

Enhanced wall-covering applications

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Jayflex™ DINP offers the optimal balance of processability and performance for your wall-covering applications

By creating opportunities for cost savings and improved performance of wall-covering products, Jayflex DINP is a cost-effective substitute for DOP in many flexible PVC applications.

Significant cost savings (lower plasticizer density)

Alternatively, the lower density of Jayflex DINP allows the amount of filler to be increased, thereby reducing the formulation cost.

Key advantages

- Significant cost savings (lower plasticizer density)
- Increased plasticizer retention (lower volatility)
- Reduced costs (more stable viscosity)
- Better product performance (lower soapy water extraction)
- Improved product quality consistency (lower migration)
- Meets China's Green Label wall-covering standard (HJ 2502-2010)

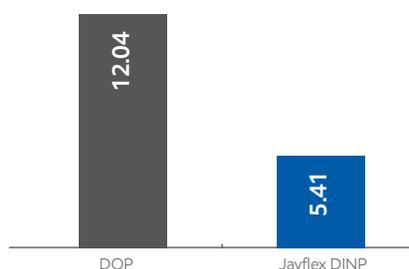
Raw Material	Density (g/cm ³)	Formulation A (phr)	Formulation B (phr)
EPVC	1.4	100	100
DOP	0.986	60	0
DINP	0.974	0	60
VM	0.803	5	5
Filler	2.7	60	60
Formulation	Density (g/cm ³)	1.3999	1.3934

To explore your formulation possibilities, please contact your local ExxonMobil Sales Representative.

Increased plasticizer retention (lower volatility)

Due to its higher molecular weight, Jayflex DINP is discernibly less volatile than DOP, which means lower plasticizer evaporation during the gelation/fusion process and lower plasticizer loss during the product lifecycle. Consequently, Jayflex DINP can help you improve the performance of your wall-covering products – from less cracking and fogging to better aging and longer service life.

Percentage of neat plasticizer weight loss (after 24h at 155°C forced ventilated oven)



Source: TSR 2015-048
Test Method: Based on ASTM D2288

Reduced costs (more stable viscosity)

Jayflex™ DINP provides superior viscosity stability compared to DOP — consequently requiring less frequent addition of viscosity depressants and remixing time to maintain plastisol viscosity. As a result, the superior viscosity stability of Jayflex DINP can help reduce your costs and improve production efficiency.*

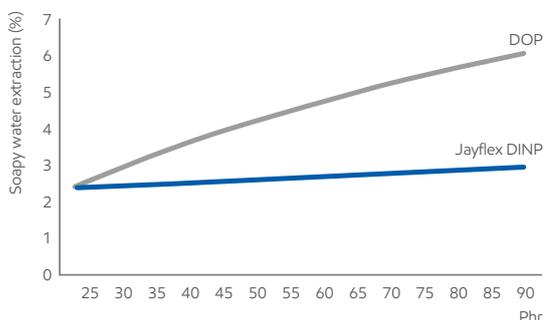
Test Method: Brookfield Viscosity Test, based on ASTM D1824 / based on GB/T 12004; condition: temperature 23C. RPM and Spindle No# based on specific formulation and application.

Better product performance (lower soapy water extraction)

When wall-covering product surfaces are exposed to soapy water, they become susceptible to extraction, which can increase the risk of cracking. In comparison to DOP,

Jayflex DINP improves resistance to soapy water extraction — giving you improved product performance and service life.

Soapy water extraction (%) vs phr

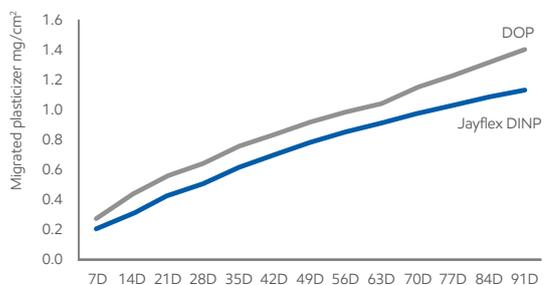


COPPCO simulation: Soapy water extraction based on ASTM D1239
Formulation: S-PVC 100 phr, DOP or DINP 25-95, CaCO₃ 60 phr.

Improved product quality consistency (lower migration)

Multilayer film and sheet products using Jayflex DINP exhibit lower plasticizer migration between layers, compared with lower molecular weight plasticizers such as DOP. This improves the individual functionality of each layer and quality consistency of the final product.

Migrated plasticizer



Test Method: Based on EM Migration Method

Meeting the China Green Label wall-covering standard (HJ 2502-2010)

DINP is an approved plasticiser under the China Green Label Standard. Wall covering manufacturers using DINP may be able to use the “China Environmental Labelling”. Not all plasticisers are approved under this standard. Individual users should make their own determination whether they can apply this labelling.

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*Besides plasticizer type, other factors — including, but not limited to, type and dosage of PVC, filler, etc. — could also impact plastisol viscosity stability.

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