

ROG MICROSCOPY & CONSULTING SERVICES LLC

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Case Study: Evaluation of Injection molded toy part. Not only can sample be evaluated by imaging the surface, but they also can be cross sectioned and the structure of the part understood. Moreover samples can be prepared for other analytical techniques for examination, such as Scanning Electron Microscopy (SEM) or Infrared Analysis (IR).



Top surface

Bottom surface

Images taken using Reflected Brightfield

Part was prepared and cross sectioned using a Leica 2165 Microtome and sections were mounted in oil prior to examination in Transmitted Light. The faceoff plug can be mounted onto a 45° SEM stub, or dry cross sections placed on flat SEM stubs for examination in a Scanning Electron Microscope..



Cross Sections were imaged using an Olympus BX60 Microscope in Transmitted Light



Cross Section and Faced off plug were imaged using an Olympus BX60 Microscope in Transmitted Light and Reflected Bright Field. Note that embedded material within the part was sectioned through allowing visualization of material (1&2) or fractures (3) within the part.



Cross section

Faced off plug

Cross Sections were imaged using an Olympus BX60 Microscope in Transmitted Light



Transmitted BF

Transmitted Crossed Polars

Area 2 High Magnification

Imaged using an Olympus BX60 Microscope



Transmitted Differential Interference Contrast

Reflected Bright Field

Cross section

