

(UGAMCOAT IS A ISO 9001-2000 CERTIFIED CO. PRODUCT)

UGAM FIRE RETARDANT COATINGS

UGAM CHEMICALS are the pioneers in the fire-retardant coatings manufactures' field in India. We are manufacturing the coatings as per the desire of the surface to be coated and protected. These are based both on solvent based as well as water based coatings. These coatings can be applied both on interior and exterior surfaces. They provide good adhesion to almost all surfaces including plastic.

UGAM FIRE-RETADING COATINGS, work in the several ways include:

- Promotion of char formation. The formation of char forms the layer of carbon, thereby preventing further burning or forming a non-heat transferable curtain. This in turn also reduces chances of fire due to heat transfer or induction.
- Conversion of volatile matters to non ignitable gasses such as water vapor, carbon dioxide ,etc. thereby not allowing the combustible materials in nearby area to catch the fire. This unique tendency stops the fire to spread in surrounding areas of the substrate over which the paint is applied.
- Forming a glaze barrier at the surface.
- Forming an intumescent foam barrier at the surface.
- Free radical termination in the gaseous phase.

Application of Water based coating:

Ugam water based coatings can be applied by brush, spray or roller. They provide mat finish. They can be applied to wood, metal, plastic, wall, or any almost any kind of surface.

Directions for use:

___ Mix 3 part of paint with two parts of water.(Water addition can be increased or decreased as per application method) Apply over the surface with criss-cross application method. Allow the surface to dry for 20 minutes and apply the second coat. Allow another 20 minutes for drying of second coat and the surface is ready for use. Ugam fire-retardant paints are aesthetically appealing in colour. Topcoat can be applied with any standard colours if required.

Technical support:

We also provide the technical support for application of the coatings and do suggest the exact type for the specified substrates, specific requirement for fire retardancy and certain of fire barriers.

TECHNICAL LITERATURE

UGAMCOAT 05022007 FIRE STOP COATING

**PRECAUTION IS BETTER THAN CURE BUT THERE IS NO CURE IN CASE OF
FIRE. SO DON'T TAKE CHANCE USE UGAMCOAT 05022007**

TYPE: Water base, intumescent, fire retardant, flexible and thin coating for cables.

DESCRIPTION: Expands up to 10 times the original size when exposed to heat/fire, prevents the cable to be exposed to heat/fire. Can be used as - cable penetration product, cable coating, wood or flammable and flexible product's coating. Being halogen free and toxic gasses emission free, UGAMCOAT 05022007 is the most suitable product available in the market.

1. UGAMCOAT 05022007 passes the Test Safe's following tests.
2. Flammability testing of materials and substances, combustion.
3. Product analysis with heat, toxicity and smoke yield.
4. Explosive testing of materials, including flammable gasses, dusts, and vapours.
5. It also passes bench scale flammability test.

UGAMCOAT 05022007 passes the NFPA 703 test for fire retardant Impregnated wood and fire retardant coatings for building materials.

UGAMCOAT 05022007 passes following tests as per ASTM.-very much within the range of NFPA approval.

>Flame spread test as per ASTM E-162: 01

>Smoke generation test as per ASTM E-662: 06.

>Surface burning test as per ASTM E-84.

>Cabinet method fire retardancy test as per ASTM D-1360.

ADVANTAGES:

- Thin film coating approximately 500 microns provides reliable fire protection without causing premature ageing or overheating of cables.
- Halogen and asbestos free coating.
- Rating of electrical cables is not reduced.
- Escape routes and power supply can be used for longer time.
- Flame spread and insulation damages are delayed in case of prolonged exposure to fire.
- Minimizes smoke generation thereby permitting use in enclosed areas.
- Burning drips and burning cable fragment drops are minimized to greater extent.
- Coated surfaces will not catch fire or ignite or spread fire.
- Meets many stringent international fire standards.
- Best coating with the highest fire protection amongst the coatings of this class.
- Chemically converts nitrogen oxide and chlorine produced during burning of cables to foam and charring material thereby reducing the possibility of toxic gasses emission.
- Long lasting and can be used as outdoor/ indoor / or even at places containing high moisture.
- If coated with epoxy top coat/ varnish, life long performance can be achieved.

- Being flexible, it is very much suitable for cables. Does not crack when cables are bent. Continuous to and from movements also do not effect the performance of the coating.
- Being water base, and non toxic, it is eco-friendly.
- Can be coated by brush/ airless spray.

