

DATA SHEET

Flamebar

FLAME RETARDANTS

Highly effective economical range of water based flame retardants tested to British Standards to improve safety on a wide range of materials BS476 parts 6 and 7, BS5867 part 2 1980, BS3119/3120, BS5852 and BS5665

PRODUCT	FLAME RETARDS
	<u>Natural fabrics</u> and materials • cotton • linen • muslin • rayon • wool • silk • feathers • leather • animal skins.
Flamebar PE6	<u>Synthetic fabrics</u> - polyester • nylon • acrylics • dralon • suede • polycotton • silk and artificial silk (rayon) flowers • carpets • floor coverings • wall coverings • curtains • seating • mattress covers • foam • stage curtains • drapes and scenery.
Flamebar N5	<u>Wood and wood products</u> - softwood • hardwood • plywood • chipboard • weyroboard • hardboard • insulation board • cork • heavy weight cardboard • industrial belting • stage wood props • exhibition boards • polyurethane foam • sawdust polystyrene foam tiles • wood fibre • shavings • wood nuggets • peat • bark • vacuum impregnation of wood • straw.
Flamebar S3 May be diluted with 1 to 2 volumes of water for thin materials.	<u>Natural materials</u> - economical solution • cotton • hessian • rope • sisal • woven cotton tapes and belts • canvas welding screens • tarpaulins • tent canvas • lighter weight cardboard.
Flamebar SIWA2	Lightweight natural materials • cotton etc • muslin • paper.
Flamebar ACE6	Polyester artificial flowers, plants and tree foliage.
Flamebar DP	Dried natural flowers and plants • dried grasses • dried leaves
Flamebar A fresh Flamebar B fresh (with flame retardant)	Freshener spray for artificial (polyester etc.) plant displays and dried flowers and plants. Optically dissolves dust and contamination without washing to give bright fresh clean appearance.
Flamebar Poliac clear lacquer	Flame retardant clear coatings for wood and other substrates. May be used on its own or on wood over Flamebar N5.

Available in 25 litre or 5 litre containers and 1 litre and 600 ml trigger sprays.

Flamebar flame retardants Application data

- 1. TEST** We recommend that a small sample is tested first to check suitability and application rate. Dry and test with match or suitable flame.
- 2. SOLUTIONS** The three main flame retardants are Flamebar PE6 for natural and synthetic materials, Flamebar N5 for wood and Flamebar S3 for economical treatment of natural materials (cotton etc.). For a general purpose solution to cover a wide variety of materials use Flamebar PEG.
- 3. CONCENTRATION** Use solution as supplied. Dilute only when indicated by test. Flamebar S3 is normally the only solution requiring dilution.
- 4. APPLICATION** Usually applied by spray or dip. Padding or brushing can be used. Overall even treatment to the correct level will achieve best results.
- Spray: using trigger spray, pump up horticultural spray or airless spraygun. Apply with evenly spaced horizontal and vertical strokes. One spray may be sufficient but two light sprays are preferable to one heavy treatment. With suede or pile fabrics treat mainly on the reverse side.
- Dip:** Use plastic or stainless steel containers. Wet out completely, which normally only takes a minute or so. Squeeze by hand or mechanically to leave in about 70% - 100% of solution, (calc. on weight of fabric).
- Adapt instructions for wood, paper products, foam and wall coverings.
- 5. DRY** In a warm ventilated atmosphere drying will be quicker, but be aware that drying too quickly can cause white marking on the surface. A cool iron may be used.
- 6. COVERAGE** Depends on absorbency and thickness of the material but approximations are:
- | | Square metre/litre |
|---------------------------------|--------------------|
| Heavy weight/medium wt. fabrics | 4-6 |
| Light weight fabric | 7-9 |
| Wood | 4-6 |
| Wood to class 1 | 3-4 |
| Paper/thin card | 10 |
- 7. TREATMENT** Will withstand dry cleaning solvents but needs re-application after washing or other exposure to water. It is long lasting in dry conditions.
- 8. BRITISH STANDARDS** Flamebar flame retardants have been tested on a wide variety of materials to British Standard levels as listed on fire certificate data sheet. These include BS5867 part 2 1980 flammability of furnishings standard mainly for fabrics and building regulation standard BS476 part 7 surface spread of flame and part 6 contribution to fire. These are mainly on wood and allied products.
- 9. FLAME RETARDANCY** It is not possible to produce a non ignitable finish on all materials. The level varies. The most effective treatments are on absorbent material like cotton and other natural fibres, wood, straw, cardboard and paper products etc. Synthetic materials are more difficult and most plastics like polythene sheeting are extremely difficult to upgrade in this way. Finishes like Scotchguard stain proofing present difficulties of penetration. Increased penetration is normally possible by adding wetting agent or raising the temperature of the solution.
- The purpose is to obtain the best flame retardancy possible with the particular material applying the most suitable flame retardant. This is to make the material more difficult to ignite, to slow any flame spread down to a minimum and prevent smouldering. In this way, in case of fire, it helps along with other measures to provide a time delay for people to evacuate the area safely.
- 10. TESTING** Flamebar will test materials in their laboratory and give free advice on suitability and level of flame retardancy achievable.
- Solution is not harmful used as directed, but observe normal safety precautions limiting exposure to a minimum by providing ventilation and using gloves, goggles and mask for extended spraying. Protect mirrors, exposed ferrous and decorative metal and polished surfaces. Wash with water.

Flamebar have been manufacturing flame retardants for over 25 years. Data and recommendations are offered in good faith, to the best of our present knowledge without warranty. Customers should test and satisfy themselves that the product is suitable for the intended use. Responsibility cannot be accepted for results, loss, injury or damage consequent on its use.

