

ADDRESS: 415 Concord Ave., Bronx, NY 10455

PHONE: 718-585-3230 FAX: 718-292-2243

DATE: July 21, 2000

REQUEST

The request is for an engineering evaluation to allow the FS3003 intumescent strips on Type "A" doors.

ENGINEERING REVIEW PROCESS

Intertek Testing Services reviewed your file and the Test Report as follows:

1. WHI-495-1212 (10/22/1992): Zero intumescent strips were mortised in the G-P Firestop frame. 4/0 x 8/0 G-P door assembly were passed per positive pressure for 90 min.
2. WHI-495-1513 (3/9/2000): Zero intumescent strips were mortised in the Weyerhaeuser mineral core door in 16G, 4/0 x 9/0 steel frame. The door assembly was passed per positive pressure for 90 min.

CONCLUSIONS

It was found that FS3003 mortised in the 90 min. approved door is eligible for Type A doors (G-P core door or Weyerhaeuser core door) per UBC Standard 7-2 (1994 and 1997), NFPA 252 (1999), and UL 10C (1998).

Max. Size of door: 4/0 x 8/0 with Firestop frame/ 4/0 x 9/0 with steel frame.

Andrew Hyun, Ph.D.
Project Manager

CC: Timm Schaeffer; Spec. file.

MATERIAL SAFETY DATA SHEET

Revised: 01/01/99

Printed: 01/07/04

For Customer: Alprokon Aluminum
Barendrecht, The Netherlands

Trade Name: INTUMET™ FS3003 SOFT PUFF™ INTUMESCENT

Company Address: INTUMET, INC.
DIV.OF ZERO INTERNATIONAL INC.
415 CONCORD AVE.
BRONX, N.Y. 10455-4801
TEL: (718) 585-3230
FAX: (718) 292-2243

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS DESCRIPTION:	C.A.S.NO.	PER CENT
Synthetic Rubber		20-40
Sodium Silicate	1344-09-08	50-70
Alumina Trihydrate	21645051-2	4-10
Plasticizer	26761-40-0	1-4
Color		<1.00
Antioxidant		<0.5

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point...	Not Established
Specific Gravity (H2O-1)...	1.6
Vapor Pressure (mm Hg) and Temp...	Not Established
Melting Point...	Not Established
Vapor Density (air - 1)...	Not Established
Evaporation Rate...	Not Established
Solubility in Water...	Not Soluble
Water Reactive...	No
Appearance and Odor	Rubber composite with slight odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

- * Flash Point: Not Established
- * Auto-Ignition Temperature: Not Established
- * Flammability Limit in Air LEL: (N/A) UEL: (N/A)
- * Extinguisher Media: Water, spray fog or steam-foam, inert gas (CO2).
- * Special Fire Fighting Procedures: Large fire, use water fog, spray of stream. Thermal Decomposition of surrounding materials may create toxic fumes. Protective fire fighting equipment is recommended.
- * Unusual Fire and Explosion Hazards: Same as above.

SECTION 4 - ACTIVITY HAZARD DATA

- * Stability: Stable
- * Conditions to Avoid: None
- * Incompatibility (Material to Avoid): As a normal precaution, strong mineral acids and/or oxidizing agents should be avoided.
- * Hazardous Polymerization: Will not occur.
- * Condition to Avoid: None
- * Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide. In small amounts Hydrogen cyanide, Ammonia, Hydrochloric acid and Phosphoric acid.

SECTION 5 - HEALTH HAZARD DATA

- * Primary Routes of Entry: Inhalation-Ingestion.
- * Carcinogen Listed In: Not listed.
- * Health Hazards: Acute: None Noted.
Chronic: None Noted.
- * Signs and Symptoms of exposure: No evidence of adverse effects from available information.
- * Medical Conditions Generally Aggravated by Exposure: No data available at this time.

EMERGENCY FIRST AID PROCEDURES: **Seek medical assistance as required.**

- ** Eye Contact: Flush with water.
- ** Skin Contact: Wash with soap and water.
- ** Inhalation: Remove to fresh air.
- ** Ingestion: As with swallowing any foreign substance, consult a physician.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES.

- * Respiratory Protection: Not required in normal use.
- * Protective Gloves: As required.
- * Eye Protection: As required.
- * Ventilation to be Used: Local exhaust.
- * Other Protective Clothing and Equipment: As required to meet local industrial standards.
- * Hygienic Work Practices: Industrial Hygiene and safety practice should be observed.

SECTION 7 - PRECAUTIONS FOR HANDLING AND USE/LEAK PROCEDURES.
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- | | |
|---------------------------|---|
| * Spill Response: | N/A. |
| * Waste Disposal Methods: | Dispose of in accordance with local, state and federal regulations. |
| * Other Precautions: | None. This product is not designated as a hazardous waste. |

***DISCLAIMER**

Although the information and recommendations given are believed correct at the date of issuance, they are provided without any warranty expressed or implied. Intumet Inc., shall in no event be responsible for damages whatsoever directly or indirectly resulting from such information and recommendations.