TECHNICAL DATA

1. COLOUR :Off white / special shades can be manufactured.
2. FINISH Mat.
3. CURING
 - Surface dry 60min
 - Hard dry 8 hrs.
 - Tack free dry 48 hrs.
4. DRYING Air drying paint.
5. APPLICATION Brush or air less spray.
6. NON VOLATILE MATTER min 70%.
7. SCRATCH HARDNESS. :No such scratch as to show the bare surface
8. FLEXIBILITY AND ADHESION AFTER 48 HOURS AIR DRYING. :No visible damage or detachment of the film
9. WATER/ACID/ALKALY/OIL : No Effect in mild applications.
10. SHELF LIFE : One Year
11. WATER IMMERSION :No effect after immersion for 360 Hours
12. RADIATION : No effect
13. EFFECT ON CABLE JACKETING MATERIAL : No Effect
14. COVERAGE : 10 – 12 Sq ft per Kg for 500 microns dft.
15. SOLVENT :water.

APPLICATION PROCEDURE

Areas should be cleaned, dried and made free from oil and dust.

Surface temperature should be greater than 20 degrees C

Stir the can properly. Observe the viscosity for brushing / airless spraying.

Add soft water if required. Apply minimum two coats or as per requirement to achieve 500 microns dry film thickness. If smooth and decorative finish is required apply UGAM EPOXY TOP COAT (suitable for intumescent coating).

No primer is required for this system if to be applied over cables. But if application is over metallic surfaces, UGAM ZINC RICH PRIMER should be applied.

PACKING AND SHELF LIFE

Packing	:20Kg buckets.
Shelf life	: Min. one year
Storage	:cool and dry place free from freezing.

TESTS AND APPROVALS

1. UGAMCOAT 05022007 passes the Test Safe`s following tests.

- A Flammability testing of materials and substances, combustion.
 - B Product analysis with heat, toxicity and smoke yield.
 - C Explosive testing of materials, including flammable gasses, dusts, and vapours.
 - D It also passes bench scale flammability test.
2. UGAMCOAT 05022007 passes the NFPA 703 test for fire retardant Impregnated wood and fire retardant coatings for building materials.
3. UGAMCOAT 05022007 passes following tests as per ASTM.-very much within the range of NFPA approval.
- >Flame spread test as per ASTM E-162: 01
 - >Smoke generation test as per ASTM E-662: 06.
 - >Surface burning test as per ASTM E-84.
 - >Cabinet method fire retardancy test as per ASTM D-1360.

TECHNICAL LITERATURE

PRODUCT	:UGAMCOAT 191202
TYPE	:Fire preventing water base clear paint
COLOUR	:Milk white when wet and clear when dry.
Consistency.	:Smooth and uniform.
Volume solids.	:35% minimum
FINISH	:Mat.
N. F. P. content	:35% minimum (by wet volume)
Fastness to light.	:To pass the test.

Weathering properties	:Excellent with anti-fungal and algae resistant characteristics	
Scratch Hardness.	:No such scratch as to show the bare surface	
Flexibility and adhesion after 48 hours air drying.	:No visible damage or detachment of the film.	
Flash point-minimum	:does not catch fire..	
CURING	:Surface dry	30min
	:Hard dry	4 hrs.
	:Tack free dry	12hrs.
DRYING	:Air drying paint.	
Keeping Properties.	:Not less than one year.	
Spread flame test-	:Passes as per ASTM E- 162.	
Smoke generation test	:Passes as per ASTM E – 662.	
Surface burning test	:Passes as per ASTM E-84.	

Manufactured by : [UGAM CHEMICALS](#).

The technical specification is correct to the best of our knowledge and under test conditions and we do not accept any liability towards misuse and contents of it. Product must be tested for specific use prior to use.

APPLICATION :Brush or spray.

USE :Suitable on any type of surface. Simply clean the surface and apply the paint on the surface. It can be tinted by universal stainer. Once exposed to fire, the surface should be repainted.

HOW IT WORKS -----

First it resists the fire with the help of special fire resistant chemicals. Then it releases water molecules after prolonged exposure to fire. Simultaneously it releases small amount of gasses to block the Oxygen in surrounding area. It also forms charred layer to prevent the area from receiving oxygen and stopping the spread of flame. Hence due to lack of oxygen, presence of water and prevention of spread of flame, the fire does not spread and gets retarded.

PACKING

20 ltr. Drums.

