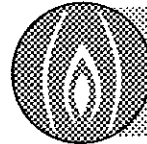

**ENVIROGRAF®**


# CHRISTMAS TREES CAN BURN!

In 1994, two Christmas trees caught fire in an Antwerp hotel and killed three people and critically injured 37. Tests carried out by government test houses proved that a 1.49m high noble fir from ignition at 40 seconds reached 1117kW (i.e. equal to 1117 single-bar electric fires!) lasted 85 seconds, with a peak temperature of 760°C.

## THIS NEED NOT HAPPEN

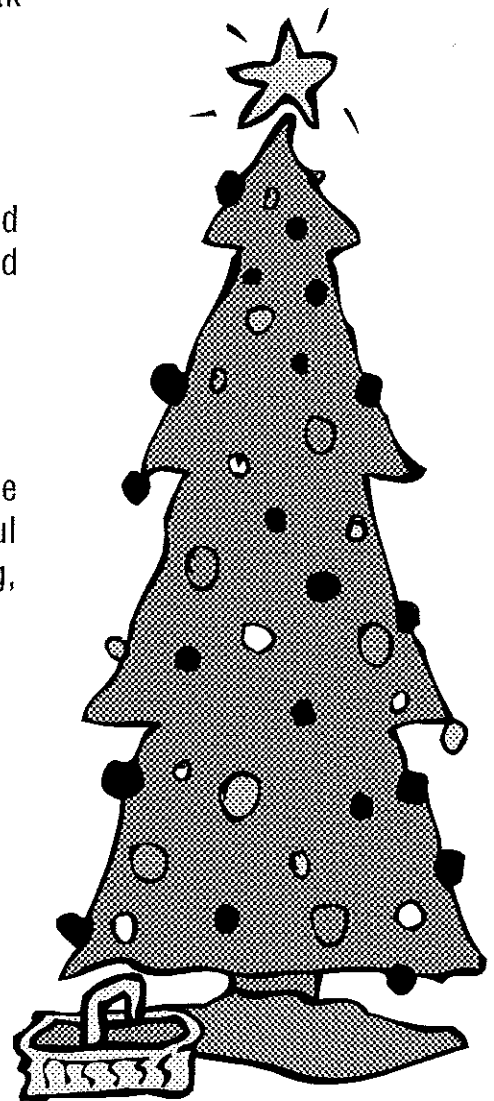
Spray Envirograf® 3-2-1 clear liquid onto the tree and decorations. Place the trunk of the tree in sand or soil and feed once a day with water.

## TREATED TREES WILL NOT BURN

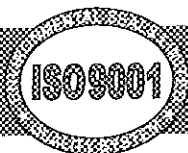
Envirograf® 3-2-1 has also been tested on polyurethane foam and all types of cloth materials. 3-2-1 has no harmful effect on children as it has been tested on bedding, nightwear, and toys for children.

## WHY SPOIL CHRISTMAS WITHOUT A TREE?

**JUST SPRAY WITH  
ENVIROGRAF® 3-2-1  
FOR SAFETY**

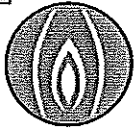


PROTECTING PROPERTY  
PROTECTING LIVES



Environmental Seals Ltd, Envirograf House, Barrestone, Dover, Kent, CT15 7JG, United Kingdom

Phone: +44 (0) 1 304 842 555 – Fax: +44 (0) 1304 842 666 – Email: sales@envirograf.com – URL: www.envirograf.com



# Envirograf®



## IDENTIFICATION, DESCRIPTION

Environmental Seals Limited have developed a range of liquid fire retardant solutions to treat a wide range of flammable materials that are often the initial items that ignite in major fires. The 3-2-1 range is suitable for many common types of materials, upholstery, bedding, mattresses, curtains, carpets, etc.

There are three types available:

3-2-1 - For standard covering

3-2-1 Special - For artificial plants etc.

3-2-1 Washable - For standard coverings which require washing.

## ADVANTAGES

- Can prevent the spread of flame on many types of popular materials
- Can help landlords/letting agents/Hoteliers etc meet new Regulations\*
- Environmentally friendly

\* This must first be authorised by your local Trading Standards Office.

## REQUIREMENTS

### STANDARDS AND APPROVALS

The 3-2-1 range has been extensively tested on many types of fabrics

### COMPATIBILITY

The Envirograf 3-2-1 range is compatible with many types of materials - a colour fast test should be followed to ensure the dye is not affected.

