

POLYURETHANE CLEANING BLADES

Challenge: Printer OEM's are constantly searching for ways to reduce the 'cost of ownership' of their products through improved product performance and increased in-service life cycles of consumable piece parts and assemblies. Cleaning blades in printers are critical to function components which influence the life cycle of expensive Photoreceptor Drums and Imaging Belts. One of BMP's major customers tasked BMP with developing a cleaning blade material that would exhibit lower Photoreceptor wear, thereby extending the service life of the component.

Solution: BMP compared the material property characteristics of traditional Polyurethane cleaning blades and associated rates of wear to the Photoreceptor. It was apparent that rates of drum wear varied from machine to machine indicating that some toners were more aggressive, resulting in premature replacement of the Photoreceptor.

Based on BMP's extensive experience in manufacturing elastomer materials and components, an alternative polymer chemistry and urethane system was developed to suit different Photoreceptor/Toner combinations. The end result was the launch of a softer abrasion resistant urethane material suitable for use in low and mid volume printers.

Utilising the new urethane formulation, BMP's client was able to significantly increase the life cycle of their Photoreceptor drums thereby reducing service costs per copy.

Significant capital expenditure was also invested in processing equipment which enabled the urethane to be accurately spun cast ensuring inclusion free urethane with enhanced clarity, exceptional dimensional stability and improved wear resistance.

