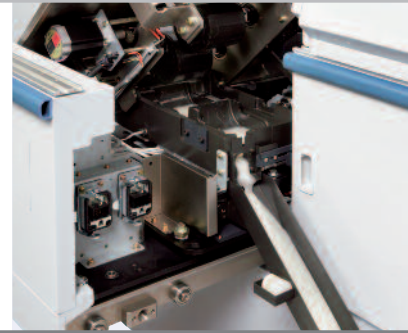


## Binders Designed for PUR Glue

Standard Horizon offers a range of perfect binders specially designed to accommodate the unique requirements of PUR adhesive. Binders feature a variety of PUR glue delivery systems, spine preparation specific to PUR binding, and gentle post-binding delivery to ensure quality finished products. PUR replacement and cleanup is also fast and easy for minimal interruption to productivity.



Superior binding strength and lay-flat documents

# PUR...What Is It and Why Should I Care?

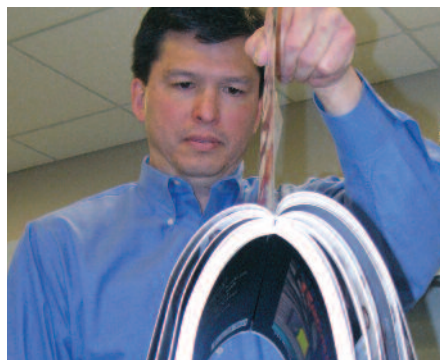


Greg Nakanishi, Standard senior technical service engineer performs a changeover on the Horizon BQ-470PUR.

**Polyurethane Reactive, commonly referred to as PUR, is a polyurethane-based adhesive that is attracting popular attention due to superior binding strength, flexibility and eco-friendly nature.**

## Growing Demand

There is a growing demand for digital color book binding, with much of the imaging being done on high gloss paper stock. Conventional EVA hot-melt glue has difficulty creating a strong bind on coated stocks and generally has poor lay-flat qualities. However, PUR hot-melt glue can provide superior bind strength and lay-flat of offset and digitally-imaged sheets printed on a wide range of coated stocks. PUR bound books also outperform their EVA counterparts in their ability to maintain integrity of the bind under extreme temperatures, from -4° to 248° F for PUR versus 32° to 140° F for EVA. What does all this mean? For example, an EVA-bound snowmobile user manual might become brittle in winter, while pages might fall out of a car manual that's been baking in a glove-box during the heat of summer.



## Superior Binding Strength

PUR also provides superior binding strength versus EVA adhesives, and has page-pull and page flex ratings that can be 40 to 60% higher. Uncured PUR is thermoplastic in nature; it reacts with the moisture in the air and within the paper stock to create a strong cross-linking bind that is resistive to re-melting. PUR is applied in a much thinner layer, so usage per book is less than EVA. The thin

application and flexible nature of cured PUR enables books to open more easily to the gutter and lay flatter, preventing the book or pages from turning or closing prematurely. PUR is less affected by the wide variety of inks, varnishes, oils and solvents that can migrate into the glue line and cause EVA adhesives to fail. Additionally, PUR will create a superior bind on certain substrates such as coated stocks, photographic papers, recycled stocks, cross-grained stocks, acetates, and digitally imaged stocks. Although most PUR adhesives are very versatile, it is always best to discuss your applications and binding system with your adhesive supplier to insure that you are using the right adhesive for the best results.

## Environmentally Friendly

PUR scores points in terms of environmental friendliness too. PUR-bound books are fully recyclable, whereas EVA glue must be separated from the paper. Energy conservation is another plus, since PUR is applied at 248° F whereas many EVA hot-melts are applied at higher temperatures.

If there is a drawback to PUR versus EVA, it is that the books generally require a longer cure time prior to three-knife trimming or handling of the books for operations such as casing-in and packaging. EVA sets-up very quickly, so books can be trimmed and shipped almost immediately after binding. Many of today's PUR products will set sufficiently for trimming in a matter of minutes, but full cure time will vary widely depending upon a number of factors such as: binding substrates, book thickness, available moisture in the air and paper stock, as well as the specific adhesive being used. However if you are looking for a stronger, more flexible bind on a wide range of substrates, PUR just might be the answer.