APPLICATION METHODOLOGY : Wooden grains should be first filled with water base fillers of the same colour as wood or required colour. After drying the surface should be sanded down lightly. First coat of UGAM 191202 should be applied by brush or spray. First coat should be allowed to dry for minimum two hours till little hard dry. Second coat of UGAM191202 should be applied on the top and allowed to hard and tack free dry. Now the wooden surface is ready for prevention of fire.

Manufactured by : UGAM CHEMICALS.

The technical specification is correct to the best of our knowledge and under test conditions and we do not accept any liability towards misuse and contents of it. Product must be tested for specific use prior to use.

TECHNICAL BROUCHER

PRODUCT-UGAMCOAT 191202.

TYPE- FIRE RESISTANT PAINT.

DETAILS OF TESTS PASSED.

A. UGAMCOAT 191202 passes the Test Safe`s following tests.

1. Explosion and fire resistance test on full scale on building structures.
2. Flammability testing of materials and substances, combustion.
3. Product analysis with heat, toxicity and smoke yield.
4. Explosibility testing of materials, including flammable gasses, dusts, and vapours.
5. It also passes bench scale flammability test.

B. UGAMCOAT 191202 passes the NFPA 703 test for fire retardant Impregnated wood and fire resistant coatings for building materials.

C. UGAMCOAT 191202 passes following tests as per ASTM.-very much within the range of NFPA approval.

1. Flame spread test as per ASTM E-162: 01
2. Smoke generation test as per ASTM E-662: 06.
3. Surface burning test as per ASTM E-84.
4. Cabinet method fire retardancy test as per ASTM D-1360.

Brief Description of Various Fire Tests

ASTM-E-84 - SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS, (NFPA-255)

Steiner Tunnel Test, more commonly referred to as Underwriters Laboratory Tunnel Test. Test samples used are 20 inches wide by 25 feet long. This test determines the FLAME SPREAD, FUEL CONTRIBUTED, and SMOKE DEVELOPED of building materials when compared to Asbestos Cement Board (rated as 0, 0, 0), and uncoated Red Oak (rated as 100, 100, 100). This test is used for testing fire retardant paints and varnishes, to establish their effectiveness when applied to various building materials. Fire resistant coatings tested by this method are nationally accepted for reducing the flame spread and smoke developed of building materials, bringing them into compliance with building and fire codes.

TECHNICAL LITERATURE.

1. NAME OF PRODUCT : **UGAMCOAT 07022007**
2. TYPE : **Fire retardant water base intumescent coating paint; Anti Halogen and asbestos free for walls.**
3. COLOUR : **Off white / special shades can be manufactured.**
4. FINISH : **Mat.**
5. CURING

Surface dry	60min
Hard dry	8 hrs.
Tack free dry	48 hrs.

- | | |
|--|--|
| 6. DRYING | Air drying paint. |
| 7. APPLICATION | Brush or air less spray. |
| 8. NON VOLATILE MATTER | min 55%. |
| 9. SCRATCH HARDNESS. | :No such scratch as to show the bare surface |
| 10 FLEXIBILITY AND ADHESION AFTER 48 HOURS AIR DRYING. | :No visible damage or detachment of the film |
| 11 WATER/ACID/ALKALY/OIL | : No Effect in mild applications. |
| 12 SHELF LIFE | : One Year |
| 13 WATER IMMERSION : | No effect after immersion for 360 Hours |
| 14 RATING | : 120 MINUTES OF WALL. |
| 15 COVERING | : 15 SFT FOR ONE HOUR RATING. AND 6 TO 7 SFT FOR TWO HOURS RATING |
| 16 USE | Suitable on any type of surface. Simply clean the surface and apply the paint on the surface. It can be tinted by universal stainers. Once exposed to fire, the surface should be repainted. |

17. HOW IT WORKS ----- It forms foam when temperature reaches 200 degrees Celsius. This foam is heat and fire resistant and almost non conductive. This keeps the surface away from heat and hence does not allow the surface to receive or conduct the heat in other areas. Also since this forms foam and a charred layer, it does not allow oxygen to reach to the surface over which it is applied. Hence it protects the surface from catching fire.

18. [UGAMCOAT 07022007](#) passes the Test Safe`s following tests.

A Flammability testing of materials and substances, combustion.

B Product analysis with heat, toxicity and smoke yield.

C Explosive testing of materials, including flammable gasses, dusts, and vapours.

D It also passes bench scale flammability test.

