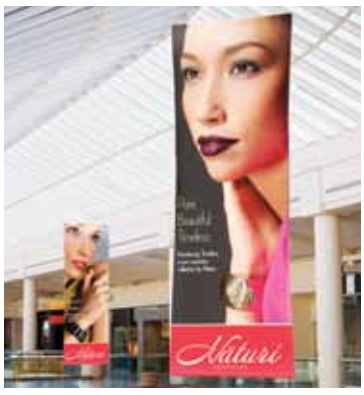
Progressive, Profitable Printing

SHIFT YOUR THINKING

about **vinyl banner material—**

and **SHIFT YOUR OPPORTUNITY FOR GROWTH**

into high gear



Are you thinking about new ways to grow your business? Perhaps looking to attract—and win—the business of environmentally conscious customers? To support your goals, HP has been hard at work. We're leading the greening of sign and display printing by providing innovative technologies that reduce the impact of printing on the environment. And we're developing innovative HP printing materials solutions to help you find new growth opportunities for your business. HP HDPE Reinforced Banner is an excellent example of the HP commitment to providing a high-performance PVC scrim banner alternative with a better environmental profile.

The performance and strength of 440 g/m^2 (13-ounce) PVC scrim[1] in a 180 g/m^2 (5.5-ounce) banner material

It's no surprise that PVC scrim is used so broadly for such a wide range of banner applications from advertisements to billboards and building wraps. This cost-effective, uncoated substrate produces flexible, durable, vivid outdoor displays. However, print service providers are increasingly looking for alternatives that not only offer this performance and durability, but also appeal to environmentally conscious customers who are looking for ways to reduce the impact of printing on the environment.

HP HDPE Reinforced Banner is a 100% recyclable,[2] 100% alternative to PVC scrim banner material

This tough, lightweight woven High Density Polyethylene (HDPE) banner material is designed to withstand harsh weather conditions without fading and losing vibrancy. The performance provides temperature-, tear-, and weather-resistance for great outdoor durability. At a competitive price, lightweight HP HDPE Reinforced Banner offers the strength of 440 g/m^2 (13-ounce) vinyl and helps reduce the impact of printing on the environment, making it a compelling alternative to traditional PVC scrim banner material.

Attribute	HP HDPE Reinforced Banner 180 g/m^2 (5.5 oz)
Image-quality performance	Comparable to PVC scrim banner material(1
Display permanence	Up to 1 year outdoors, unlaminated using HP Latex Inks(8 See **www.hp.com/go/supplies/printpermanence**
Tensile strength **N /50 mm** **N /2 in**	870 N (MD)/1000 N (CD)
Maximum stress (MPa)	91.8
Tear strength (N)	47.0
Carbon footprint impact	Up to two-thirds less than performance-equivalent 440 g/m^2 (13-ounce) PVC scrim(6
Transportation cost impact	Reduce costs, per square foot of material, by about half(4
Recyclability/disposability	Free, convenient recycling in the U.S., Europe, and Canada (as of June 1, 2010) through the HP Large-format Media take-back program(2 See **www.hp.com/recycle** Keep prints out of landfill. State-of-the-art HP processes ensure that the plastics and fibers used in eligible HP printing materials are recycled in a way that conserves resources and reduces the environmental impact of printing.
Installation	Lightweight material facilitates easy installation Can be sewn, grommeted and welded with heat, back-to-back(9
List price	New lower U.S. list (WW reference) price is approximately $0.23 per square foot, making this a competitive alternative to vinyl in both price and performance(1

For the latest ICC/media profiles, please visit **www.hp.com/go/paperpresets** (click on ICC profiles and select your printer). For non-postscript printers see your external RIP vendor.

(1 All references to "PVC" in this document refer to polyvinyl chloride (PVC) substrates. Comparison is to 440 g/m^2 (13-ounce) HP Outdoor Frontlit Scrim Banner and a range of polyvinyl chloride scrim products available worldwide as of April 15, 2010 and offered by well-known brands including Ultraflex (Normandy Pro), Endutex (Print XL), and LG (Vizuon Bannux).

(2 HP offers the HP Large-format Media take-back program in the U.S., Europe, and Canada (as of June 1, 2010) through which most HP recyclable signage media can be returned, availability varies. Some recyclable papers can be recycled through commonly available recycling programs. For details visit **www.hp.com/recycle**. Aside from this program, recycling opportunities for these products are currently only available in limited areas. Customers should consult local recycling resources for recycling these products.

(3 In many European countries such as the United Kingdom, there is a Landfill Tax payable on waste disposed of at landfills. The Tax is regulated by HM Revenue and Customs. Tax on active waste amounts to £40/tonne (+VAT) in 2009-2010 and is set to increase £8 /per year to 2013. According to **www.defra.gov.uk/environment/waste/topics/**, this is becoming a Standard practice for other EU countries **www.cewep.com/data/landfill/index.html**

(4 Based on the transportation cost per square foot of material comparing a 30-roll pallet of HP HDPE Reinforced Banner (1067 mm x 45,7 m/42 in x 150 ft rolls, 888 lbs, 15750 ft^2 of material) and a 20-roll pallet of HP Outdoor Frontlit Scrim Banner (1067 mm x 35 m/42 in x 115 ft, 844 lbs, 8050 ft^2 of material); using FedEx National shipping rates (Standard Service) from San Diego, California to New York, New York of $4.08 per lb for 888 lbs and $4.25 per lb for 844 lbs. Ground transportation costs vary by region and ship-to location.

