



## FLAMEXX<sup>®</sup> SERIES

### CLS-4 FLAME RETARDANT

<b>Trade Names</b>	CLS-4, CLS4	
<b>Description</b>	CLS-4 flame retardant is a high purity water-soluble non-halogen flame retardant comprised of a synergistic blend of phosphor and sulfur.	
<b>Applications</b>	CLS-4 flame retardant provides a highly effective solution to treating paper, single layer cardboard, and other cellulose based materials.	
<b>Benefits and Features</b>	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.	
<b>Typical Properties</b>	Appearance	Clear Liquid
	PH	6.7 – 6.9
	Thermal Decomposition after dry	150 C
<b>Usage Level</b>	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.	
<b>Flammability Tests</b>	NFPA 701, ASTM E-84, CA 1237.1, FDNY R805	
<b>Registrations/Approvals</b>	CAL #C-024601	
<b>Shipping Information</b>	Non-hazardous material per DOT  Available in 1-gallon containers, 55 gallon drums or 5 gallon pails	
<b>Responsible Care</b>	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.