## HEALTH & SAFETY

**EYE CONTACT** - Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, seek medical advice.

It is advisable to wear gloves when using 3-2-1.

**SKIN CONTACT** - Wash skin thoroughly with soap and water or use proprietary skin cleaner.

**INGESTION** - If accidentally swallowed drink plenty of cold water and if necessary seek medical attention.

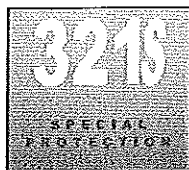
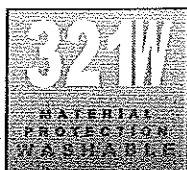
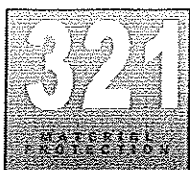
**KEEP AWAY** from children.

3-2-1 has been tested for Antimony content and was found to be safe.

## TECHNICAL DESCRIPTION

### COMPOSITION

Envirograf 3-2-1 comprises ammonium polyphosphate base and inorganic halide.



## Fire Retarding liquids

### Product 66/67

### Data Sheet

Products for the painter, decorator and interior designer

Products for the carpenter, joiner and general builder

Products for the electrician and plumber

Products for the construction worker and general builder

## PERFORMANCE

### FIRE

The 3-2-1 range has been successfully tested on a wide range of fabrics, mattresses, carpets and upholstery according to the relevant British Standards. Successful aging and wearing tests have been done at the Shirley Institute as well as a variety of washing tests.

*Test Reports are available on request.*

### EXEMPTIONS

100% nylon and Polypropylene are not suitable for treatment of 3-2-1.

### LIQUID

If the item to be treated requires regular washing then 3-2-1 Washable should be used. After 6 washes retreat-treatment is necessary.

### ENVIRONMENTAL /BIOLOGICAL

Envirograf products are resistant to fungi, insect attack, bacterial action, and are not susceptible to rodents and other vermin.

### MAINTENANCE, REPAIR, REPLACEMENT, DISPOSAL

When required the treated material can be simply disposed of - no special conditions of disposal are necessary.

### LABOUR

It is advisable that instruction is taken from your nearest Envirograf distributor for the application of these systems. It is important that the manufacturer's instructions are followed. For licensed premises, let accommodation and hotels application must be carried out by an approved applicator who will give certification on completion.

### SUPPLY

Required quantities are supplied to order.

### QUANTITIES AND ORDERING REFERENCES

Supplied in 0.5 litre spray bottles or 1 and 2 litre bottles.

2.5 and 3.5 litre packs are also available which include 2.5, 5 or 25 litre spray bottles.

3-2-1

3-2-1/W - Washable

3-2-1/S - Special

### PACKAGING

The Envirograf 3-2-1 system is supplied in appropriately labelled containers.

### QUALITY MANAGEMENT

Environmental Seals Ltd operates a Quality Management System according to the relevant British Standards.

### COMPANY INFORMATION

ENVIRONMENTAL SEALS LTD.,

ENVIROGRAF HOUSE, BARFRESTON, NR. DOVER, KENT, CT15 7JG.

TEL.01304 842555 FAX: 01304 842666

### DISCLAIMER

The 3-2-1 range has been successfully tested on a wide selection of commonly available fabrics, carpets etc. It cannot however be guaranteed to raise the performance of all materials to the required standard - additional testing can be carried out if appropriate.