19. **UGAMCOAT 07022007** passes the NFPA 703 test for fire retardant Impregnated wood and fire retardant coatings for building materials.
20. **UGAMCOAT 07022007** passes following tests as per ASTM.-very much within the range of NFPA approval.
 - >Flame spread test as per ASTM E-162: 01
 - >Smoke generation test as per ASTM E-662: 06.
 - >Surface burning test as per ASTM E-84.
 - >Cabinet method fire retardancy test as per ASTM D-1360.
21. FIRE RATING: Two hours for walls (coating d f t 600microns min.)

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TECHNICAL LITERATURE.

6. NAME OF PRODUCT : **UGAMCOAT 06022007**
7. TYPE : **Fire retardant water base intumescent coating paint for wood: Anti Halogen and asbestos free**
8. COLOUR :Off white / special shades can be manufactured.
9. FINISH :Mat.
10. CURING

Surface dry	60min
Hard dry	8 hrs.
Tack free dry	48 hrs.
6. DRYING : Air drying paint.
7. APPLICATION : Brush or air less spray.
8. NON VOLATILE MATTER : min 55%.
9. SCRATCH HARDNESS. :No such scratch as to show the bare surface
10. FLEXIBILITY AND ADHESION AFTER 48 HOURS AIR DRYING. :No visible damage or detachment of the film
11. WATER/ACID/ALKALY/OIL : No Effect in mild applications.
12. SHELF LIFE : One Year

- 13 WATER IMMERSION : No effect after immersion for 360 Hours
14. RADIATION : NO EFFECT.
- 15 FIRE RATING :60 minutes at 500 microns thickness.
120 minutes at 1 mm thickness.
- 16 USE Suitable on any type of surface. Specially recommended for wooden surfaces, cables, paper surfaces, clothes etc. Simply clean the surface and apply the paint on the surface. It can be tinted by universal stainers. Once exposed to fire, the surface should be repainted.
17. HOW IT WORKS ----- It forms foam when temperature reaches 200 degrees Celsius. This foam is heat and fire resistant and almost non conductive. This keeps the surface away from heat and hence does not allow the surface to receive or conduct the heat in other areas. Also since this forms foam and a charred layer, it does not allow oxygen to reach to the surface over which it is applied. Hence it protects the surface from catching fire.
- 18. UGAMCOAT 06022007 passes the Test Safe`s following tests.**
- A Flammability testing of materials and substances, combustion.
 - B Product analysis with heat, toxicity and smoke yield.
 - C Explosive testing of materials, including flammable gasses, dusts, and vapours.
 - D It also passes bench scale flammability test.
21. UGAMCOAT 06022007 passes the NFPA 703 test for fire retardant Impregnated wood and fire retardant coatings for building materials.
22. UGAMCOAT 06022007 passes following tests as per ASTM.-very much within the range of NFPA approval.
- >Flame spread test as per ASTM E-162: 01
 - >Smoke generation test as per ASTM E-662: 06.
 - >Surface burning test as per ASTM E-84.
 - >Cabinet method fire retardancy test as per ASTM D-1360.
21. FIRE RATING: Two hours for wood (coating d f t 1000microns min.)
23. COVERING: 20 Sq. ft per liter for one hr rating and 10 Sq. ft. per liter for

two hours rating.

Manufactured by **UGAM CHEMICALS, PUNE - ISO 9001:2000 COMPANY**

Specifications are provided as guidelines and no liability can be accepted on misuse. You are advised to test sample for your use.

TECHNICAL LITERATURE

PRODUCT	UGAMCOAT 141098 EPOXY for STEEL	
TYPE	Fire retardant epoxy base paint (INTUMESCENT)	
COLOUR	Off white	
FINISH	Mat.	
CURING	After mixing base with hardener as per ratio given.	
	Surface dry	120min
	Hard dry	4 hrs.
	Tack free dry	24hrs.
DRYING	Chemical curing	
APPLICATION	Brush or spray.	
RATING	Two hours on steel	
NON VOLATILE MATTER	min 55%.	
COVERING	5 Sft for 2 hr ratings, 1.5 mm thick. 12 sft for 1 hr rating, 750 microns thick.	
SCRATCH HARDNESS.	:No such scratch as to show the bare surface	
FLEXIBILITY AND ADHESION AFTER 48 HOURS AIR DRYING.	:No visible damage or detachment of the film	

USE

Suitable on any type of surface. Simply clean the surface and apply UGAM FIRE RETARDANT EPOXY PRIMER to the surface after mixing base with hardener in given proportion. Then apply UGAMCOAT 141098 EPOXY to the thickness specified after adding the hardener in required ratio suggested. In humid conditions, it required UGAM P U – F R TOP COAT of required shade to be applied over. Once exposed to fire, the surface should be repainted.

