

FA: 01.137768

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MICROFILMED

3

CITY OF PORTLAND FACILITIES PERMIT PLAN INTAKE

APPLICANT INFORMATION

Applicant: Robertson Harrison Barnes Architects

Address: 1231 NW Hoyt #403

Phone: 503.222.3753

Plans & Permits will be available for pick up on the 5th floor at 1800 SW 4th. Please indicate who should be contacted:

Name: Carolina Forsyth

Phone # 503.222.3753

Contractor Information:

(to bid)

NAME:

CCS #:

Building:

Plumbing:

Electrical:

Mechanical:

Project Description:

Facility: PSD Smith Memorial Center

Installation Address: 1825 SW Broadway Ave.

Project Name: First, Third & Fourth FL. Remodel

Job Description:

Est. Valuation: \$600,000 Project Ref. # 187499-1

Building Permit #: 01-137768 FA

Occupancy Group: A-3-B

Const. Type: TWO FL

No. Of Stories: ONE

Flood Plain: NO

Erosion Control: NO

Alarms Req'd: YES

Sprinklers: YES

Smoke Det: YES

Special Inspection:

Bln #

Building Registration Permit #

Scan

PLAN INTAKE:

Date:

Initials:

PERMIT INFORMATION:

Mechanical Permit #: 01-137771 FA

A: Valuation: 150,000 Job Description:

Plumbing Permit #:

Number of Fixtures:

Back Flow Devices:

Water Service (# of Feet):

Other:

Electrical Permit #:

A: Feeders:

200 amps or less _____ 201 to 400 amps _____

401 to 600 amps _____ 601 to 1,000 amps _____

Over 1,000 amps or volts _____

B: Branch Circuits:

New, Alteration or Extension per Panel

Each branch circuit purchased

With a feeder:

First branch circuit without

Purchase of a feeder:

Each additional branch circuit

C: Miscellaneous:

Each pump or irrigation circle

Each sign or outline lighting

Limited energy panel alteration

Or extension; or signal circuits.

D: Plan Review:

_____ Feeders 400 amps or more

_____ System over 600 volts

_____ Occupant Load over 99 Persons

_____ Building over 3 stories

_____ Health Care Facility

_____ Building over 10,000 sq. ft.

OK
sign off
in Terry
duct patch
perfect at
floor



CITY OF
PORTLAND, OREGON
OFFICE OF PLANNING AND DEVELOPMENT REVIEW
Facility Permit Program
1900 SW Fourth Avenue, Suite 5000
Portland OR 97201
e-mail: davidsonr@ci.portland.or.us



FPP Checksheet

Application # : 01-137768-000-00-FA

Review Date : May 10, 2001

To:	Applicant	CAROLYN FORSYTH ROBERTSON MERRYMAN BARNES ASSOC 1231 HOYT ST NE PORTLAND OR	Work:	503 222-3753 ext.
			Home	503 - ext.
From:	Facilities Permit Program - Sr. Building Inspector	Jim Nicks	Phone: Fax: e-mail	503-823-3446 (503) 823-7692 nicks@ci.portland.or.us
cc:	OWNER	OREGON STATE OF (BOARD OF HIGHER EDUCATION P O BOX 751 PORTLAND, OR 97207-0751		

PROJECT INFORMATION

Address:	1825 SW BROADWAY AVE
Work:	T352/3800,000/PR#187489/1ST,3RD, & 4TH FL REMODEL