# Envirograf®

## Fire Prevention Products

Product 66/67

### Technical Data Sheet

#### 3-2-1 Application Instructions

1. Firstly, spray a small sample of the material to ensure colour fast.
2. FURNITURE: Spray all the areas which have foam underneath the material, so the material is absorbing the 3-2-1 liquid.
3. Place the chair or settee in its back and spray all underside material.
4. Place furniture upright, spray the back, sides and front of the furniture, ensuring that the material is wet and soaked in 3-2-1 liquid.
5. Should seat cushions be removable, spray all material under seat cushions, ensuring that you get 3-2-1 down the gaps.
6. Should seat cushions have a zip fastener, then unzip and spray 3-2-1 over the internal sponge material and all over the outer material ensuring by pressing in with fingers that the sponge polyurethane absorbs 3-2-1.
7. Re-spray areas such as backs and arms of chairs which have sponge foam underneath the material, and using fingers, pad or cloth press 3-2-1 through the material into the sponge. This procedure should also be carried out on the cushions that cannot be unzipped. Ensure that these sponge areas are well soaked. (Note: if material is 60% polyester, do ensure that the foam areas are very well soaked). See footnote for leather and rexine covered furniture.
8. CURTAINS: If single material and not lined curtains, spray while hanging until material is moist. Spraying only needs to be carried out on one side. For lined curtains then both sides of the curtains must be sprayed.
9. CARPETS: Carpets can be sprayed while laid, if foam backed, then with cloth or pad press into the carpet as you spray, to ensure that 3-2-1 is absorbed into the backing.
10. BEDDING MATTRESSES: If it is not possible, take off the over cover on the mattress, then spray into foam, pressing 3-2-1 into the foam material with a cloth pad, ensuring that the foam absorbs all the 3-2-1 thoroughly, then spray cover until completely wet. Should the cover not be removable then spray over cover, pressing 3-2-1 into the foam until you feel it is totally absorbed.
11. SHEETS, BLANKETS, COVERS ETC: These can be sprayed with 3-2-1W and washed approximately five times then re-treat by either re-spraying or dipping into 3-2-1. Wring out into a bowl and replace residue into bottle for when re-treatment is necessary.

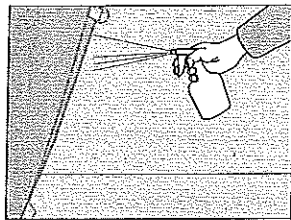
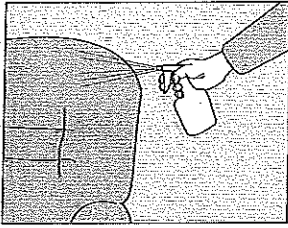
**FOOTNOTE: LEATHER AND REXINE FURNITURE:** With this type of covered furniture, the only way to treat the foam is to tip the chair on its back, take off the underneath material and spray 3-2-1 up inside the foam. With your fingers ensure that the 3-2-1 is getting thoroughly absorbed into the foam. For added safety in your kitchen, soak a tea towel in 3-2-1 and leave near the cooking area, so that if you have a pan fire, the tea towel can be placed over to help put out the fire.

Guide to amount of 3-2-1 required for curtains, bed covering etc, 6-10 square yards per litre.

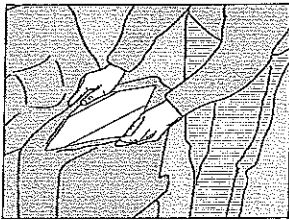
Foam filled furniture, approximately 5-7 square yards per litre, according to the amount of polyurethane foam.

## APPLICATION FOR 3-2-1 AND 3-2-1 WASHABLE

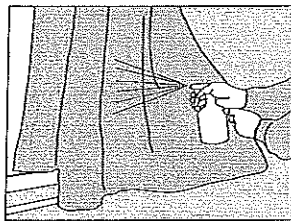
**NB:** Before applying to the whole items, spray a small sample of the material where it will not be noticed to ensure colour fastness.



Place the chair or settee on its back and spray all underside materials.

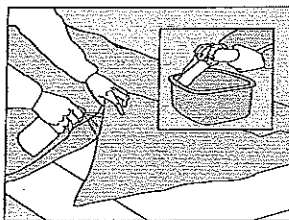


Remove seat cushions from their coverings. If the cushion is not removable spray pressing the liquid into the cushion to ensure absorption.



### Curtains

For single, non lined curtains spray on one side whilst hanging until the material is moist. Lined curtains spray both sides.



### Sheets, Blankets and Covers

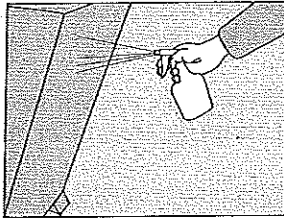
These can be sprayed with 3-2-1W and washed 4 times then re-treat either by respraying or dipping in the 3-2-1W. Wring out into a bowl and replace the residue into the bottle.

### LABOUR

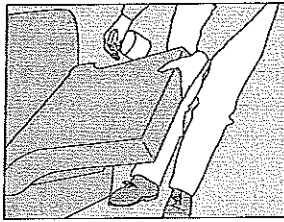
It is advisable that instruction is taken from your nearest Envirograf® Regional Office for the application of these systems. It is important that the manufacturer's instructions are followed. For licensed premises, let accommodation and hotels application must be carried out by an approved applicator who will give certification on completion.

