ASIA PACIFIC INDUSTRY GROUP CO., LIMITED
Tel +0086-551-64687285
Email sales@boppfilmsales.com
www.boppfilmsales.com · www.apigcl.com

thermal transfer ribbons& thermal transfer labels
热转印碳带与热转印标签

Document No. 文件编号	Revision 版本	Issue date 签发日期	Document type 文件类型
APIG-PDS-LBR-012-2026	**Rev. 1.0**	**2026-11-07**	**Product Data Sheet / 产品规格书**

Self adhesive label stock BOPP / PET, for label and barcode printing, supply to TTR and barcode ribbon converters.
自粘标签材料 BOPP/PET，用于标签与条码打印，供应TTR与条码碳带加工商。

1. TECHNICAL PROPERTIES 技术参数

Property 项目 Specification 规格	
Thickness 厚度	50 / 60 / 70 / 80 μm (film)
Material 材质	BOPP / PET / BOPA label stock
Adhesive	Water based acrylic, permanent / removable
Surface	Glossy or matte thermal transfer printable
Width 幅宽	60 - 1,000 mm (jumbo roll)
Roll length 卷长	1,000 - 4,000 m
Core	76 mm (3 inch) / 40 mm
Barcode	Wax, resin and ribbon compatible

2. TYPICAL APPLICATIONS 典型应用

Self adhesive labels, barcode ribbon stock, variable data printing

3. PRODUCT DESCRIPTION 产品说明

Understanding Thermal Transfer Ribbons
热转印碳带与热转印标签，标签膜厚度 50/60/70/80 μm，基材可选 BOPP/PET/BOPA。

Thermal transfer printer alongside different thermal transfer ribbon choices

If you're planning to print labels with a thermal transfer printer, you're going to need thermal transfer ribbons in addition to thermal transfer labels. Here's everything you need to know about selecting the right thermal transfer ribbon for your printer and project.

Ribbon Type / Wind Direction

Wind directions of CSO vs CSI thermal transfer ribbons

You may notice when shopping for printer ribbons that there are two categories: coated side out (CSO) and coated side in (CSI). This refers to where the ink coating is placed on the ribbons. It affects how they're wound and fed through the printer – most printers can only take one style or the other.

Coated Side Out (CSO) Ribbons

Coated side out ribbons are printing ribbons that have the ink coating facing outside. Zebra® thermal transfer printers typically use this type of ribbon. You'll notice that the ink is on the outside of the ribbon roll and that it unrolls from the bottom before making contact with the print-head and label.

To correctly insert this ribbon type into your printer, unroll it from the bottom and feed it underneath.

Shop CSO Ribbons

Coated Side In (CSI) Ribbons

Coated side in ribbons are printing ribbons that have the ink facing inside. Datamax® and Sato® thermal transfer printers most commonly use CSI ribbons. You'll notice that the ink is on the inside of the ribbon roll and that it unrolls from the top before making contact with the print-head and label.

To correctly insert this ribbon type into your printer, unroll it from the top and feed it over.

Shop CSI Ribbons

You can also determine your ribbon type/wind direction using the tape test: Stick a piece of tape to the outside of your ribbon roll. After a few seconds, peel the tape off. If ink sticks to the tape, you were using a CSO ribbon. If no ink sticks to the tape, you were using a CSI ribbon.

Ribbon Size

There are a couple of criteria to consider when selecting a thermal transfer ribbon size. They are:

Label width

Pick the ribbon width closest to that of your most commonly used label. For example, if you're printing a 2.5 inch wide label, you should purchase a 3.27 inch ribbon as opposed to a 4.33 inch one. Any unused ink on the thermal transfer ribbon will go to waste otherwise. You should also be conscious to buy a width that fits in your printer.

Ribbon length

Typically, ribbons with a shorter length are intended for desktop thermal transfer printers while the longer lengths are intended for industrial ones. Our ribbons range from 243 feet to 1,476 feet.

Core size

Smaller printers don't have as much space to accommodate larger ribbon cores. While a 1 inch core is standard, smaller printers use a 0.5 inch core.

Is your label size the best fit for your project? Our selection of thermal transfer roll labels includes more than 75 unique label sizes for both 1 inch and 3 inch core sizes.

Ribbon Material

Once you've identified compatible ribbon choices and CHOOSE a size, it's time to CHOOSE the ribbon material best suited for your application. What you use the labels for will determine the strength and durability you need from your thermal transfer ribbon. Finding the right printing ribbon can be an important step in ensuring your labels are scannable, readable, and reliable.

There are three main categories: resin-enhanced wax (aka full wax), durable wax-resin (aka wax-resin), and full resin (not currently available at OnlineLabels.com).

Resin-Enhanced Wax Ribbons (aka Full Wax)

Transparency test of resin-enhanced wax thermal ribbons

A full wax thermal transfer ribbon is coated with a wax-based ink.

Resin-enhanced wax ribbons are the most economic choice of thermal ribbons. They are ideal for basic, general uses such as shipping and retail labels. Their full wax composition requires a lower melting temperature resulting in a lighter print. It's less durable but also less expensive.