PLAN CHECK		The following assumptions were made when reviewing your project				
Occupancy group	Construction Type	Square Footage	Stories	Sprinklers	Alarms	Detection
B, A2.1, A3	IFR	EXSTG	4	Y	Y	Y
Based on the plans and specifications submitted, the following items appear to be missing or not in conformance with the Oregon Structural Specialty Code and / or other city, state, or federal requirements.						
Item #	Location on plans	Code Section	Clarification / Correction Required			
1.	Floor plans	OSSC Ch 11	Verify existing restrooms are ADA compliant on all remodeled floors. It appears that the 4th floor restroom has inadequate maneuvering space at door #20, at least one accessible urinal is required as well			
2.	Door Sch.	OSSC Ch. 7	1Hr. door rating is required for doors in the ballroom Occ Sep wall.			
3.	Hdwr. Sch.	OSSC Ch 10	Verify panic hardware at egress doors serving assembly areas.			
4.	Lighting plans	OSSC Ch 10	Rooms or areas having an occupant load of 100 or more shall have egress lighting with Aux. power. Mtg rooms 1327,328,329 appear deficient. Also, is there any egress lighting proposed for the ballroom?			
5.	Mech plans	OSSC Ch 7, FLS agreement	Duct penetrations of 1 Hr Occ Sep wall are required to be protected with fire dampers per FLS p 2, Mech Stds item 1-F			
6.	FLS plan		FLS plans should be revised to show significant changes, such as new doors at			

	Application #	01-137768-000-00-FA
	Review Date:	May 16, 2001

			the ballroom and conference room #333.
7.	M3	FLS agreement	48x16 sub duct is shown at Approx line 18-L. Does this enter a shaft? Is the floor penetration protected? Please clarify and show compliance with the FLS agreement.
8.	M2.1	FLS/appeals	Indicate existing fire dampers at 2 Hr shaft where appropriate, per appeal of 5-9-01

To respond to this checksheet, bring to 1900 SW 4th, Suite 5000, two complete sets of upgraded plans or other appropriate written documentation, with a copy of this checksheet. Documentation may be left with the 5th floor receptionist. Please mark them **Attention: Facility Permit Program**.

Provide with your submittal the attached Checksheet Response form.

If you have questions about the items on this checksheet, call the identified reviewer. To check the status of your project, call (503) 823-6521; or E-mail: davidsonr@ci.portland.or.us.

We appreciate your helping us help you.

Facilities Checksheet Response

Permit #: 01-137788-000-00-FA

Date:

Customer name and phone number: CAROLYN FORSYTH / ROBERTSON KELLYMAH GARNES
ARCHITECTS 503-222-3953

Note: Please number each change in the '#' column. Use as many lines as necessary to describe your changes. Indicate which reviewer's checksheet you are responding to and the item your change addresses. If the item is not in response to a checksheet, write customer in the last column.

#	Description of changes, revisions, additions, etc.	Cheksheet and item #
1.	ADDENDUM #3 MOVED WALL WITH DOOR 20 TO GAIN MIN. 48" CLEARANCE IN DIRECTION OF TRAVEL, + NOTE TO LOWER ONE ORIGNAL TO 17" MAX. AFF WAS ADDED.	FPP / 1
2.	ADDENDUM #2 MODIFIED THIRD FLOOR DOOR SCHEDULE TO RATE DOORS 11,12,13,14 1-HR.	FPP / 2
3.	PANIC HARDWARE VERIFIED AT DOORS 11,12,13,14 (THIRD FLOOR)	FPP / 3
4.	LIGHTING IN MEETING ROOMS 327, 328, + 329 PUT ON E-POWER - SEE ATTACHED SHEETS E3.0 + E5.0	FPP / 4
5.	FIRE DAMPERS ADDED AT BALLROOM OCCUPANCY SEPARATION - SEE ATTACHED SHEET M3.	FPP / 5
6.	FLS 8 MODIFIED TO SHOW NEW BALLROOM DOORS, NEW DOOR TO ROOM 323, + NEW VENDING TELCOM ROOM	FPP / 6

(For office use only)

7. FIRE DAMPER ADDED AT 46x16 FLOOR PENETRATION - SEE ATTACHED SHEET M3, G/LID 18-L. DAMPER ALSO ADDED AT EXISTING FIRE SUB-DUCT ON FIRST FLOOR, AT G/LID 3-H (SEE ATTACHED SHEET M2.1) FPP / 7
8. ADDENDUM #2 ADDED FIRE DAMPERS AT 2 HR SHAFT PER APPEAL OF 09 MAY 01. FPP / 8

Robertson
Merryman
Barnes
Architects, Inc.
1231 NW Hoyt #403
Portland, OR 97209

tel (503) 222-5753
fax (503) 293-6718

TRANSMITTAL

Date: 28 June 2001

To: Jim Nicks, Facilities Permit Program Senior Building Inspector
City of Portland Office of Planning and Development Review
1900 SW Fourth Avenue, Suite 5000
Portland, OR 97201

