

## Lubricants

A range of internal and external lubricant esters, waxes and soap blends for the processing of rigid and non-rigid PVC. Some are also suitable for other thermoplastics such as polyolefin, polyurethane and polycarbonate.

	Product	Melting Range (°C)	Dosage (phr)	Chemistry & application
Polyol Esters	eSlip 2010	<10	1.0 –2.5	Fatty acid ester of polyol. Liquid internal lubricant with very good compatibility and transparency in rigid and flexible PVC. Improves flow.
	eSlip 2011	<10	0.5-1.5	Fatty acid ester of polyol. Liquid internal lubricant with very good compatibility and transparency, especially in rigid PVC. Improves flow.
	eSlip 2012	58-61	0.5-1.5	Fatty acid ester of polyol. Solid internal lubricant used in extrusion of rigid PVC. Gives good transparency and improved surface gloss.
	eSlip 2015	83-87	0.5-1.5	Fatty acid ester of polyol. Solid internal lubricant used in extrusion of rigid PVC. Gives good transparency and improved surface gloss.
	eSlip 2016	<0	0.5-1.5	Fatty acid ester of polyol. Liquid internal lubricant used in rigid PVC, especially in calendaring and extrusion of PVC films. Gives good transparency.
	eSlip 2017	49-52	0.5-1.5	Fatty acid ester of polyol. Solid internal lubricant used in rigid PVC. Moderate external lubrication effect allows for more balanced fusion.
	eSlip 2018	<0	0.1-0.5	Fatty acid ester of polyol. Liquid internal lubricant with low volatility used in rigid PVC, especially in calendered and extruded PVC films.
Fatty Acid	eSlip 2020	54-56	0.2-0.5	Stearic acid. Solid external lubricant with good compatibility used in rigid and flexible PVC. Gives improved metal release with good plate out properties.
	eSlip 2021	71-80	0.2-0.5	12-hydroxystearic acid. Solid external lubricant with good compatibility used in rigid and flexible PVC. Gives improved metal release with good plate out properties.
Wax	eSlip 2022A	114-118	0.1-0.5	Polyethylene wax. Strong external lubricant used in rigid PVC applications.
Ester waxes	eSlip 2032	52-56	0.5-1.5	Wax ester. Solid lubricant with internal and external lubrication used in rigid PVC.
	eSlip 2040	<7	0.5-1.5	Wax ester. Liquid internal lubricant with good compatibility and transparency.
	eSlip 2047	60-64	0.3-1.0	Wax ester. Solid lubricant used in rigid PVC as internal and external lubricant. Strong effect on delaying time to fusion; improves flow.
Fatty Alcohol	eSlip 2053	48-54	0.5- 1.5	Fatty alcohol. Solid internal lubricant used in extrusion of rigid PVC sheets.

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Acid Ester	eSlip 2065	58-62	0.5-1.5	Fatty acid ester. Used as non-phthalate internal lubricant with high compatibility in rigid PVC, especially in rigid PVC compounding. Little or no effect on time to fusion.
Complex esters	eSlip 2070S	55-58	0.2-0.6	Long-chain complex ester of polyol. Solid external lubricant with strong release effect used in rigid PVC especially calendered films.
	eSlip 2071S	<-20	0.2-0.6	Long-chain complex ester of polyol. Liquid external lubricant with strong release effect used in rigid and flexible PVC, especially plastisols.
	eSlip 2072	43-47	0.3-1.0	Long-chain complex ester of polyol. Solid internal/external lubricant with good release effect used in rigid PVC.
	eSlip 2073	< 4	0.3-1.0	Long-chain complex ester of polyol. Liquid internal/external lubricant with good release effect used in flexible PVC.
	eSlip 2078	105-115	0.3-1.2	Long-chain complex ester of polyol. Solid external lubricant used in rigid PVC, especially bottle and packaging films.
Synthetic Waxes	eSlip 2080	65-75	0.2-1.0	Paraffin wax. Used as external lubricant in rigid PVC extrusion. Especially suitable for injection moulding.
	eSlip 2083	118-122	0.05-0.30	Polyethylene Wax. External lubricant used principally in extrusion of PVC-U pipes, profiles and sheets.
	eSlip 2085	130-135	0.05-0.2	Oxidised PE wax. Used in rigid PVC extrusion, including packaging films as well as injection moulding. e.g. bottles.
External wax ester blends	eSlip 2090	90-100	0.2-1.5	Combination lubricant. External lubricant with strong release effect used in rigid PVC foam extrusion processing.
Miscellaneous	EC 1361	141-147	0.5-1.5	EBS wax used as antislip in PVC and a variety of other thermoplastics.