

**UNIPLEX FRX-5028**  
**Tetrabromo-bis-Phenol S Dibromopropyl Ether**  
**CAS No. 42757-55-1**

**Description:** An off-white melt-processable solid additive flame retardant containing 66% aliphatic/aromatic bromine. Polypropylene systems compounded with Uniplex FRX-5028 achieve UL-94 V-2 and V-0 ratings at low additive levels with essentially no blooming or exudation.

**Applications:** Flame Retardant Polypropylene Molding Compounds  
Flame Retardant Polypropylene Fiber

**Typical Properties:**

Bromine Content (%) 66 min  
Thermal Stability (5% Loss) 310°C  
Specific Gravity 2.29  
Molecular Weight 966

**Solubility (g/100g Solvent at 25°C):**

Water Insoluble  
Acetone Soluble  
Isopropanol Soluble  
Xylene Soluble

**General Specifications:**

Appearance Off-white powder  
APHA Color (10% in DMF) 150 max.  
Melting Point (DSC) 105°C min.  
Volatiles (% , 2 hours 110°C) 0.2 max.

**Health & Safety:** Refer to Material Safety Data Sheet (MSDS)

**Applications:**

The recommended starting points for compounding flame retardant polypropylene compounds are:

Polypropylene Homopolymer (Weight %)	Uniplex FRX-5028 (Weight %)	Antimony Trioxide (Weight %)	UL-94 Rating 1/8" Test Bar	LOI
100	3	1.5	V-2	28.0
100	5	2.5	V-2	29.8
100	8	4	V-0	30.7
100	10	5	V-0	18.8
100	0	0	H-B	18.8

**Aging Weight Loss Comparison:**

Samples were compounded in Polypropylene at 200°C, extruded and molded into test bars at 3 mm thick. Samples were maintained at 120°C in a vented oven for seven days. Weight loss was determined gravimetrically. The results are in the table below:

Flame Retardant	FR Loading (Weight %)	Loss in Weight (Weight %)
Control	0	1.0
Great Lakes PE-68	10	12.7
Uniplex FRX-5028	10	1.5

*These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale. Suggestions for uses of our product should not be understood as recommendations that they be used in violation of any patents.*