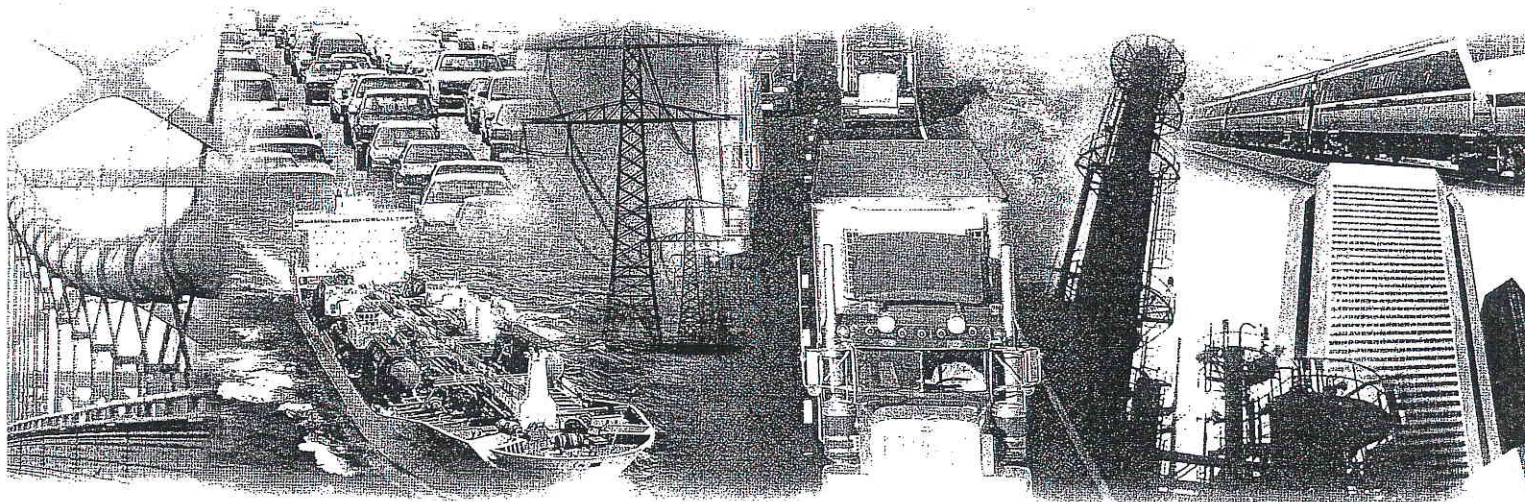
INTUMET Intumescent Materials: Versatile Technology Spanning the Spectrum of Fire Protection Needs

ZERO offers a variety of INTUMET products for specialized applications. We can also customize formulations for specific requirements, including tinting to any color for design flexibility. We are actively seeking OEM partners for cooperative research, development and testing to explore applications of mutual interest in any industry, including shipbuilding, bridge-building and train construction. We also welcome inquiries from any building team member for assistance in solving fire protection challenges using INTUMET technology.

Our capabilities include:

- Pipe wraps
- Sprays and paints
- Pipe collars
- Tubing for electrical box fire containment
- Tape
- Impregnated paper
- Cable protection
- Expansion joint seals
- Soffit protection for firestorm regions

Contact our Engineering Department for information.



NO.	TYPE	COLOR	EXPANSION PRESSURE	STABILITY AFTER EXPANSION
FS1001	Hard Puff	White	27 PSI (0.0187 N/mm ²)	Excellent
Begins to expand at 450°F (232°C), forming a very hard char that binds to glass and metal. Very little expansion (2-3 times its volume).				
FS2002	Hard Puff	Brown	27 PSI (0.0187 N/mm ²)	Very Good
Begins to expand at 350°F (176°C), forming a hard char. Relatively little expansion (6-8 times its volume).				
FS3003	Soft Puff	Black	27 PSI (0.0187 N/mm ²)	Very Good
Begins to expand at 250°F (121°C), forming a hard char. High expansion (20 times its volume).				
FS4004	Hard Puff	Silver, Gray	131 PSI (0.09 N/mm ²)	Poor
Graphite-based. Begins to expand at 550°F (288°C), forming a very soft and fluffy char. Very high expansion (80 times its volume).				

SPECIFICATIONS

Stock Sizes: Thickness: .062" (1.6), .125" (3.2), .250" (6.4)
Width: .375" (9.5), .500" (12.7), .750" (19.1)
1.00" (25.4), 1.500" (38.1), 2.00" (50.8)

All INTUMET intumescent material is available in various thickness (millimeters or inches) and in any custom color as special order.
All above material is available in red for European specification.

MATERIAL DEFINITIONS

SOFT PUFF™ Begins intumescenting at relatively low temperatures. Expands gradually with low force and forms a firm char. It has a reservoir for continued expansion.

HARD PUFF Begins intumescenting at higher temperatures. Expands with strong force. It has a high intumescent capacity, dissipating char, but no reservoir for additional expansion.

INTUMET	Very low temperature activation	Controlled high-volume expansion	Multi or controlled directional	Any size Any color	Does not sustain flame	Moisture resistant	Paintable and chemically inert	Non-carcinogenic	Long life (no deterioration)	No odor	Hard char
FS2002	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS3003	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS4004			✓	✓	✓	✓	✓	✓	✓	✓	