### Furniture

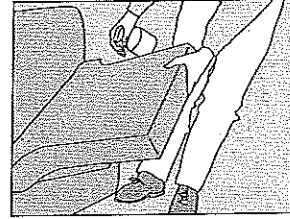
Spray all areas which have foam underneath the material so that the material fully absorbs the 3-2-1/W.



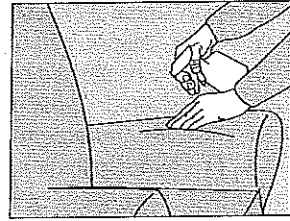
Place the furniture upright, spray the back, front and sides ensuring that the material is wet and has soaked in the 321/W.



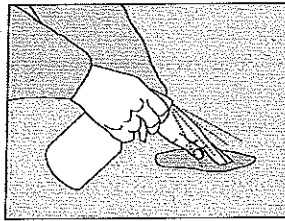
Spray 321 on all sides of the foam cushion. Ensure that the foam absorbs the liquid by pressing the sponge with your fingers.



If the seat cushions are removable spray all the material under the seat, ensure that the 321/W is applied down the sides.

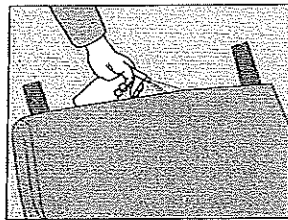


Spray backs, arms and all other areas where foam is underneath material. Ensure that the foam absorbs the liquid by pressing the sponge with your fingers.



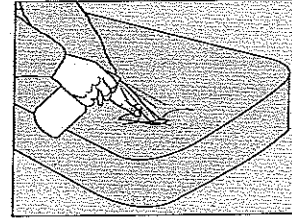
### Carpets

Spray the carpet while laid. If the carpet is foam backed use cloth pad to press 321W thoroughly into the carpet ensuring full absorption.



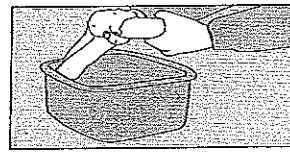
### Leather and Rexine Furniture

To treat the foam tip the chair or settee on its back, take off the under material. Spray and press the liquid into the foam ensuring full absorption.



### Mattresses

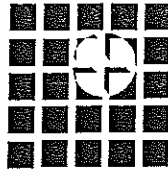
If possible take off the cover. Spray on the 321W pressing the liquid into the foam with a cloth pad, ensuring full absorption. spray the cover completely until wet. If the cover is not removable then follow the above procedure with the cover on.



### Kitchen safety

Soak a tea towel in 321 and leave near the cooking area and if necessary use as a fire blanket for pan fires.

**CONFIDENTIAL  
TEST REPORT**



**WIRA  
TESTING CENTRE**

**BTTG**

**Date:** 08 October 1996

Page 1 of 5

**Our Ref :** 27941/9/96

**Your Ref :**

**Client:** Environmental Seals Limited  
Envirograf House  
Barfreston  
Kent  
CT15 7JG

**Job Title:** Fire Tests on Fabric

**Client's order no:**

**Date of receipt:** 19.9.96.

**Description of sample(s):** One sample of fabric labelled 100% Cotton,  
treated with Envirograf 321W

**Work requested:** BS 5852 Part 1

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TEST REPORT**

**WIRA  
TESTING CENTRE**

**Date:** 08 October 1996

Page 2 of 5

**Our Ref :** 27941/9/96

**Your Ref :**

**Environmental Seals Limited  
Barfreston**

**STATUTORY INSTRUMENT NO.1324 CONSUMER PROTECTION  
THE FURNITURE AND FURNISHINGS (FIRE) (SAFETY) REGULATIONS 1988  
(SI No 2358 Amendment 1989)**

**Date of Test :** 4.10.96.

**Conditioning**

Immediately prior to testing the sample was placed in indoor ambient conditions for 72 hours and then conditioned in the standard atmosphere for conditioning textiles (BS 1051:1981) of  $65 \pm 2\%$  r.h. and  $20 \pm 2^\circ\text{C}$ .

The sample was tested in a room of volume  $25\text{m}^3$  and  $23^\circ\text{C}$ .

**Procedure**

The sample was tested in accordance with Schedule 4 Part I and Schedule 5 Part I of the above regulations.

The specimens were mounted over fillings of standard non FR polyurethane foam of density about  $22\text{ kg/gm}^3$ .

