

Agfa Thermostar

Thermostar P970
Thermostar P971



Thermal plates that bring you new speed and convenience

Thermostar plates set a new standard for high-quality thermal imaging and give your pressroom the steady stream of high-quality plates it needs to stay productive and profitable. They integrate seamlessly with the world's leading thermal computer-to-plate systems, and bring the convenience of daylight operation to any environment.

No other thermal plate outruns it

Thermostar plates bring new efficiency to your computer-to-plate workflow. They do not require pre-heating or special handling. And best of all, they come from Agfa, the world leader in plate manufacturing. So you can be assured of the highest consistency. For high-performance, high-quality thermal plates — choose Agfa Thermostar.



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Agfa Thermostar: The smart choice for long-run thermal plates

Thermostar plates are positive-acting plates based on innovative thermal technology developed and patented by Agfa.

Aluminum substrate

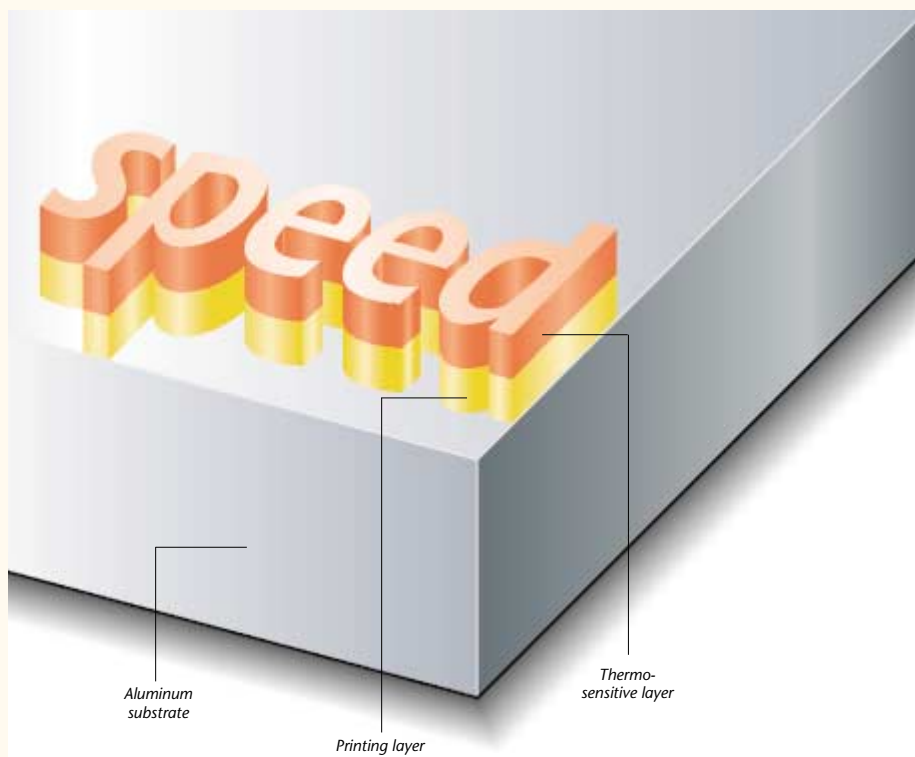
Thermostar starts with a state-of-the-art aluminum substrate that provides the level of rigidity appropriate for most press runs. The substrate is made of electrochemically grained and anodized aluminum manufactured to exacting tolerances and known for its excellent lithographic performance.

Printing layer

The first coating layer is a hydrophobic polymer that is insensitive to light of any wavelength. It provides the basis for Thermostar's lithographic behaviour, long run lengths without baking, and the ability to be developed using standard aqueous alkaline developer for conventional positive plates.

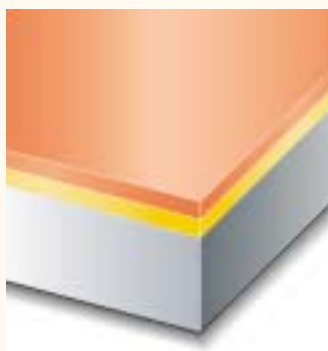
Thermo-sensitive layer

The top layer is less than a micron thick — or 100 times thinner than a human hair — and highly sensitive to infrared light. The high IR sensitivity of this layer makes extremely fast imaging speeds possible, since it takes less laser time to expose the plate. During exposure, the high-power laser causes a heat-induced conversion to take place in the top layer — hence the name thermal imaging.