HOW IT WORKS -----

It releases water molecules once exposed to fire. It also forms charred layer to prevent the area from receiving oxygen and stopping the spread of flame. It also releases some gasses, which prevent the oxygen from reaching nearest surrounding. Finally when the temperature crosses 200 degrees Celsius, it forms foam and protects the structural steel from getting heat for conduction and convection. Due to the heat blockage, the steel does not melt and also does not pass heat to other areas. This also blocks Oxygen to surrounding area. Hence due to lack of oxygen, presence of water and prevention of spread of flame, the fire does not spread and gets retarded.

TECHNICAL BROUCHER

PRODUCT-UGAMCOAT 141098.

TYPE- FIRE RETARDANT PAINT.

DETAILS OF TESTS PASSED.

A. UGAMCOAT 141098 passes the Test Safe`s following tests.

1. Flammability testing of materials and substances, combustion.
2. Product analysis with heat, toxicity and smoke yield.
3. Explosibility testing of materials, including flammable gasses, dusts, and vapours.
4. It also passes bench scale flammability test.

B. **UGAMCOAT 141098 passes the NFPA 703 test** for fire retardant Impregnated wood and fire retardant coatings for building materials.

C. **UGAMCOAT 141098 passes following tests as per ASTM.**-verymuch within the range of NFPA approval.

1. Flame spread test as per ASTM E-162: 01
2. Smoke generation test as per ASTM E-662: 06.
3. Surface burning test as per ASTM E-84.
4. Cabinet method fire retardancy test as per ASTM D-1360.

ASTM-E-84 - SURFACE BURNING CHARACTERISTICS OF BUILDING

MATERIALS, (NFPA-255)

Steiner Tunnel Test, more commonly referred to as Underwriters Laboratory Tunnel Test. Test samples used are 20 inches wide by 25 feet long. This test determines the FLAME SPREAD, FUEL CONTRIBUTED, and SMOKE DEVELOPED of building materials when compared to Asbestos Cement Board (rated as 0, 0, 0), and uncoated Red Oak (rated as 100, 100, 100). This test is used for testing fire retardant paints and varnishes, to establish their effectiveness when applied to various building materials. Fire retardant coatings tested by this method are nationally accepted for reducing the flame spread and smoke developed of building materials, bringing them into compliance with building and fire codes.

ASTM-E-119 - FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS (NFPA-251)

"FURNACE TEST" Test samples, various sizes used. Test used to determine time ratings. These methods are applicable to assemblies of masonry units and to composite assemblies of structural materials of buildings, including bearing or other walls and partitions, columns, girders, beams, slabs and composite slabs, and beam assemblies for floors and roofs. They are also applicable to other assemblies and structural units that constitute permanent integral parts of a finished building. Test results are expressed in hourly ratings.

**ASTM-E-162 - SURFACE FLAMMABILITY OF MATERIALS USING
A
RADIANT HEAT ENERGY SOURCE**

Measures and compares the surface flammability of materials when exposed to a prescribed level of radiant heat energy. Test sample size 6 inches x 18 inches. This test is required by the Department of Transportation on various materials utilized in construction, and interior finishing of mass transportation vehicles. It is also used in research and development work. Test results are expressed numerically, similar to ASTM-E-84.

However, no correlation exists between the results obtained in these tests.

**ASTM-D-1360 - FIRE RETARDANCY OF PAINTS (CABINET
METHOD)**

This method determines quantitatively the fire retardant properties of a coating or coating system upon a wood surface. This test is required in various federal specifications for determining the fire retardancy and relative resistance of fire retardant coatings to leaching (loss of fire retardancy), due to water or moisture exposure. Test sample size 6 inches x 12 inches. Test results are expressed in terms of weight loss and char volume.

