Application: Medical Handles – Enclosures

Component: Custom Colorization Of Molded Medical Devices And Orthopedic Instruments

Design Requirements:
Distinguish a product brand and differentiate product lines or components by the use of color. Insure that materials formulated can be autoclaved for repeated use.

Design Approach:
Provide a full range of advanced polymers designed specifically to meet the needs of the medical device industry. Develop advanced materials, in a wide spectrum of colors, with features important to medical device designers including sterilizability, chemical compatibility, biocompatibility, durability and hydrolytic stability at elevated temperatures.

Related Benefits:
Minnesota Rubber and Plastics provides both transparent and opaque molded colors allowing for many options in color customization. Vibrant effects using transparent color combinations allow for the customization of a desired look.

Many advanced polymers and formulations are available including polyethersulfone grades, for example, which are biocompatible and comply with USP Class VI. This advanced polymer resists chemicals and bodily fluids including enzymatic soaking agents, high level disinfectants, blood reagents and anesthetics. The polymer retains 85 to 100 percent hydrolytic stability after long term exposure (2 years continuous).

A partial list of applications include surgical trays, orthopedic handles, cases, lids, containers, check valves, stop cocks and syringes.

Minnesota Rubber and Plastics operates an ISO 13485:2003 certified quality management system and manufactures medical device components and assemblies in Class 10,000 and Class 100,000 clean rooms. Providing design assistance and prototype development, the company brings over 65 years experience in custom materials engineering and in difficult sealing applications. This experience, plus its unique ability to offer both rubber and plastic combination components, results in greater engineering design and production efficiencies, thereby reducing costs and time to market.