Via: Courier

From: Carolyn Forsyth

RE: PSU SMC First, Third, & Fourth Floor Remodel 2001
RMBA Project Number: 97-0718 #2

<u>Date</u>	<u>#</u>	<u>Description</u>
27 June 01	1	FPP Checksheet with Amended Responses
27 June 01	2	M2.1 First Floor, M3 Third Floor
27 June 01	2	E3.0 Third Floor, E5.0 Third Floor
27 June 01	1	Amended FLS 8

Jim,

Regarding your comments on our check sheet responses for the above project:

- RMBA to copy you when these changes are issued to Contractor for construction.
- Room 327A is indeed a shaft (floor is a metal grate), so the 2 hr. separation shown on FLS 8 is correct.
- I have amended FLS8 to show the adjusted locations of the 1 hr. occupancy separation wall, as we discussed earlier this week. It's a new line type, so it will be easy to distinguish from the 1 hr. corridor wall.

I hope this clears up the remaining issues for permitting this project. Let me know if you need anything else!

Thanks for your time -

Carolyn 

Copy: RMBA file

Facilities Checksheet Response

Permit #: 01-137768-000-00-FA

Date:

Customer name and phone number: CAROLYN FORSYTH / ROBERTSON KELLYMAN SALVES
ARCHITECTS SD3 222-3953

Note: Please number each change in the '#' column. Use as many lines as necessary to describe your changes. Indicate which reviewer's checksheet you are responding to and the item your change addresses. If the item is not in response to a checksheet, write customer in the last column.

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1.	ADDENDUM #3 MOVED WALL WITH DOOR 20 TO GAIN MIN. 48" CLEARANCE IN DIRECTION OF TRAVEL, + NOTE TO LOWER ONE ORIGINAL TO 17" MAX. AEF WAS ADDED.	FPP / 1
2.	ADDENDUM #2 MODIFIED THIRD FLOOR DOOR SCHEDULE TO RATE DOORS 11,12,13,14 1-HR.	FPP / 2
3.	PANIC HARDWARE VERIFIED AT DOORS 11,12,13,14 (THIRD FLOOR)	FPP / 3
4.	LIGHTING IN MEETING ROOMS 327,328,329 WILL BE PUT ON E-POWER - Document how provided in M&E Rm - Express lighting @ Ben Room?	
5.	ADDENDUM #2 ADDED FIRE DAMPERS AT OCCUPANCY SEPERATION WALL, THIRD FLOOR 2 Ducts line 7-H Unprotected / also at 8.5 - 1-line	FPP / 5
6.	FLS8 MODIFIED TO SHOW NEW BALLROOM DOORS, NEW DOOR TO ROOM 323, + NEW VENDING ROOM	FPP / 6

(For office use only)

7. 46x16 DUCT AT 18-L IS AN EXISTING FIRE SUB- DUCT GOING INTO AN EXISTING SHAFT, AND THEREFORE IN COMPLIANCE WITH FLS (MECH. STDS, ITEM 1.A) ~~still need~~ ^{at}
we need to fix FLS 18-L.

8. ADDENDUM #2 ADDED FIRE DAMPERS AT 2HR SHAFT PER APPEAL OF 09 MAY 01. ^{Page 3 of 3} _{mic}

FPP / 8

micro

Pro-Tec Fireproofing, Inc.
Fireproofing - Specialty Coatings

Fireproofing Thickness Schedule For PSU Smith Memorial

<u>Floor Beams UL#N816</u>	<u>2hr</u>	<u>Minimum Allowed</u>	<u>3hr</u>	<u>Minimum Allowed</u>
Beams	1"	3/4"	1-9/16"	1-5/16"

☒ NO EXCEPTION TAKEN ☐ REVISE & RESUBMIT
☐ REJECTED ☐ MAKE CORRECTIONS NOTED
 Checking is only for general compliance with Contract Documents and design concept of the project. Any action shown is subject to requirements of Drawings & Specifications. The contractor is responsible for confirmation and correlation of dimensions, fabrication and construction techniques, coordination of work with other trades, and satisfactory performance of work.
 Date: 19 JULY 01
 By: GF