TECHNICAL LITERATURE

PRODUCT	UGAM P U - F R TOPCOAT.
TYPE	Fire retardant solvent base polyurethane top coat.
SCOPE	Active type non-intumescent fire retardant top coat. This is applied over UGAMCOAT141098 intumescent solvent base coating. Comes in two pack system and in any desired shade. Top coat is must in humid conditions and to prevent losses of fire retardant properties of intumescent coatings. It is not ordinary polyurethane coating but is also active type fire retardant. This comes in contact with fire first and

starts releasing carbon dioxide and water molecules to block small fires. But when temperature crosses 200 degrees C, intumescent coating comes in to action and forms foam. It is halogen free too.

COLOUR	Any desired shade. Minimum qty. 40 L
FINISH	Semi glossy.
CURING	Surface dry 3 hours To recoat 8 hrs. Tack free dry 24hrs.
DRYING	Two component chemical drying
APPLICATION	Brush or spray.
NON VOLATILE MATTER	min 65%.
COVERING	9.5 to 10.00 square meters per coat.
SCRATCH HARDNESS.	:No such scratch as to show the bare surface
FLEXIBILITY AND ADHESION AFTER 48 HOURS AIR DRYING.	:No visible damage or detachment of the film
USE	<i>Suitable as top coat for intumescent coatings only. Should not be used as sole fire retardant coat without UGAMCOAT141098. This can be brushed, sprayed or dip coated as per requirement. Our technical team will guide you on it's exact use in case of any doubts. Once exposed to fire, the surface should be repainted.</i>
RECOMMENDED BASE	UGAMCOAT141098.- EPOXY
RECOMMENDED BASE	UGAMCOAT141098.- EPOXY
SHELF LIFE	One year
PACKING	15 ltr Base + 5 Ltr Hardener..

TECHNICAL LITERATURE.

1. NAME OF PRODUCT : UGAM FIRE BLOCK 09022007
2. TYPE : Fire retardant powder compound **to be used as cement mortar.**
3. COLOUR : grayish red colour .
4. FIRE RATING : more than four hours. For thickness more than 135mm.
5. CURING
 - Set up time : four hours
 - Complete cure : four weeks
6. DRYING : cement type mortar
7. APPLICATION : with trowel as mortar
8. NON VOLATILE MATTER : 100 percent (powder)
9. APPLICATION TEMPERATURE : above 4 C
10. MIXING : mix only water to form fire resistant mortar.
11. WATER/ACID/ALKALY/OIL : No Effect in mild applications.
12. SHELF LIFE : One Year
13. WATER IMMERSION : No effect after immersion for 360 Hours
14. RADIATION : No effect
15. EFFECT ON CABLE JACKETING MATERIAL : No Effect
16. USE : Suitable on any type of surface. Simply clean the surface and fill the mortar prepared in the ratio 1:4 water to UGAM FIRE BLOCK in the opening to prepare fire seal to the area.
17. HOW IT WORKS ----- : it is fire resistant compound. This prevents fire to enter in the openings and thereby reduces the risk of fire spread. This does not allow the fire to penetrate for four hours and gives ample time for escape or also gives ample time for fire fighting. When cable

is surrounded with UGAMCOAT 05022007 followed by UGAM FIRE BLOCK 09022007 the system itself becomes fire fighter and blocks any type of serious fire through cable bursting.

18. UGAM FIRE BLOCK 09022007 passes the Test Safe`s following tests.

- A Flammability testing of construction materials and substances, combustion.
- B Product analysis with heat, toxicity and smoke yield.
- C Explosibility testing of materials, including flammable gasses, dusts, and vapours.
- D It also passes bench scale flammability test.

19. UGAM FIRE BLOCK 09022007 passes the NFPA 703 test for fire retardant Impregnated wood, cables and flammable materials and fire retardant coatings for building materials.

20 UGAM FIRE BLOCK 09022007 passes following tests as per ASTM.-very much within the range of NFPA approval.

- a. Flame test for building construction and materials as per ASTM E-119
- b. Smoke generation test as per ASTM E-662: 06.
- c. Test for stop fire penetration test as per ASTM E-814.
- d. Cabinet method fire retardancy test as per ASTM D-1360.

21. PACKING 25Kg bags.

22. Limitations Should not be used as pedestrian crossing material or for load carrying surface. Should be used as filling material and safety plates should be kept to cover area from abrasion.

As our product is much more advanced than your requirements we strongly recommend this for use. Since I S specifications are of old standards and not updated as per current stringent standards, we do follow A S T M standards in these regards.

(Manufactured by [UGAM CHEMICALS, PUNE. ISO 9001:2000 COMPANY](#)
Specifications are provided as guidelines and no liability can be accepted on misuse. You are advised to test sample for your use.)