(5 Depending on the size of the output and the particular printed application.

(6 Calculation by the HP IPG Environmental Technology Platform Team (and confirmed by an independent environmental life cycle assessment firm), based on the activities associated with the manufacturing of the product, and comparing 180 g/m^2 (5.5-ounce) HP HDPE Reinforced Banner to 440 g/m^2 (13-ounce) HP Outdoor Frontlit Scrim Banner using the Swiss Center for Life Cycle Inventories Ecoinvent 2.0 database and model IPCC 2007 version 1.01; primarily for the category of PVC/PET/HDPE, and measuring materials extraction, transportation to the manufacturing site, and greenhouse gas emissions generated during manufacturing.

(7 For applications compatible with HP HDPE Reinforced Banner as an alternative to polyvinyl chloride (PVC) scrim banner material.

(8 HP image permanence estimates by HP Image Permanence Lab. Outdoor display permanence tested according to SAE J2527 on a range of media, including HP media; in a vertical display orientation in simulated nominal outdoor display conditions for select high and low climates, including exposure to direct sunlight and water; performance may vary as environmental conditions change. Results may vary based on specific media performance.

(9 RF welding is not compatible.

CONSIDER THE BENEFITS

Strength, durability, image quality

At 180 g/m^2 (5.5 ounces), HP HDPE Reinforced Banner offers strength greater than or equal to 440 g/m^2 (13-ounce) PVC scrim products. With the proprietary HP media surface-treatment technology that delivers both durability and sharp, vivid image quality, there is no trade-off in performance.

PVC scrim banner material is typically used for display applications that require strength and durability, especially outdoors. The lighter-weight HP HDPE alternative has benefits in terms of installation, transportation, and disposal costs, while still meeting the basic performance demands around image quality and durability. And with a look and feel quite different from PVC scrim—actually more similar to re-usable shopping bags—your customers may come to associate your HP HDPE Reinforced Banners with other environmentally responsible options.

Keep material out of landfill

HP HDPE Reinforced Banner is eligible for free, convenient recycling through the HP Large-format Media take-back program.[2]

Most flexible PVC scrim is disposed of in landfills. Polyvinyl chloride, or PVC, is a polymer with a number of characteristics that make recycling or incineration difficult. For example, more than half of the content by weight consists of chlorine, which may lead to dioxin formation with uncontrolled incineration. With the addition of modifiers such as plasticizers and stabilizers, up to 80% of the materials in PVC scrim banner materials pose incineration and recycling challenges. PVC scrim is very durable and may last over 20 years in a landfill. As landfill taxes become more common, and the rates increase, disposal cost considerations are becoming more important.[3]

Lighter weight, lower transportation costs

At less than half the weight of most standard PVC scrim, you can reduce your transportation costs by about half.[4]

Substrate weight can have a big impact on installation, transportation, and disposal costs. A substantial difference in weight can mean it takes fewer people to install displays.[5] The difference also impacts the sheer volume of raw material used and disposed. And less weight can translate into lower transportation costs—you can reduce the transportation cost, per square foot of material, by about half.[4]

Lower carbon footprint

You can reduce the carbon footprint of your banner printing material by up to two-thirds using 180 g/m^2 (5.5-ounce) HP HDPE Reinforced Banner compared to using a performance-equivalent 440 g/m^2 (13-ounce) PVC scrim banner material.[6]

When you can choose a lighter banner material that performs as well as traditional 440 g/m^2 (13-ounce) PVC scrim banner, you not only use less material, but you can also substantially reduce the carbon footprint of your banner printing material in terms of greenhouse gas emissions associated with the manufacture of the substrate.[6,7]

WHEN YOU'RE TALKING ABOUT TONS, A FEW GRAMS MAKE ALL THE DIFFERENCE

Surprise your customers, and yourself, with the range of benefits you get using HP HDPE Reinforced Banner. This lightweight 180 g/m^2 (5.5-ounce) material offers the strength of 440 g/m^2 (13-ounce) PVC scrim. With this combination, you can produce signage suited to the rough-and-ready demands of banner displays, and at the same time you can reduce your raw material consumption, lower your transportation and disposal costs,[3,4] and reduce the carbon footprint of your banner printing material.[6,7] Recyclable through the HP Large-format Media take-back program,[2] and designed together with Original HP Latex, solvent, and UV-curable inks, HP HDPE Reinforced Banner helps you—and your customers—go green.

HP HDPE Reinforced Banner is available in a variety of sizes and is compatible with HP Latex, solvent, and UV-curable inks:

CG414A	914 mm x 45,7 m (36 in x 150 ft)
CG415A	1067 mm x 45,7 m (42 in x 150 ft)
CG416A	1524 mm x 45,7 m (60 in x 150 ft)
CG417A	2642 mm x 100,6 m (104 in x 330 ft)

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