

Are there really Metal & X-Ray Detectable Materials?



Stringent government regulations mandate that food, beverage, and pharmaceutical manufacturers keep foreign material out of ingredients to ensure food and drug safety for consumers. Preventing foreign material from entering the processing stream is of the utmost concern but there must also be measures in place to detect contaminated product and quarantine it before it is distributed.

Component parts that are used in food and drug processing equipment can become damaged by improper installation and/or excessive shear experienced during operation that causes fragments of rubber, plastic, and metal to contaminate ingredients. Chemicals used for cleaning and sterilization of equipment can cause rubber seals to degrade increasing the probability of particles breaking off and entering the consumable products. Part failures causing product contamination can lead to machine down time, scrap product, product recalls and result in legal problems and negative media attention. All of which have a significant financial impact and can compromise brand loyalty within the market.

Many processing operations now employ HACCP (Hazard Analysis Critical Control Point) programs which stipulate that all parts have to be metal and X-ray detectable. This made it necessary to develop special rubber materials that would allow food processors to conduct routine inspections for this type of contamination utilizing in-line metal detectors and X-ray machines. Rubber must be compounded with special additives to make detection possible. However, certain foods have phase angles similar to metal detectable rubber so a complete understanding of the rubber product's application is necessary for proper compound selection.

One of Rocket Seals suppliers has developed four Metal and X-Ray detectable materials made with ingredients sanctioned under FDA Title 21 CFR 177.2600. All four are 3A Sanitary 18-03 approved. Available in Silicone, Nitrile, EPDM, and FKM, all are 70 durometer and blue in color. The industry standard color is blue but materials can be colored for specific customer requirements and any polymer can be made metal detectable. All compounds were tested by an independent laboratory and found to have magnetic properties that exceed industry standards.

If you are in an industry that needs these controls, contact us at 1 (800) 445-7803 or (303) 777-7024 for information on these metal detectable products.

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