



## PERFORMANCE FEATURES

- Excellent cellulosic flame retardant

## Product Description

**Ulterion® APS** An aqueous ammonium polyphosphate solution used to flame-retard cellulosic products such as paper, textiles, and wood. It is particularly suitable for use in fiberboard products due to its' efficiency and process compatibility.

## Typical Properties

% Solids	47.0 ± 2.0
PH	7.0
Viscosity (cps)	<100
Gallon Weight	10.9 lbs/gallon
Color	Clear colorless liquid
Specific gravity	1.31 g/ml
Solubility in water	Soluble

## Application Methods

**Ulterion® APS** is typically used to flame-retard cellulosic products due to its efficiency in modifying the burning decomposition of cellulosic materials. The recommended amounts of **Ulterion® APS** to be used in initial evaluations of different cellulosic products are:

Paper	20% solids by weight
Textiles	10-15% solids by weight
Timber	40 kg/m <sup>3</sup> solids

Proper formulation of manufactured wood products can provide for high internal bond strengths and other properties capable of passing existing product requirements. Flame retardant loadings required for a particular application need to be established for each product - wood species vary in flammability, as shown in the USDA data below. The USDA

## MARKET USES

- Textile
- Paper
- Wood

printed a reference about the E-84 performance of various wood species, USDA Ag Book #72, "Wood Handbook". A table in that book reported as follows:

<u>Species</u>	<u>E-84 Fame Spread</u>
White Spruce	65
Douglas fir	70-100
Lodgepole Pine	65-110
Red Oak	100

Typical flame-retardant loadings to achieve various international burn test ratings are summarized below for medium density fiberboard (MDF) products produced from pin species. Applicable flame-retardant loadings require for other species and products may vary.

## Typical MDF Product Analysis

<u>Burn Test</u>	<u>Typical product analysis % Flame-retardant</u>	<u>Typical on dry fiber, % Flame-Retardant</u>
NFP 92-501	3.1	3.8
MI, Face Core	1.9	2.2
UL 726 Class	2.3	2.8
I, Face Core	1.3	1.5
BS 476 Part	1.6	
7, Face Core	1.3	1.5

A typical Formulation may include 5-6% binder, 0.1-1% sizing agents (paraffin), 0.05% dyes, and other chemicals. The product analysis above includes 5-6% atmospheric moisture.

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### Handling / Storage Stability

Keep from freezing. Store in cool, dry area i.e., 70-80°F. Keep away from high heat to retain a six-month shelf life.

### Product Safety

**Ulterion® APS** is a non-hazardous liquid. As with all industrial chemicals, basic handling precautions are recommended. Avoid skin contact. Avoid mist inhalation or eye contact. Wear protective clothing and goggles if there is a chance of exposure. Prolonged skin contact may produce dermal reactions, especially under wet conditions.

When considering the use of **Ulterion®** brand products, please refer to the latest Safety Data Sheets (SDS). If a SDS for this product is required, please contact your **Jain Chem Representative**.

Jain Chem, Ltd.  
200 Tanner Drive  
Taylors, SC 29687  
Phone: (864) 609-0910  
Fax: (864) 331-4264  
[www.jainchem.com](http://www.jainchem.com)  
[www.ulterion.com](http://www.ulterion.com)

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