FLAMEBAR

MATERIAL SAFETY DATA SHEET

Products: FLAMEBAR PE6, N5, S3, SIWA2, ACE 6 and DP.

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Description: Practically clear, water based flame retardant solution, used to provide improved fire safety on various materials.

Company: FLAMEBAR Ltd, 3B Chestnut Estate, Bassingham, Lincoln, LN5 9LL
Telephone: 01522 788818 Fax: 01522 788890

2. COMPOSITION / INFORMATION ON INGREDIENTS

Non Volatile: A mixture of water soluble organic and inorganic flame retardant compounds including salts of phosphorous and halogen.

Volatile: Water

3. HAZARDS IDENTIFICATION:

This health hazard assessment is based on a consideration of the composition of the product, and it is believed to be low hazard in normal conditions of use.

Splashes may cause eye irritation and irritate sensitive skin if exposure is prolonged.

4. FIRST AID MEASURES

Eye Contact : Wash out eye immediately with clean water for at least 10 minutes. Seek medical advice.

Skin Contact : Removed contaminated clothing. Wash skin with plenty of mild soap and water. Seek medical advice if any irritation persists.

Ingestion : Wash out mouth with plenty of water. If swallowed give plenty of water to drink and seek medical advice immediately.

Inhalation : Remove from exposure, to fresh air.

5. FIRE FIGHTING MEASURE

Not classed as flammable, but if involved in a fire it will decompose at high temperatures to emit limited quantities of toxic fumes which will assist in extinguishing the flames. Avoid breathing the products of combustion, and wear self contained breathing apparatus in the vicinity of the conflagration. Extinguishing media can be water spray, powder, foam, carbon dioxide, or pressurised gas extinguishers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Avoid contact with eyes and skin. Wash off with water.

Environmental precautions : All spillages must be contained and collected. Do not release into drains and water courses.

Methods of cleaning : Absorb spillages in suitably absorbent material. Transfer to suitable container for disposal.

7. HANDLING AND STORAGE:

Apply proper industrial standards and wear suitable protective clothing. (See section 8).

7.1 Handling : Avoid prolonged and repeated skin contact. Do not take internally.

7.2 Storage : In suitable closed containers at normal room temperatures. Protect from frost.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Controls : None of the components has T.L.V./O.E.L. listed in the H.S.E. EH40, nor is mentioned in the CHIPS supply list of hazardous chemicals.

8.2 Personal Protection : Avoid eye contamination. Do not take internally. Avoid prolonged and repeated skin contact.

Eye : Yes. Wear goggles or safety spectacles.

Hand : Yes. Wear protective gloves.

Skin : Yes. Wear overalls.

Respiratory : Yes. When spraying, wear a mask.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Almost clear liquid.
Viscosity : Water thin.
Solubility : Readily in water.
pH : Approximately 5/6.
Specific Gravity : 1.1 to 1.2
Odour : Slight and characteristic.
Flash Point : Not applicable.
Flammability : Not flammable.
Explosion Limit : Not applicable.
Thermal Decomposition : Above 110°C.

10. STABILITY AND REACTIVITY

Stability : Stable at normal room temperatures.

Conditions to avoid : Temperatures above 110°C and below freezing.

Materials to avoid : Oxidising agents, strong acids and alkalis. Some metals may be corroded and some polished surfaces may be stained.

Hazardous decomposition products : Ammonia, carbon monoxide, nitrogen oxides, phosphorus oxides, and halogen gases will be released at conflagration temperatures.

11. TOXICOLOGICAL INFORMATION

Effects of over exposure:-

Eye contact : May irritate.

Skin contact : May irritate on prolonged exposure.

Ingestion : Large doses may cause stomach upsets, abdominal pains, nausea, vomiting, falling asleep, muscular inco-ordination and respiratory depression.

Inhalation : Unlikely to be hazardous under normal conditions using a mask during spraying.

Long term : No documented evidence available, but see 16.

12. ECOLOGICAL INFORMATION:

Contains a mixture of water soluble, mainly non biodegradable chemicals, some of which may degrade water quality, but bioaccumulation is unlikely, because it is readily soluble in water.

13. DISPOSAL CONSIDERATIONS:

Dispose of contaminated product and any material used for cleaning up spillages, in a manner approved for this type of material. Review national, regional, and local government requirements prior to disposal, or seek guidance advice from local waste authority about the disposal route.

14. TRANSPORT INFORMATION non hazardous

UN No. : Not regulated.
IMDG code : Not regulated.
ADR / RID : Not regulated.
ICAO / IATA : Not regulated.

15. REGULATORY INFORMATION

Classification : Not classified as hazardous to users.

Risk Phrases : Not required on label.

Safety Phrases : Not required on label.

16. OTHER INFORMATION:

This product has been supplied by Flamebar Ltd. for many years, with no reported health problems. Use in accordance with the specific recommendation of the product technical data sheet.

The information contained in this document is intended to describe the product only in terms of health, safety and environmental requirements for the purposes of safe handling, use and disposal and is to the best of Flamebar's knowledge and belief correct. Flamebar will be pleased to give further advice and assistance, but customers must satisfy themselves, by appropriate testing if necessary, that the product is suitable for their purposes and conditions of use and that their facilities and arrangements are suitable for handling or using the product. Accordingly Flamebar disclaims any liability for loss, injury or damage which may result from the use of the product, this information or from such advice and assistance that is requested.

The information does not comprise a technical or performance specification for the product and customers are referred to any relevant product technical information issued by Flamebar Ltd.

This data sheet was prepared in accordance with Directive 91 / 155 /EEC