Exceptional and repeatable coloration

Use Case – Using Stratasys® J55™ Prime and VeroUltra™ materials to create accurate coloration for toy design and validation.

Challenge

From spray painting to hand painting, dry transfers, stickers and more, creating toy dolls with the right appearance for design validation was a manual multi-step process. Achieving accurate skin tone coloration required manual blending of spray paints, and cans of previously used colors needed to be stored in a warehouse in case of future use. The delicate assemblies also required specialized expertise and were prone to inconsistencies.

Additionally, when shipping multiple models to different stakeholders for approval, each stakeholder could potentially receive a doll with a slightly different appearance — which could lead to decisions based on the wrong data. The whole process was very time-consuming, expensive and susceptible to errors. As a result, it was only done on a small amount of design iterations used for final approvals.

Solution

Using Stratasys PolyJet™ J55™ Prime 3D printing technology in combination with new materials such as the VeroUltra family of opaque color materials, the manual, multi-step design process was reduced to a single-step print. The J55 Prime;s ability to get full-color, full texture, realistic functional parts early and often promote efficient stakeholder reviews and approvals while enabling decision makers to hold a true, quality prototype in their hands and impressing customers so that designs receive approval quickly and with greater confidence.

The VeroUltra materials allowed designers to achieve sharp detailing, excellent color reproduction and textures for faster design validation. The dolls could also be printed and assembled in a matter of hours for quick calls on various design elements. Additionally, the CAD-to-print process streamlined workflows and eliminated the need for long and time-consuming CMF documents — which simplified communication and reduced the chance of errors.

The J55™ Prime's new materials are taking design prototypes to new levels of achievement.

Impact

The precision detailing and repeatable results meant that every stakeholder would receive a doll with the same appearance — leading to more accurate design decisions and using the J55™ Prime enables company to bring high level, precise prototypes in-house in a matter of hours.