



FLAMEXX® SERIES CLS-12 FLAME RETARDANT

Trade Names	CLS-12, CLS12	
Description	CLS-12 flame retardant is a high purity water-soluble non-halogen flame retardant comprised of a synergistic blend of phosphor and sulfur.	
Applications	CLS-12 flame retardant provides superior fire resistance when applied directly to unsealed wood and lumber. Flamexx CLS-12 can also be used on corrugated cardboard, cellulosic insulation, and other cellulose products. For lumber, 2 coats are required with 20 minute intervals between coats.	
Benefits and Features	CLS-12 flame retardant bonds directly with the cellulose, and provides excellent charring when subjected to fire. The chemical structure of CLS-12 opens the cellulose fibers to rapidly absorb the fire retardant.	
Typical Properties	Appearance PH Thermal Decomposition after dry	Pale Straw Liquid 6.6 – 6.9 165 C
Usage Level	Add-on level of CLS-12 flame retardant varies depending on the structure and weight of the material. Application may vary from 6% to 20% finished dry add-on weight. CLS-12 flame retardant may be applied to the material or textile by pad, spray, or brush. A wetting agent is not recommended in most cases.	
Flammability Tests Registrations/Approvals	NFPA 701, CA 1237.1, ASTM E-84 (Class B, plywood), TB-117, NFPA 260, FDNY R805 CAL #C-024401	
Shipping Information	Non-hazardous material per DOT Available in 1-gallon containers, 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.