

MEDIA TRANSPORT ROLLERS

Challenge: BMP were tasked by a printer OEM to deliver a paper transport roller that would be more abrasion and temperature resistant than traditional EPDM rubber.

Solution: BMP compared the properties and performance parameters for a variety of elastomeric materials in varying environmental conditions. As OEM's are continually pushing the speed envelope in Xerographic printers, abrasion, temperature and chemical resistance are key. BMP's test results indicated that a non EPDM elastomer product would have to be developed to meet the elevated performance criteria demanded by high speed printers.

Based on BMP's extensive experience in manufacturing elastomer materials and components, a highly cross linked Polyurethane material was developed specifically for use as paper transport rolls. Significant capital expenditure was also invested in processing equipment which enabled the urethane to be moulded in a continuous system resulting in highly finished, dimensionally accurate segmented rolls which did not require a final grinding operation.

Sample rolls were submitted to BMP's client for rigorous life testing over a period of several months. BMP's TransThane Elastomer Compound (TecRoll) outperformed all traditional EPDM and moulded urethane products in the areas of wear (reduction in outside diameter), continuous temperature resistance and resistance to oxidation. The table below details the relative wear rates for TransThane Elastomer Compound compared to moulded urethane and EPDM products;