Tests were made in accordance with BS 5852 part 1 using ignition sources 0 and 1.

**Requirements**

Ignition Source 0

No progressive smouldering or flaming within one hour of the placement of the cigarette.

Ignition Source 1

All progressive smouldering and flaming to cease within 120sec of removal of the burner tube.



Date: 08 October 1996

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Our Ref : 27941/9/96

Your Ref :

**Environmental Seals Limited  
Barfreston**

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

<u>Ignition Source</u>	<u>Pass/Fail</u>
0	Pass
0	Pass
1	Fail
1	Pass

**Comments**

The specimens were tested after a water soaking procedure specified in clauses 4.2 to 4.5 of BS 5651, save that for the second sub clause of clause 4.5 there shall be substituted the following:-

"After 30 minutes, remove the specimen, rinse in water using a liquor ratio of 1:20 for 2 minutes, and then dry the specimen by any method suitable for the fabric type".

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TEST REPORT**

**WIRA  
TESTING CENTRE**

**Date:** 08 October 1996

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**Our Ref :** 27941/9/96

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**Environmental Seals Limited  
Barfreston**

During testing the following was noted:-

	<u>Source 0</u>		<u>Source 1</u>	
Time of ignition(s)	0	0	4	6
Time of extinction(s)	0	0	>120	22
Time of cover split(s)	Did not split		100	Did not split
Melting (yes or no)	No	No	No	No
Dripping (yes or no)	No	No	No	No
Charring (yes or no)	Yes	Yes	Yes	Yes
Other phenomena	-	-	-	-



**BTTG**

This report is incomplete without all pages specified above together with the inner front cover which contains information relevant to this report. © BTTG 1996



**CONFIDENTIAL  
TEST REPORT**

**WIRA  
TESTING CENTRE**

**Date:** 08 October 1996

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**Our Ref:** 27941/9/96

**Your Ref:**

**Environmental Seals Limited  
Barfreston**

**Comments**

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

The Source 1 tests were assessed in accordance with the NAMAS Technical Policy Statement 14.

The information contained on page no's 1/5 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by Wira Testing Services on the materials referred to.

Signed.....  ..... Date 8.10.96.....

C T Johnson  
Head of Fire Testing

CTJ/AM  
7564.rep

Enquiries concerning the technical content of this report should be addressed to the Head of the reporting laboratory named above.

Terms and conditions applying to the operations of Wira Testing Centre are printed on the back of the cover page of this report

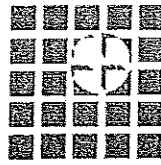


This report is incomplete without all pages specified above together with the inner front cover which contains information relevant to this report. © BTTG 1996



**BTTG**

**CONFIDENTIAL  
TEST REPORT**



**WIRA  
TESTING CENTRE**

**BTTG**

**Date 16 December 1996**

**Page 1 of 8**

**Our Ref : 27988/10/96  
Your Ref : DAW/def**

**Client:** Environmental Seals Ltd  
Envirograf House  
Barfreston  
Kent  
CT15 7JG

**Job Title:** Fire Tests on Mattress

**Client's order no:**

**Date of receipt:** 12.11.96

**Description of sample(s):** One sample of mattress labelled ref. Dark Blue/Beige, Foam Filled. Double Bed. Treated with Envirograf 321 Washable.

**Work requested:** BS 7177

**CONFIDENTIAL  
TEST REPORT**

**WIRA  
TESTING CENTRE**

Date 16 December 1996

Page 2 of 8

Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

Date of Test : 5.12.96

**1. FIRE TESTS ACCORDING TO BS EN 597-1:1995  
(Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part  
1 : Ignition source : smouldering cigarette**

**Conditioning**

The sample and cigarettes were conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

**Procedure**

Specimens of the composite sample were tested in accordance with the above standard using the specified cigarette placed in the positions stated in para. 9.2.1.

**Requirements**

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders through thickness
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source
6. Occurrence of flames

**CONFIDENTIAL  
TEST REPORT**

**WIRA  
TESTING CENTRE**

Date 16 December 1996

Page.3 of 8

Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI

NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
Smouldering criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
Flaming criteria			
Occurrence of flames	No	No	



**BT TG**

Date 16 December 1996

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Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

### Comments

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

### 2. FIRE TESTS ACCORDING TO BS EN 597-2:1995 (Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part 2 : Ignition source : match flame equivalent

#### Conditioning

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

#### Procedure

Specimens of the composite sample were tested in accordance with the above standard using the specified flame placed in the positions stated in para. 9.2.1.