Robertson, Merryman, Barnes ARCHITECT'S
 1231 NW Hoyt, #403, Portland, OR 97209 (503) 222-3753

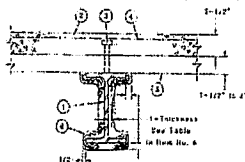
THESE DRAWINGS/PRODUCT DATA HAVE BEEN REVIEWED BY SIERRA CONSTRUCTION COMPANY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. THIS REVIEW OF ACCEPTANCE DOES NOT RELIEVE THE SUBCONTRACTOR FROM RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS.

SPEC. SECT 7
 DATE 7/17/01
 REVIEWED BY JB
 SUBMITTAL 7-100

5 NE 10th Ave Ridgefield WA 98642 (360)887-8075 (360)887-4431

752
 01-137768 DFS 01
 FA

Design No. N816
 Restrained Beam Ratings — 1, 1-1/2, 2, 3 and 4 (See Item 6)
 Unrestrained Beam Ratings — 1, 1-1/2, 2, 3 and 4 (See Item 6)



1. Steel Beam — W8X28 min size.
2. Normal Weight or Lightweight Concrete — For normal weight concrete, either carbonate or silicious aggregate may be used. Lightweight concrete, expanded shale, clay or slate aggregate by rotary - kiln method. Unit weight may range from 104 to 150 pcf. Compressive strength, 2000 psi.
3. Shear connector — (Optional) — Studs, 3/4 in. diam headed type or equivalent per AISC specifications. Welded to the top flange of beam through the steel floor units.
4. Welded Wire Fabric — 6 by 6 — W14 by W14.
5. Steel Floor and Form Units — 1-1/2 to 3 in. deep fluted units.

MARK ON PRODUCT

2000 FIRE RESISTANCE DIRECTORY

FIRE RESISTANCE DIRECTORY (BXRH)

Fire Resistance Ratings - ANSI/UL 263 (BXUV)—Continued

6. **Spray-Applied Fire Resistive Materials*** — Applied by spraying with water to the final thicknesses shown below. Crest areas shall be filled with Spray-Applied Fire Resistive Materials above the beam. Beam surfaces must be clean and free of dirt, loose scale and oil. Min average density of 13 pcf with min. ind density of 11 pcf for Types II, or DC/F. Min avg and min ind densities of 22 and 19 pcf, respectively, for Type III. For method of density determination, refer to Design Information, Section.

Rating Hr	Min Thickness in.	
	Unrestrained Beam Rating Hr	Restrained Composite Noncomposite
1	1/2	1/2
1-1/2	3/4	3/4
2	1	1 1/2
3	1-3/16	1-7/16
4	2 1/4	1-15/16

ISOLATEK INTERNATIONAL — Type D-C, E, H¹ or Type II
 Investigated for exterior use Type EBS or Type X adhesive
 sealer is optional.

*Bearing the UL Classification Marking

2000 FIRE RESISTANCE DIRECTORY

Individual measured thickness, which exceeds the thickness specified in a design by $1/4$ in. or more shall be recorded as the thickness specified in the design plus $1/4$ in. For design thicknesses 1 in. or greater, the minimum allowable individual thickness shall be the design thickness minus $1/4$ in. For design thicknesses less than 1 in., the minimum allowable individual thickness shall be the design thickness minus 25 percent.



Blaze-Shield II



Fire
Protection
Solutions



ISOLATEK

Blaze-Shield II

Product

CAFCO® BLAZE-SHIELD® II is a portland cement based spray-applied fire resistive material (SFRM) designed to provide fire resistive ratings for structural steel and concrete in commercial construction.

Applied directly to steel beams, columns and deck, or to concrete surfaces, this product's outstanding value and proven fire resistive performance make it an excellent choice for concealed commercial environments.

BLAZE-SHIELD II is applied exclusively by CAFCO licensed and trained contractors. Our technical staff works closely with building team members to meet all your fire protection needs.

