

HP-215

DESCRIPTION

HP-215 flame retardant consists of cyclophosphinic acid esters, it is a flame retardant additive for textile products.

In addition to its high phosphorus content **HP-215** has other outstanding characteristics:

-good thermal stability

-low volatility

HP-215 is particularly suitable for the treatment of polyester fabrics and impart them a wash durable finish.

CHEMICAL AND PHYSICAL PROPERTIES

Appearance	Clear liquid with high Viscosity
Active Component(%)	100
Phosphorus Content(% by weight)	21.5
Acid Value (mg KOH/g)	2
Density(g/cc@25°C)	1.28
Viscosity(CPS, Brookfield)@	
20°C	250,000
40°C	16,000
60°C	1,600
refractive Index @25°C	1.46
flash Point(Seta-Flash-Closed Cup °C)	146
Solubility (g/100cc)	
Water	Miscible
Acetone	Miscible
Ethanol	Miscible
Ethylene Dichloride	>10
Butane	< 5
Benzene	>10
Temperature °C	%Weight Loss
100	<1
150	2
200	4
250	13
300	43
350	84

The effects of **HP-215** are not corrosive. Corrosion Rate MPY@38°C

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Aluminium(7075-T6)	<1 (tested at 55°C)
Carbon Steel	<1
304 S/S	<0.1
316 S/S	<0.1

DESCRIPTION

HP-215 is applied to 100% polyester fabrics by conventional textile finishing equipment using pad/dry/thermo-fixation technique. It can be applied after dyeing or at earlier processing steps if desired, HP-215 has minimal effect on color bleeding or discoloration of white backgrounds and, can be used before or after printing and for yarn dyed fabrics.

Because the requirement of the low add-on levels of **HP-215**, treated fabrics have virtually the same properties as untreated fabrics; strength and durability properties of polyester fabrics are unaffected.

There is little effect upon light-fastness, rubbing fastness, solvent bleeding or color transfer so that dark shades may be readily used in dyeing and printing.

LEVELS OF TREATMENT

Fixation efficiencies vary from fiber quality, fabric construction and pretreatment, but an addition level of 3-6% of weight of **HP-215** is usually sufficient to achieve a final fixation of 1.4%. Each new fabric should be assessed by using varying levels of **HP-215** and tested for flammability, to determine optimum application levels.

EFFECT OF CURING TEMPERATURE ON FIXATION EFFICIENCY

Curing Temperature °C	% Fixation
170-175°C	41
180-185°C	43
190-195°C	50
200-205°C	51

PACKAGE

250 kg in each iron drum