#### Requirements

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders or burns through thickness or to extremities
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source, due to smouldering
6. Flaming for more than 120 sec.

**CONFIDENTIAL  
TEST REPORT**

**WIRA  
TESTING CENTRE**

Date 16 December 1996

Page 5 of 8

Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI

NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
	Yes	No	
Smouldering criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
Flaming criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Burned through thickness or to extremities	No	No	
Flaming more than 120sec	No	No	



**BTTG**

Date 16 December 1996

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Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

### Comments

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

**3. FIRE TESTS ACCORDING TO BS6807:1996 (Methods of test for assessment of the ignitability of mattresses upholstered divans and upholstered bed bases with flaming types of primary and secondary sources of ignition).**

### Conditioning

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

### Procedure

Specimens of the composite sample were tested in accordance with Section 2 of the above standard using ignition source 5 in the positions as specified.

Date 16 December 1996

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Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

### Requirements

<u>Ignition Source No.</u>	<u>Flaming</u>	<u>Progressive Smouldering</u>
2	Less than 120 sec after removal of the burner tube.	Less than 15 min after removal of the burner tube
3		
4	Less than 10 min after ignition of the crib	Less than 60 min after ignition of the crib
5		
6	Less than 13 min after ignition of the crib	
7		

Failure also occurs if smouldering or flaming necessitates forcible extinction, reaches the extremities of the specimen, consumes the specimen within the test duration or shows evidence of charring 100mm from the nearest part of the original position of the source.

### Results

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.



**BTTC**

CONFIDENTIAL  
TEST REPORT

WIRA  
TESTING CENTRE

Date 16 December 1996

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Our Ref : 27988/10/96

Your Ref : DAW/def

Environmental Seals Ltd, Barfreston

<u>Ignition Source</u>	<u>Position</u>	<u>Time of Extinction(s) From Placement of Ignition Source</u>	<u>Ignition/ Non-Ignition</u>
5	On Top	185 PS	Ignition

PS = Progressive Smouldering.

**Comments and Observations**

The components were, wherever possible, removed and watersoaked in accordance with BS 5651 prior to testing.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

The results of the above tests indicate that the sample would not meet the requirements of the Medium Hazard classification given in BS 7177:1996.

It would, however, meet the requirements of the Low Hazard classification given in BS 7177:1996.

The information contained on page no's 1/8 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by Wira Testing Services on the materials referred to.

Signed.....*CTJ*.....Date 16.12.96.....

C.T. Johnson, Head of Fire Testing

CTJ/MM 8272.rep

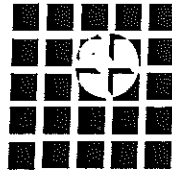
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**BTTG**

**CONFIDENTIAL  
TEST REPORT**



**WIRA  
TESTING CENTRE**

**BTTG**

**Date 16 December 1996**

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**Our Ref :** 27988/10/96/B  
**Your Ref :** DAW/def

**Client:** Environmental Seals Ltd  
Envirograf House  
Barfreston  
Kent  
CT15 7JG

**Job Title:** Fire Tests on Mattress

**Client's order no:**

**Date of receipt:** 12.11.96

**Description of sample(s):** One sample of mattress labelled ref. Brown/Dark Beige Floral Pattern. Sprung. Single Bed. Treated with Envirograf 321 Washable.

**Work requested:** BS 7177

Date 16 December 1996

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Our Ref: 27988/10/96/B  
Your Ref: DAW/def

Environmental Seals Ltd  
Barfreston

Date of Test : 3.12.96

**1. FIRE TESTS ACCORDING TO BS EN 597-1:1995  
(Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part  
1 : Ignition source : smouldering cigarette**

**Conditioning**

The sample and cigarettes were conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^{\circ}\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

**Procedure**

Specimens of the composite sample were tested in accordance with the above standard using the specified cigarette placed in the positions stated in para. 9.2.1.