Major Specifications

BLAZE-SHIELD II complies with the requirements of the following specifications:

- General Services Administration (GSA): AIA/SC/GSA: 07811
- Department of the Navy NAVFACENCOM Guide Specification NFGS 07810, Sprayed-On Fireproofing
- Veterans Administration (VA): H-08-1
- U.S. ARMY Corps of Engineers. CECS-07811
- U.S. Environmental Protection Agency (EPA): Regulation 40
- Construction Specification Canada (CSC) TEK-AID

Fire Test Performance

CAFCO BLAZE-SHIELD II has been extensively tested for fire endurance by Underwriters Laboratories, Inc. (UL) and Underwriters Laboratories of Canada (ULC) in accordance with ASTM E119 (UL 263, CAN/ULC-S101).

These tests have resulted in ratings of up to 4 hours for:

- Floor Assemblies
- Beams
- Joists
- Columns
- Roof Assemblies
- Walls and Partitions

BLAZE-SHIELD II has also been tested in accordance with ASTM E84 and CAN/ULC-S102 and has the following Surface Burning Characteristics.

Flame Spread 0
Smoke Developed 0

Code Compliances

CAFCO BLAZE-SHIELD II satisfies the requirements of the following:

- SBCCI—Southern Building Code Congress International
- ICBO—International Conference of Building Officials (Report No. 1244)
- BOCA—Building Officials and Code Administrators International
- New York City—MEA
- NBCC—National Building Code of Canada sections 2.5, 3.1.5, and 3.1.7

Physical Performance

Characteristic	ASTM Method	Standard Performance*	Tested Performance**
Density	E805	15 lb/cu ft (240 kg/m ³)	16 ± lb/cu ft (264 kg/m ³)
Combustibility	E136	Noncombustible	Noncombustible
Cohesion/Adhesion	E736	150 lb/in ² (1.2 MPa)	345 psi (19.1 MPa)
Deflection	E750	No Cracks or Deformations	No Cracks or Deformations
Udd Impact	E750	No Cracks or Deformations	No Cracks or Deformations
Compressive Strength	E751	750 lb/in ² (51.5 MPa)	1,700 lb/in ² (114.4 MPa)
Air Erosion Resistance	E659	Less than 0.025 g/in ² (0.27 g/m ²)	0.540 g/in ² (0.000 g/m ²)
Corrosion Resistance	E1937, Mil Std A10	Does Not Promote Corrosion of Steel	Does Not Promote Corrosion of Steel
Sound Absorption	E423		0.5 NRC 1/2" (13 mm) cavity, 1/4" (6 mm) surface

* Standard performance based on General Services Administration AIA/SC/GSA/07811 except for density which is based on MIL-STD-129 density requirement.

** Values represent independent laboratory tests under controlled conditions.

Blaze-Shield II

Thermal Properties

The unique formulation of CAFCO® BLAZE-SHIELD® II makes it a very effective thermal insulator. This benefit is important in reducing heat loss, particularly when applied to the underside of a roof deck. A reduction in-roof insulation may result.

Product	Conductivity (k)	Resistance (R/inch)
BLAZE-SHIELD II	0.20 BTU in/hr ft ² °F @ 75°F (0.043 W/m·K @ 24°C)	3.33

*When tested in accordance with ASTM C518

Acoustical Properties

As an efficient sound-absorbing material, BLAZE-SHIELD II adds value to the fire protection application in areas where high-noise levels are anticipated. Typical acoustical performance is as follows:

Product	Thickness	Base	NRC Rating*
BLAZE-SHIELD II	1/2 inch (13 mm)	Deck & Beam	0.75
BLAZE-SHIELD II	1 inch (25 mm)	Solid	0.75

*When tested in accordance with ASTM C423

UL*/ULC Fire Resistance Ratings

Designs

System or Component

Rating (HR)

