

# PN 5090

**A very low extractable, Eco-Friendly Polyester plasticisers especially suitable for FKM Compound.**

A High Viscosity Polyester type Plasticizer with following properties compared to PN 350.

## Typical Physical Properties PN 5090

Parameters	Unit	PN 5090	PN 350
Viscosity	mPa.s (25°C)	10000	10000
Specific Gravity	25 at 25°C	1.128	1.104
Refractive Index	At 25°C	1.467	1.466
Freezing point	°C	-10	-15
Solubility Parameter	-	9.5	9.3
Plasticising efficiency	-	1.31	1.32
Flash Point	°C	>282	>282
Acid Value	KOH mg/gm	0.3	0.3
Colour	APHA	60	60
n-Heptane Extract	/mg	5	15

## Salient Features

- A. Eco-Friendly & Low Volatility.
- B. Doesn't include restricted substances like DEHP(DOP), Bisphenol A & substances related to PRTR law of Japan.
- C. Very low extractable amount when extracted in n-Heptane. N-Heptane extract of PN 5090 is 5/mg compared to 15/mg than PN 350.
- D. High Resistance to extraction by oil & fuel provides Low Volume Swelling in contact with oils at elevated temperatures.
- E. Resistance to self-degradation or disintegration in elastomer vulcanizate.
- F. Very good Compatibility with Polar Rubber like NBR, ECO, XIIR, ACM, FKM, and AEM.
- G. Good Low Temperature properties which Reduces Tg of compounded rubber Especially applicable to FKM / Viton compound.

## Guideline formulations with FKM Rubber

Ingredients	Formula A	Formula B	Formula C	Formula D
FKM Copolymer	100	100	100	100
PN 5090	0	3	6	3
Starmag 150	3	3	3	3
Innovoh	6	6	6	6
Carnauba Wax	0.5	0.5	0.5	0.5
MT Black	22	30	5	45

Press Cure: 10 Minutes at 170°C Post cure: 24 Hours at 230°C

PROPERTIES	Formula A	Formula B	Formula C	Formula D
Shore A Hardness	70	70	54	80
Tensile Strength Kg / Cm <sup>2</sup>	132	128	110	130
% Elongation	230	260	280	215
% Compression set	19.5	20.6	22.8	21.2

