

## FLAME DEFENSE SERIES

### FD455S


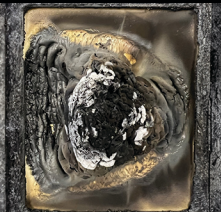
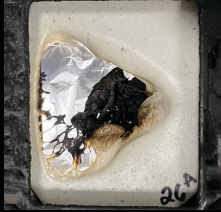

#### Typical Physical Properties

Color	white to off-white
Specific Gravity	3.73
Median Particle Size (microns)	2-3
99% Less Than (microns)	15
Decomposition Temp.	>550°F (>290°C)

The FD455S reactive synergist blend has been specially formulated to serve as a 100% replacement of Antimony Trioxide in PVC compounds where the Antimony Trioxide loading is at or below 2.1 phr.

The product also has efficacy in other polymer types where the primary flame retardant is halogen-based.

*The use of cost effective FD455S to replace antimony trioxide can dramatically reduce your synergist cost.*

Flammability Performance Summary			Burn Test*	
Formulation Ingredient (phr)	Control	FD455S	Control	FD455S
PVC Resin	100	100		
DINP	45	45		
Ca-Zn Stabilizer	6	6		
Stearic Acid	0.3	0.3		
CaCO <sub>3</sub>	60	60		
AO	2.1	0		
<b>FD455S Synergist</b>	<b>0</b>	<b>2.1</b>		
Limiting Oxygen Index %	29.0	29.0		

\*PVC compound plaques burned in a horizontal plane for 9 minutes with a Bunsen Burner shows that the flame penetrates the PVC compound containing Antimony Trioxide. In contrast, the equivalent compound containing FD455S creates a robust char.

More detailed case studies are available for discussion on this product.

For further guidance it is recommended that customers contact [matsolutions@rjmarshall.com](mailto:matsolutions@rjmarshall.com) to discuss their specific recipes.

HEALTH AND SAFETY: Refer to the Safety Data Sheet

PACKAGING: 50 lb plastic bags, pallet weight 2500 lbs.

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