



Chemical Corporation

**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)



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### 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

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