A simple development process

Thermostar P970 is sensitized for 830 nm, while Thermostar P971 is sensitized for 1064 – 1080 nm. However, all Thermostar plates use the same exposure and development process. Put simply, alkaline developers can penetrate exposed areas, while unexposed areas are masked by the top layer, which keeps the developer from penetrating. The result is a sharp delineation between exposed and unexposed areas, creating high-resolution plates capable of capturing the finest details.



A closer look at Thermostar



Step 1: Exposure

The IR absorber in the top layer converts light to heat, which deforms the layer, and alters the wetting behaviour to alkaline developers. This allows the developer to diffuse through the top layer, and then dissolve the bottom layer. The unexposed areas remain less soluble to the developer, with the top layer acting as a mask.



Step 2: Development

Immersion in alkaline developer removes both layers in the exposed areas.



Step 3: Finishing

The plate is finished with a standard gum.

Agfa Thermostar

Agfa Thermostar is designed to meet the needs of today's printers — performance, ease-of-use, quality, and consistency. Thermostar thermal plates can be used in all leading thermal computer-to-plate systems (830 nm and 1064 – 1080 nm) with the same excellent results. Only Thermostar plates bring so many powerful benefits to your printing operation.

Fast performance

Thermostar plates can be imaged and processed extremely quickly, ensuring a steady stream of plates to the press. Our engineering team applied Agfa's decades of expertise in coating and dye technology to the challenges of thermal platesetting. The result is Thermostar, an extremely fast plate that achieves the highest level of quality.

High-quality results

Thermostar plates can achieve 1 to 99 percent dot resolutions at 200 lpi, making them appropriate for a wide range of high-quality applications — including stochastic screening. And the latent image on Thermostar plates is extremely stable, ensuring high-quality results. In fact, plates can be processed hours after exposure with no adverse effects — enabling you to process plates when it is most convenient to your workflow.

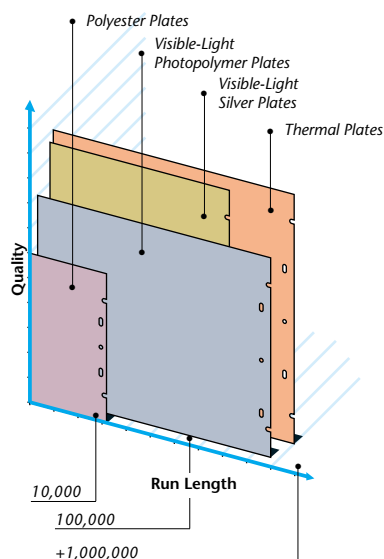
Designed for easy use

Although the technology behind Thermostar may sound sophisticated, in reality it is remarkably simple, enabling new levels of consistency. Thermostar plates are easy to image and process under convenient daylight conditions, eliminating safelights and separate work areas. Plus, Thermostar plates use conventional wet processing and standard positive plate developer. Your pressmen will appreciate how Agfa thermal plates behave like all lithographic plates on press, and that they can mix them with traditional plates without adjustment.

Optimized for use with the Xcalibur

At Agfa, we design and manufacture innovative digital plate imaging systems as well as the plates that they image. More than a thousand engineers and scientists around the world collaborate on all aspects of our platesetters, plates and processors, ensuring an integrated computer-to-plate solution. Our engineers fine-tuned Agfa Thermostar P970 together with the Xcalibur 45 and Xcalibur VLF platesetters to give the hardest dot possible, the highest resolution and the best performance on press.

Agfa offers the broadest line of plates in the industry, including polyester, photopolymer, silver halide, and thermal plates. So you can choose the Agfa plate that meets your quality and run length requirements. And to extend our leadership, we continually push the boundaries of consistency and quality with new plate technologies.



When you choose Agfa for thermal plates, you benefit from our wide-ranging expertise in traditional and digital plates, PDF workflows, imagesetting, computer-to-plate systems and much more. We know what printers need — and ensure that our products meet those needs. Agfa provides advanced technology and powerful solutions that enable printers to move into computer-to-plate workflows with complete confidence.



Integrated with leading platesetters

Agfa also works with the world's other platesetter manufacturers to ensure that our plates are compatible with their platesetters. The broad range of imaging technologies covered by Agfa Thermostar ensures excellent results with any thermal computer-to-plate solution. No matter what type of thermal imaging system your platesetter uses, Thermostar provides high-resolution, reliable results.

An ecological approach to processing

Agfa Thermostar processors are highly stable, user-friendly, low-maintenance systems ideally suited for processing Thermostar plates. The latest line of Autolith TP processors are designed primarily for online configurations. They have the most up-to-date control system to ensure optimum chemical usage, reducing waste. Maintenance and troubleshooting are aided by the state-of-the-art Androdiags software, which enables remote diagnostics.