UL

ULC

Design Details

Floor Assemblies - Protected Deck

1, 1½, 2, 3
1, 1½, 2, 3, 4
1, 1½, 2, 3
1, 1½, 2, 3, 4
1, 1½, 2, 3

D832
D858
D859
D860
D891

D832
F801, F819

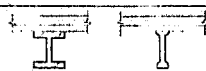


Floor Assemblies - Unprotected Deck

1, 1½, 2, 3

D902

F904



Beam or Joist Only - Floors

1, 1½, 2, 3
1, 1½, 2, 3, 4
1, 1½, 2, 3, 4
1, 1½, 2, 3
1, 1½, 2

N815
N816
N823
N826
N830

N802
Q804



Roof Assemblies - Protected Deck

1, 1½, 2
1, 1½, 2
1, 1½, 2
1, 1½, 2
1, 1½, 2, 3

P801
P814
P819
P825
P826

R805

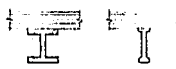


Roof Assemblies - Unprotected Deck

1, 1½, 2
1, 1½, 2

P938

P977

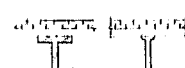


Beam or Joist Only - Roofs

1, 1½, 2, 3
1, 1½, 2
1, 1½, 2, 3, 4
1, 1½, 2

S801
S802**
S803**
S804

S805



Wide Flange Columns
Pipe and Tube Steel Columns

1, 2, 3, 4
1, 2, 3, 4
1, 1½, 2
1, 1½, 2, 3

X87a
X87b

X87c

X87d

X87e

X87f

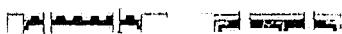
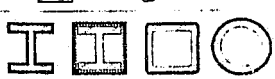
X87g

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X87i

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X87k



PART I GENERAL

2000-1545

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11/20/2016 10:30

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⁵ *ibid.* 112–113, 115–116.

- [illegible]

PART 2: PRODUCTS

- 2.1 The following statements are true. The system is a
 2.2 The system is a
 2.3 The system is a
 2.4 The system is a
 2.5 The system is a

© 1997 Blackwell Science Ltd

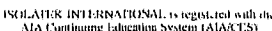
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PART 2 – EXECUTION

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1. *La grande*

- [illegible]



For Further Information

CAFCO® Technical and Sales Representatives are always available to lend assistance. Additional printed materials, including Material Safety Data Sheet, and other product literature, are available upon request. For more information about our CAFCO® line of sprayed fire protection, thermal and acoustical treatments, TFS® Firestop SprayFilm® Intumescent Coatings, CAFCO-BOARD® or for the name of the Sales Representative in your area, please contact:

In the United States: Isolatak International, Stanhope, New Jersey Tel: 800.631.9600 Fax: 973.347.9170
In Mexico & Central America: Cafco Mexico S.A. de C.V., Mexico D.F. Tel: 525.254.6683 Fax: 525.531.7826
In Andean Countries: Cafco Andina S.A., Santiago, Chile Tel: 562.206.0727 Fax: 562.263.0205
In Canada: Cafco Industries, Etobicoke (Ontario) Tel: 416.679.2830 Fax: 416.679.2933

For more detailed product information, visit our website at www.cafco.com or contact us at cafco@isolatek.com



The terms, conditions, and other matters of the agreement shall be subject to the review and approval of the Board of Directors of the Company. The Board of Directors shall have the authority to amend, modify, or terminate the agreement at any time, and the Company shall not be bound by the agreement if the Board of Directors does not approve it.



References

15. The following table shows the number of people who attended the concert in each age group.



POOR QUALITY DOCUMENT

MATERIAL SAFETY DATA SHEET (OSHA 29 CFR 1910.1200)