**Requirements**

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders through thickness
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source
6. Occurrence of flames



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**Date 16 December 1996**

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**Our Ref :** 27988/10/96/B

**Your Ref :** DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI

NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
Smouldering criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
Flaming criteria			
Occurrence of flames	No	No	



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**Our Ref :** 27988/10/96/B  
**Your Ref :** DAW/def

Environmental Seals Ltd  
Barfreston

### **Comments**

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

### **2. FIRE TESTS ACCORDING TO BS EN 597-2:1995 (Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part 2 : Ignition source : match flame equivalent**

#### **Conditioning**

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

#### **Procedure**

Specimens of the composite sample were tested in accordance with the above standard using the specified flame placed in the positions stated in para. 9.2.1.

#### **Requirements**

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders or burns through thickness or to extremities
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source, due to smouldering
6. Flaming for more than 120 sec.



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Our Ref : 27988/10/96/B

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI  
NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
Smouldering criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
Flaming criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Burned through thickness or to extremities	No	No	
Flaming more than 120sec	No	No	



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**Our Ref :** 27988/10/96/B  
**Your Ref :** DAW/def

Environmental Seals Ltd  
Barfreston

### **Comments**

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

**3. FIRE TESTS ACCORDING TO BS6807:1996 (Methods of test for assessment of the ignitability of mattresses upholstered divans and upholstered bed bases with flaming types of primary and secondary sources of ignition).**

### **Conditioning**

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

### **Procedure**

Specimens of the composite sample were tested in accordance with Section 2 of the above standard using ignition source 5 in the positions as specified.



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**Our Ref : 27988/10/96/B  
Your Ref : DAW/def**

**Environmental Seals Ltd  
Barfreston**

**Requirements**

<u>Ignition Source No.</u>	<u>Flaming</u>	<u>Progressive Smouldering</u>
2	Less than 120 sec after removal of the burner tube.	Less than 15 min after removal of the burner tube
3		
4	Less than 10 min after ignition of the crib	Less than 60 min after ignition of the crib
5		
6	Less than 13 min after ignition of the crib	
7		

Failure also occurs if smouldering or flaming necessitates forcible extinction, reaches the extremities of the specimen, consumes the specimen within the test duration or shows evidence of charring 100mm from the nearest part of the original position of the source.

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**Our Ref : 27988/10/96/B**

**Your Ref : DAW/def**

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

<u>Ignition Source</u>	<u>Position</u>	<u>Time of Extinction(s) From Placement of Ignition Source</u>	<u>Ignition/ Non-Ignition</u>
5	On Top	241	Non Ignition
5	On Top	244	Non Ignition
5	Below	118	Non Ignition
5	Below	137 P.S	Ignition

PS = Progressive Smouldering.

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Our Ref : 27988/10/96/B

Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

**Comments and Observations**


The components were, wherever possible, removed and watersoaked in accordance with BS 5651 prior to testing.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

The results of the above tests indicate that the sample would not meet the requirements of the Medium Hazard classification given in BS 7177:1996.

It would, however, meet the requirements of the Low Hazard classification given in BS 7177:1996.

The information contained on page no's 1/9 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by Wira Testing Services on the materials referred to.

Signed.......... Date 16.12.96.....

C.T. Johnson  
Head of Fire Testing

CTJ/MM  
8272b.rep

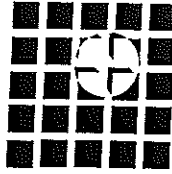
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**BTTG**

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TEST REPORT**



**WIRA  
TESTING CENTRE**

**BTTG**

**Date 16 December 1996**

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**Our Ref : 27988/10/96/A  
Your Ref : DAW/def**

**Client:** Environmental Seals Ltd  
Envirograf House  
Barfreston  
Kent  
CT15 7JG

**Job Title:** Fire Tests on Mattress

**Client's order no:**

**Date of receipt:** 12.11.96

**Description of sample(s):** One sample of mattress labelled ref. Pink/Orange/Blue Stripes.  
Sprung. Single Bed. Treated with Envirograf 321 Washable.

**Work requested:** BS 7177

**Date 16 December 1996**

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**Our Ref : 27988/10/96/A**

**Your Ref : DAW/def**

Environmental Seals Ltd  
Barfreston

**Date of Test : 2.12.96**

**1. FIRE TESTS ACCORDING TO BS EN 597-1:1995  
(Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part  
1 : Ignition source : smouldering cigarette**

**Conditioning**

The sample and cigarettes were conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

**Procedure**

Specimens of the composite sample were tested in accordance with the above standard using the specified cigarette placed in the positions stated in para. 9.2.1.