Key Facts

Most common type of thermal transfer ribbon

Recommended for coated and uncoated paper stock

Softer image durability

Inexpensive

Good for shipping, shelf, bin, retail, and warehouse labels

Ideal for short-term/temporary use

Can hold up to indoor use

Durable Wax-Resin Ribbons (aka Wax-Resin)

Transparency test of durable wax-resin thermal ribbons

A wax-resin thermal transfer ribbon is coated with a combination of wax and resin.

Wax-resin thermal transfer ribbons are more durable than the full wax of resin-enhanced ribbons. They provide excellent resistance to scratching, abrasion, and contact with moisture and create sharp and clear images on a wide range of material types.

These ribbons are the perfect choice for printing labels that will be exposed to extreme conditions such as industrial refrigerators and freezers, as well as for applications that involve heavy or frequent handling.

Key Facts

Ideal for both standard and weatherproof thermal transfer labels

Harder printed area than full wax; more resistant to occasional heavy handling, moisture, and temperature changes

Intermediate price bracket

Good for barcode, shipping, prescription pharmaceutical, and shelf labels

Ideal for medium-term/standard use

Can withstand indoor use, moisture, handling, scratching, abrasion, sunlight, and moderate temperature changes

Full Resin Ribbons

Transparency test of resin thermal ribbons

A full resin thermal transfer ribbon is coated with a resin-based ink.

Full resin thermal transfer printer ribbons are made of pure resin. They melt at a much higher temperature, dissolving into the material on which they're printed, resulting in extreme durability.

Unlike certain situations where having the top-of-the-line product is better than an economy version, full resin ribbons can be overkill when the situation doesn't call for it. You should likely bypass them for either of the more economic options detailed above if your project doesn't necessitate their durability.

Key Facts

Most expensive ribbon type

For use on non-paper, synthetic stocks

Most durable of the ribbon types

Good for medical applications, chemicals, textiles or garments, automotive, and flexible packaging

Ideal for long-term/permanent use

Can endure indoor use, moisture, handling, scratching, abrasion, sunlight, extreme temperature changes, water, chemicals, medical machinery, outdoors, and UV exposure

Remember to consider the label material, too. We offer a variety of thermal transfer label materials, including standard white, removable, and weatherproof.

Ribbon Quantity

When you're printing large quantities or are on a tight timeline, we'd hate for you to run out of ribbon in the middle of your project. Use our thermal ribbon calculator to determine how many ribbons your project will require. Select the label product number, label material, the number of label rolls you have, and your ribbon product number, then let the calculator do the rest.

Ribbon/Printer Compatibility

Below, you can view a list of which printer brands and models are compatible with our selection of thermal transfer ribbons. Jump to: Zebra, Datamax, or Sato.

CSO Thermal Ribbons for Zebra® Printers

Printer ModelTR2181TR2182TR2183TR2622TR2623TR3101TR3653TR3654

Zebra® 105SL Plus●●●●●●●

Zebra® 110Xi4●●●●●●●

Zebra® 140Xi4●●●●●●●

Zebra® 170Xi4●●●●●●●

Zebra® 220Xi4●●●●●●●

Zebra® GC420t●

Zebra® GK420t●

Zebra® GX420t●

Zebra® GX430t●

Zebra® ZM400●●●●●●●

Zebra® ZM600●●●●●

Zebra® ZT220●●

Zebra® ZT230●●●●●●●

CSI Thermal Ribbons for Datamax® Printers

Printer ModelTR2624TR2625TR2626TR2631

Datamax® E-4204B●

Datamax® E-4205A●

Datamax® E-4206L●

Datamax® E-4206P●

Datamax® E-4304B●

Datamax® E-4305A●

Datamax® E-4305L●

Datamax® H-4212●●●

Datamax® H-4212X●●●

Datamax® H-4310●●●

Datamax® H-4310X●●●

Datamax® H-4408●●●

Datamax® H-4606●●●

Datamax® H-4606X●●●

Datamax® H-6210●●●

Datamax® H-6212X●●●

Datamax® H-6308●●●

Datamax® H-6310X●●●

Datamax® H-8308X●●●

Datamax® I-4212e●●●

Datamax® I-4310●●●

Datamax® I-4606●●●

Datamax® M-4206●●●

Datamax® M-4210●●●

Datamax® M-4308●●●

Datamax® p1115●●●

Datamax® p1115s●●●

Datamax® p1125●●●

Datamax® p1725●●●

CSI Thermal Ribbons for Sato® Printers

Printer ModelTR2628TR2630

Sato® CL408e●●

Sato® CL412e●●

Sato® CL608e●●

Sato® CL612e●●

Sato® GL408e●●

Sato® GL412e●●

Sato® GT408e●●

Sato® GT412e●●

Sato® GT424e●●

Sato® LM408e●●

Sato® LM412e●●

Sato® M84Pro●●

Sato® X-2000V●

Sato® X-2300ZE●

Hopefully the information provided here will make selecting the proper transfer ribbon a little less daunting. If you need any additional assistance choosing a ribbon, please feel free to contact our customer service department for guidance.

5. HS CODE & REMARKS 海关编码与备注

Item 项目 Value 内容	
HS Code 海关编码	4821900000
Product Code 产品编号	APIG-LBR-012

Values above are the supply range published on this product page; blank cells are to be supplied. No test value, certificate number or customer name has been added.
上表为本站产品页已公布的供货范围值；空白项为待补。未添加任何检测数值、认证编号或客户名称。