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This paper presents a systematic methodology for designing blended products consisting of three stages; product design, process identification and experimental verification. The product design stage is considered in this paper. The objective of this stage is to screen and select suitable chemicals to be used as building blocks in the mixture design, and then to propose the blend formulations that fulfill the desired product attributes. The result is a set of blends that match the constraints, the compositions, values of the target properties and information about their miscibility. The methodology has been applied to design several blended products. A case study on design of blended lubricants is highlighted. The objective is to identify blended products that satisfy the product attributes with at least similar or better performance compared to conventional products.

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