This capability enhances service and support by allowing Agfa's technical specialists to assist you at any time of day. For offline configurations, choose the simple Autolith T processor, which is based on the proven Autolith PN analogue processor.

Great results on press

Agfa Thermostar is designed to get ideal results on press with minimal adjustment, lowering labor costs and simplifying operation. Your press operator can mix Thermostar plates with conventional plates. And with Agfa Thermostar, every job benefits from a high-resolution thermal plate that makes it easy to achieve great results.



Thermostar P970 is optimized for use with Agfa's new external drum platesetters Xcalibur4S & Xcalibur VLF.

Choose the right Thermostar plate

Our Thermostar family of thermal plates meets the needs of the world's leading thermal computer-to-plate systems. It includes thermal plates sensitized to the most common thermal imaging wavelengths — 830 nm and 1064 – 1080 nm. And they provide excellent imaging qualities and printing characteristics.

• **Thermostar P970**

Thermostar P970 is a positive-acting plate designed for computer-to-plate systems using infrared laser diode imaging systems operating at 830 nm, such as the Agfa Xcalibur computer-to-plate system. Thermostar P970 is one of the fastest imaging thermal plates available. Thermostar P970 is designed for commercial printing applications of medium run lengths, and can achieve up to 150,000 impressions without baking. Optional post-baking after processing enables press runs of more than one million impressions.

• **Thermostar P971**

Thermostar P971 is designed for use with platesetters using high-power infrared thermal imaging systems (1064 – 1080 nm), such as the Agfa Galileo Thermal S Plate Manufacturing System. Thermostar P971 is based on the same innovative two-layer coating technology as Thermostar P970, and offers the same powerful benefits — fast imaging, convenient handling, and excellent press performance.

	Thermostar P970	Thermostar P971
<i>Laser sensitivity</i>	830 nm	1064 – 1080 nm
<i>Run length (without baking)*</i>	up to 150,000	up to 150,000
<i>Run length (with baking)</i>	1,000,000+	1,000,000+

*depending on press conditions and image content

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All product specifications are subject to change without notice. Appearance of equipment ordered may differ from that of equipment shown in photographs.

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Thermostar product specifications

Feature	Thermostar
Plate type	Thermally exposed aluminum laser plate for sheet and web offset
Coating	Two-layer system, infrared sensitive, positive acting
Gauges	0.15 mm, 0.20 mm, 0.24 mm, 0.30 mm, 0.40 mm, 0.5mm 0.006", 0.008", 0.010", 0.012", 0.016", 0.020"
Sizes	1500 x 2000 in 0.40 mm 1483 x 2000 in 0.30 mm
Spectral sensitivity	830 nm (P970), 1064 – 1080 nm (P971)
Exposure energy	135 mJ/cm2 (P970), 120 mJ/cm2 (P971)
Resolution	1 – 99 percent dot rendering at 200 lpi
Image color	Bright blue (P971), Blue-green (P970)
Processing steps	Conventional wet processing using standard positive plate developer
Development	Dwell time in developer bath: 22 ± 4 seconds
Processor speed	0.7 – 1.2 meters per minute
Temperature	25 ± 3°C (77 ± 5°F)
Replenishment rate	100 ml/m² (depending on usage)
Run length*	150,000 without post-baking, 1 million+ with baking (Recommended in North America)
Lighting conditions	Daylight
Storage conditions	Thermostar plates should be stored in the original container under ambient conditions of less than 30°C (86°F) and 30 – 70% relative humidity

* Depending on press conditions and image content

The smart choice for digital plates

Every day, more pages are imaged on Agfa plates than any other type of plate. Agfa offers the broadest line of digital plates in the industry, including thermal (Thermostar), thermal non-ablative processless (Thermolite Plus), silver halide (Lithostar Ultra), photopolymer (N91), and polyester (Setprint) plates. So you can choose the Agfa plate that meets your quality and run length requirements. To extend our plate leadership, we continually push the boundaries of consistency and quality with new plate technologies.

The world’s choice for computer-to-plate solutions

Only Agfa offers the full range of platesetters, plates, processors, RIPs, screening technologies, digital proofing solutions, workflow expertise, and other prepress systems and consumables necessary for your success. For complete, high-quality platesetting solutions that give you a choice, look to Agfa — the world leader in computer-to-plate technology and expertise.