Effective Date: December 13, 1999
 Supersedes: January 6, 1999

Page 1 of 2

SECTION I - PRODUCT INFORMATION

1. **MANUFACTURER'S NAME AND ADDRESS:**
 United States Mineral Products Company
 dba Isolatek International/CAFCO INDUSTRIES
 41 Furness Street
 Stanhope, NJ 07874
2. **EMERGENCY TELEPHONE NUMBER:**
 973-347-1200
3. **CHEMICAL NAME AND SYNONYMS:**
 Spray-Applied Fire Resistive Materials (SFRMs)
4. **CHEMICAL FAMILY:**
 Silicates and Calcium Sulfates
5. **FORMULA:**
 Slag Wool and Inorganic Binders
6. **TRADE NAMES AND SYNONYMS:**
 CAFCO® BLAZE-SHIELD®, CAFCO BLAZE-SHIELD WHITE, CAFCO BLAZE-SHIELD CHARCOAL,
 CAFCO BLAZE-SHIELD II, CAFCO BLAZE-SHIELD II WHITE, CAFCO BLAZE-SHIELD II CHARCOAL,
 CAFCO BLAZE-SHIELD HP, CAFCO BLAZE-SHIELD HP WHITE, CAFCO BLAZE-SHIELD HP CHARCOAL.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV-TWA
Slag Wool	85997-17-3	NE	1 fiber/cc
Powdered Binders & Fillers	N/Ap	Total Dust: 15mg/m ³	10mg/m ³
Nuisance Particulates		Respirable fraction: 5mg/m ³	3mg/m ³

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

1. Boiling Point (°F): N/Ap
2. Vapor Pressure (mm Hg): N/Ap
3. Vapor Density (Air=1): N/Ap
4. Solubility in Water: Negligible
5. Specific Gravity (H₂O=1): > 1
6. Melting Point (°F): > 1800
7. Evaporation Rate: N/Ap
8. Appearance and Odor: White to charcoal, low odor.
9. Physical State: Solid

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

1. Flash Point (Method used): N/Ap
2. Flammable Limits: Noncombustible
3. Extinguishing Media: N/Ap
4. Special Fire Fighting Procedures: N/Ap
5. Unusual Fire and Explosion Hazards: None

SECTION V - REACTIVITY DATA

1. **Stability:**
 Conditions to Avoid: Stable
 Incompatibility (Materials to Avoid): Contact with strong acids
 Hazardous Decomposition Products: Strong Acids
 Hazardous Polymerization: CO, CO₂
 Conditions to Avoid: Will not occur
 N/Ap

NE = Not Established
 N/Ap = Not Applicable

**POOR QUALITY
 DOCUMENT**

SECTION VI - HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation, Skin and Eye Contact.

Acute: Slag wool and other nuisance particulates may cause transitory skin irritation (itching) and possible irritation of eyes and upper respiratory tract.

Chronic: Some studies conducted over the past 50 years seem to indicate that slag wool and fiberglass production workers, employed during 1930-1950, have a somewhat higher risk of lung cancer than the average population. These studies did not take into account smoking habits and exposure to other known carcinogens. Current research has failed to confirm those earlier findings.

Inhalation over long periods of high amounts of any dust may overload lung clearance mechanisms and may make the lungs more vulnerable to disease.

Carcinogenicity: 1 TP - NO

IARC - 2B

OSHA - NO

Medical Conditions Aggravated by Exposure: Any condition, which may be aggravated by mechanical irritants.

Emergency and First Aid Procedures:

Eye Contact:	*Flush with water.
Skin Contact:	*Wash with water. Launder clothing separate from other garments.
Inhalation:	*Remove to fresh air.

*If irritation persists, seek medical attention.

USE NORMAL PERSONAL HYGIENE AFTER CONTACT TO REMOVE ANY MATERIAL CONTAMINANTS.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

1. Steps to be taken in case material is released or spilled:
Sweep up and place in disposal containers. Avoid inhalation of dust.
2. Waste Disposal Method: Land Fill - In accordance with local, state, and federal regulations.
3. Precautions to be taken in handling and storing:
Avoid inhalation of dust during use. Avoid skin and eye contact. Use normal personal hygiene to remove material contaminants.

SECTION VIII - CONTROL MEASURES

- | | |
|--------------------------------|---|
| 1. Respiratory Protection: | Use NIOSH approved dust mask or equivalent for nuisance dust. |
| 2. Ventilation: | Sufficient to maintain dust levels below TLV. |
| 3. Protective Gloves: | Wear cloth gloves. |
| 4. Eye Protection: | Wear proper eye protection. |
| 5. Other Protective Equipment: | Wear Loose fitting long sleeve shirt and pants. |

SECTION IX - PREPARATION INFORMATION

Prepared By: Research Department, U.S.A.

Telephone: (973) 347-1200

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