

UNIPLEX FRP-42 FLAME RETARDANT

Description: A liquid flame retardant plasticizer containing bromine and phthalate compounds. Improves on low temperature brittleness and lower smoke than conventional brominated phthalate diesters used in wire and cable industry applications.

Applications: Flexible PVC, EPDM, and TPO applications in the wire and cable industries.

Features: Pale yellow liquid
Improved flame retardant permanence
Superior electrical properties
Lower smoke (NBS smoke chamber)
Improved low temperature brittleness properties

Typical Properties:

Total esters:	98% minimum
Gardner Color:	3 maximum
Water Content	0.1% maximum
Acid Value:	0.05meq/100g maximum
Thermal Stability 5% Wt. Loss:	295°C

APPLICATIONS IN POLY(VINYL CHLORIDE) WIRE AND CABLE INDUSTRIES

FORMULATION

COMPONENT	phr
PVC Resin (Geon 30)	100
Brominated Phthalate	40
Uniplex 546-A (TOTM)	34.3
Lead Stabilizer	5
Antimony Trioxide	15

UL1581 - 105°C Rating	UNIPLEX FRP-45	UNIPLEX FRP-42
Tensile Modulus at 100% Strain (psi)	1576	1663
Tensile Strength at Break	2883	3391
Elongation (%)	288	371
Shore A Hardness	95	94

LOW TEMPERATURE BRITTLINESS, °C (ASTM D-746)

UNIPLEX FRP-45	UNIPLEX FRP-42
-16	-28

NBS SMOKE VALUES (ASTM E-662)

	UNIPLEX FRP-45	UNIPLEX FRP-42
Smoldering (D _{MC})	180	140
Flaming (D _{MC})	440	328

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