



# *Codonics DirectVista<sup>®</sup> Film*

## *Material Safety Data Sheet (MSDS)*

### **1. Article Name:**

DirectVista Film Blue (DVFB) and DirectVista Film Clear (DVFC)  
DirectVista Film-5 (DVB5)

### **2. Article Type:**

Thermographic film for medical imaging applications.

### **3. Composition:**

DirectVista Film is a direct thermographic film consisting of a support layer, an image forming layer, a top protective layer, and a bottom layer. The support layer is made of polyethylene terephthalate (PET). Its color is tinted blue for DVFB/DVB5 and is untinted for DVFC. The PET support layer accounts for about 80% of the weight of the film material. The image-forming layer mainly consists of an organic silver salt in an organic binder. This layer also contains small amounts of additives used to provide the necessary physical and sensitometric properties of the film. The transparent top layer, which is coated on top of the imaging forming layer, has a high glass transition temperature, which is both heat conductive and chemically stable to heat. The transparent bottom layer, which is coated on the bottom of the PET support, helps to prevent individual films from sticking to each other. The recording on DirectVista Film is created by a thermal printhead in Codonics printers. The recording does not require any wet chemical processing.

### **4. Health and Safety:**

**4.1 General:** DirectVista Film will not cause any special health or safety hazards when used as intended.

**4.2 Health Aspects:** Under normal transport, storage, and use conditions, no harmful concentrations of volatile components are released from DirectVista Film. No wet chemicals are used in the imaging process.

#### **4.3 Fire Hazard and Media Extinguishment:**

**4.3.1** The film support layer of DirectVista Film is made of polyethylene terephthalate and meets the "Safety Film" specifications

as described in ANSI/ISO 543-1990. Safety film passes the ignition test when ignition time is = 10 minutes.

It passes the burning time test when the burning time is > 45 seconds for a film thickness = 0.08 mm or when the burning time is > 30 seconds for a film thickness < 0.08 mm. DirectVista Film is approximately 0.20 mm thick.

The nature of any combustion products is dependent on the physical properties of the combustion process and on the degree of combustion, whereby different gases can be generated, such as water vapor, carbon dioxide, carbon monoxide, and small concentrations of organic and inorganic degradation products.

**4.3.2** Combustion of DirectVista Film can lead to the formation of gases similar in composition to the volatile organic and inorganic degradation products of the polyethylene terephthalate support layer.

**4.3.3** Fire extinguishing media: water spray, carbon dioxide, extinguishing powder or foam.

## **5. Waste Disposal:**

Regulations concerning waste disposal differ from country to country. Please consult the local regulations on this subject. In most countries, DirectVista Film is considered as industrial waste and consequently it is not allowed to be disposed of as household waste. Codonics recommends waste DirectVista Film be hauled away by a licensed company for silver reclamation. Waste DirectVista Film should be treated separately from conventional PET-based waste, when the later is subjected to PET recycling.

## **6. Transport and Labeling Regulations:**

DirectVista Film is an article as defined in 29 CFR1910.1200 and is thus not subject to the regulations on transport, labeling, health, safety, and environment that apply to chemical substances and preparations. Transboundary transport of silver-containing waste is subject to legislation based on the Basel Treaty and OECD Rules.

## **7. Storage:**

For specific information on storage conditions of DirectVista Film, please refer to the general instructions for use of this article.

## **8. Other Information:**

None

The information contained here is based on Codonics best knowledge and experience. This data sheet does not convey any warranty as to the properties of this article. The data sheet provides information pertaining to health, safety, and environmental concerns when the article is used as intended.

If there are additional questions or you require further assistance, please call us at 1-440-243-1198 and request to speak with the Quality Assurance Manager.

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