



FLAMEXX SERIES CLS-4 FLAME RETARDANT

Trade Names	CLS-4, CLS4	
Description	CLS-4 flame retardant is a high purity water-soluble non-halogen flame retardant comprised of a synergistic blend of phosphor and sulfur.	
Applications	CLS-4 flame retardant provides a highly effective solution to treating paper, single layer cardboard, and other cellulose based materials.	
Benefits and Features	CLS-4 flame retardant is a prime candidate for many applications due to its high performance and cost effectiveness. Due to its high phosphor content, CLS-4 is highly effective in achieving desired flame resistance with low add-on levels. CLS-4 is halogen free. Use of CLS-4 increases LEEDS compliance.	
Typical Properties	Appearance PH Thermal Decomposition after dry	Clear Liquid 6.4 – 7.4 150 C
Usage Level	Add-on level of CLS-4 flame retardant varies depending on the structure and weight of the material. Application may vary from 7% to 20% finished dry add-on weight. CLS-4 flame retardant may be applied to the material (fabric, paper, cardboard, insulation) by pad, spray, or brush. A wetting agent may be added to improve penetrations. Dry at temperature of 100C or lower.	
Shipping Information	Non-hazardous material per DOT Available in 55 gallon drums or 5 gallon pails	
Responsible Care	Turning Star, Inc. is committed to the safety and well-being of our customers, employees and the community. Refer to the material safety data sheet for specific safety, handling, and toxicity information.	

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Turning Star, Inc. It is the responsibility of the users to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patents.

The following statement is required by the Fire Department of the City of New York:

To New York City Users and Buyers:

The following conditions of approval must be complied with as per NYC Fire Department Certificate of Approval No. 5075:

1. The use of CLS-4 shall be limited to paper and cardboard. The method of application shall be by padding, dipping, brush, or spray method.
2. The use of flame resistant chemicals shall be certified only by or under the supervision of a person holding a Fire Department Certificate of Fitness.
3. The use of flame-resistant materials shall comply with all applicable New York City codes, rules and regulations including New York City Fire Code Chapter 8 and R805-01.
4. The effectiveness of flame resistant materials is significantly reduced when the flame resistant materials are dry cleaned or washed. The Fire Department requires flame resistant materials that have been dry cleaned or washed to be re-treated with flame retardant or removed from the premises. After the materials have been re-treated with flame retardant, the Certificate of Fitness holder must file a new affidavit with the Fire Commissioner.
5. When the materials have been accepted, they may be used on the premises for a period of up to three years or until the materials are washed, dry cleaned or otherwise rendered ineffective. The three year period is officially called the period of acceptance. After the period of acceptance has expired, the owner of the building may apply to renew acceptance. Acceptance will be renewed after the materials have passes a new filed flame test. Acceptance may be renewed for three years, after which time materials must be either re-treated with flame retardant or removed from the premises.
6. Certificate of Approval number shall be plainly and permanently stamped or otherwise fixed upon each product by the applicator. The dry cleaning and washing of the above reference flame resistant materials must be recorded by the owner of the building and made available to the Fire Department inspectors upon request.
7. The New York City Fire Department Certificate of Approval does not grant the right to use any trademark associated with the New York City Fire Department (the letters FDNY, the FDNY Shield design, the FDNY Maltese Cross design and the seal of the City of New York). The unauthorized use of trademarks in connection with the sale of commercial goods or services violates federal and state law.