**Requirements**

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders through thickness
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source
6. Occurrence of flames

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**Date 16 December 1996**

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**Our Ref :** 27988/10/96/A

**Your Ref :** DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI  
NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
Smouldering criteria			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
Flaming criteria			
Occurrence of flames	No	No	



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Our Ref: 27988/10/96/A

Your Ref: DAW/def

Environmental Seals Ltd  
Barfreston

### Comments

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

### 2. FIRE TESTS ACCORDING TO BS EN 597-2:1995 (Furniture - Assessment of the ignitability of mattresses and upholstered bed bases) Part 2 : Ignition source : match flame equivalent

#### Conditioning

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

#### Procedure

Specimens of the composite sample were tested in accordance with the above standard using the specified flame placed in the positions stated in para. 9.2.1.

#### Requirements

Ignition is considered to have occurred if any of the following occurs:-

1. Unsafe escalating combustion
2. Test assembly consumed
3. Smoulders or burns through thickness or to extremities
4. Smoulders more than 1 hour
5. Charring more than 50 mm from source, due to smouldering
6. Flaming for more than 120 sec.

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Our Ref : 27988/10/96/A  
Your Ref : DAW/def

Environmental Seals Ltd  
Barfreston

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test, they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.

Ignitability Performance

NI  
NI

NI = Non Ignition

Criteria of ignition	Yes or No		Comments
<b>Smouldering criteria</b>			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Smoulders through thickness	No	No	
Smoulders more than 1 hour	No	No	
Charring more than 50mm from source	No	No	
<b>Flaming criteria</b>			
Unsafe escalating combustion	No	No	
Test assembly consumed	No	No	
Burned through thickness or to extremities	No	No	
Flaming more than 120sec	No	No	

**Date 16 December 1996**

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**Our Ref :** 27988/10/96/A

**Your Ref :** DAW/def

Environmental Seals Ltd  
Barfreston

**Comments**

An NI designation indicates that the sample met the performance requirements.

The material was sampled in accordance with the BTTG Internal Flammability Procedure F1.

**3. FIRE TESTS ACCORDING TO BS6807:1996 (Methods of test for assessment of the ignitability of mattresses upholstered divans and upholstered bed bases with flaming types of primary and secondary sources of ignition).**

**Conditioning**

The sample was conditioned for at least 16 hours immediately prior to testing in an atmosphere having a temperature of  $23 \pm 2^\circ\text{C}$  and a relative humidity of  $50 \pm 5\%$ .

**Procedure**

Specimens of the composite sample were tested in accordance with Section 2 of the above standard using ignition source 5 in the positions as specified.

**Date 16 December 1996**

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**Our Ref : 27988/10/96/A  
Your Ref : DAW/def**

Environmental Seals Ltd  
Barfreston

**Requirements**

<u>Ignition Source No.</u>	<u>Flaming</u>	<u>Progressive Smouldering</u>
2	Less than 120 sec after removal of the burner tube.	Less than 15 min after removal of the burner tube
3		
4	Less than 10 min after ignition of the crib	Less than 60 min after ignition of the crib
5		
6	Less than 13 min after ignition of the crib	
7		

Failure also occurs if smouldering or flaming necessitates forcible extinction, reaches the extremities of the specimen, consumes the specimen within the test duration or shows evidence of charring 100mm from the nearest part of the original position of the source.

**Results**

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the item in use.

They also only relate to the materials tested. They do not guarantee to represent the performance of production materials.



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**Our Ref :** 27988/10/96/A  
**Your Ref :** DAW/def

Environmental Seals Ltd, Barfreton

<u>Ignition Source</u>	<u>Position</u>	<u>Time of Extinction(s) From Placement of Ignition Source</u>	<u>Ignition/ Non-Ignition</u>
5	On Top	231	Non Ignition
5	On Top	526	Non Ignition
5	Below	135	Non Ignition
5	Below	137	Non Ignition

**Comments and Observations**

The components were, wherever possible, removed and watersoaked in accordance with BS 5651 prior to testing.

The material was sampled in accordance with the BTGG Internal Flammability Procedure F1.

The results of the above tests indicate that the sample met the requirements of the Medium Hazard classification given in BS 7177:1996.

The information contained on page no's 1/8 of this certificate is hereby certified to be a correct statement of the tests and investigations carried out by Wira Testing Services on the materials referred to.

Signed *C.T. Johnson* Date 16.12.96  
C.T. Johnson  
Head of Fire Testing

CTJ/MM 8272a.rep

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