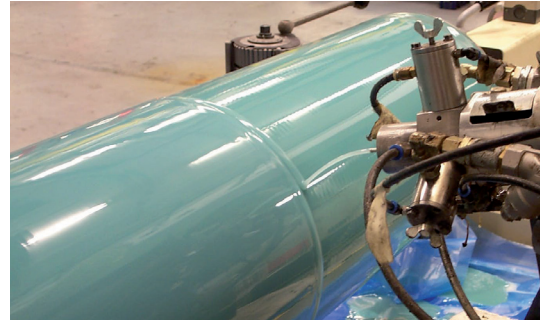


# Excellence in Metal Coating

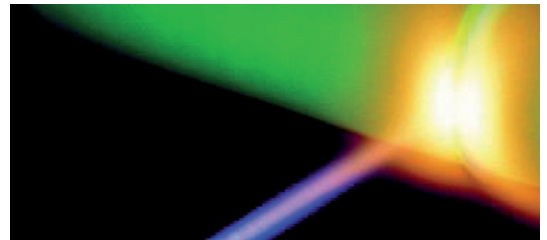
## New Generation Coating Cylinder Coverings from Böttcher

The Böttcher Group, with 20 production plants spread all over the globe, is committed to supporting the canmaking industry with innovative products and global technical support. Besides printing rollers, washes, fountain solution additives and blankets for metal decorating, Böttcher offers a full range of rubber and polyurethane compounds for coating cylinders. Coverings are available in durometers from 40 to 60 Shore A in rubber and from 50 to 60 Shore A in polyurethane.



Böttcher supplies both fully covered cylinders and coverings grooved to your specifications (both axial and radial grooves).

In addition, we can supply laser-engraved cylinder coverings for spot varnishing (closures), which significantly reduce the coating consumption. Your local Böttcher representative can supply you with all the relevant details with regard to profiling.



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### Chemical Trends and Demands

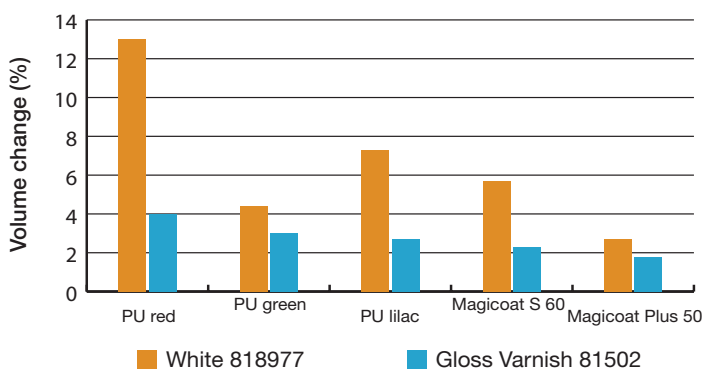
Today, the application of coatings in the canmaking process is a highly complex and critical operation: besides the function of protecting and maintaining the quality of the packed goods, can coatings are subject to an increased sensitivity of consumers, brand owners and regulators to the chemical interaction between canned foods and beverages and the coating materials. This has led to repeated changes in the constituents which can be used in coatings for metal packaging.

These changes represent new challenges for both canmakers and the suppliers of coatings and applicator rollers. A recent example is the removal of BPA from many packaging coatings (mandatory in some countries, voluntary in other cases). The substitution of other materials for the epoxy systems previously used has altered the chemical balance between the roller compounds and the coating materials, leading in many cases to problems with roller swelling.

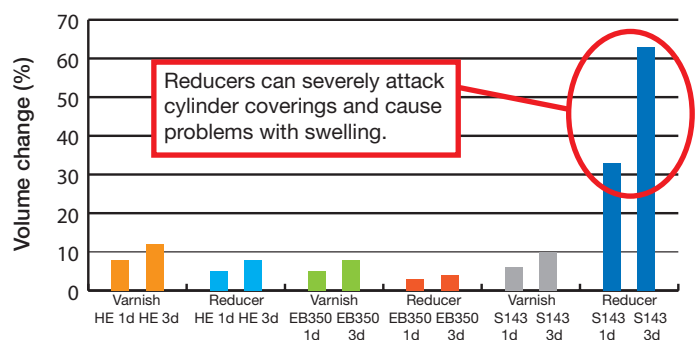
The Böttcher Group has worked closely with both canmakers and coatings manufacturers to develop roller coverings which have optimum chemical resistance to the new BPA-free or BPA-NI coatings.

These new roller materials significantly reduce the effects of the coating on the elastomer covering, affording much more stable production conditions, longer roller life and a better and more even coating transfer. In many cases, it has been possible to replace the range of different roller compounds previously in use and standardize on one single compound with excellent tolerance towards practically all coatings and varnishes present at each site. To ensure that the very best compound for your particular application is selected, Böttcher backs its products up with a complimentary laboratory service which determines the compatibility of the different compounds with the coatings and varnishes used in your production process.

**Swell Rates in Different Coatings:  
Competitive Comparison**



**Swell Effects of Varnishes/  
Reducers on Coating Cylinders**



Since the shift towards BPA-free and BPA-NI coatings, a lot of plants have experienced problems with swelling, sheets sticking to the cylinder surface, etc.. Our compatibility tests ensure that you receive the best compound match for your particular mix of coatings.

As the chart above shows, not only the coatings themselves, but also the solvents used to clean the cylinder surface can severely swell the cylinder covering. Böttcher has developed a series of cleaning agents specifically designed to remove coating residue from rubber and polyurethane covered cylinders quickly and effectively, without damaging the covering.



The Vita range of products – tailored to the strict requirements placed on food and beverage packaging – has been independently tested and certified to conform with low migration standards, preventing contamination of the packaging and protecting its contents.



## Downgauging/Lightweighting: Cost and Competitiveness

„Please release me, let me go ...“ was a popular song around a generation ago, but this sentiment can now be appropriately applied to the thinner tinplate which is being introduced to reduce the material cost of metal packaging, making it more economically competitive, particularly when compared to plastic.

The problem is that – on coating lines without grippers – the thinner sheets have a tendency to adhere to the coating cylinder surface and follow it around, causing not only waste, but a high risk of mechanical damage to the machine. „Quick release“, a term better known from blanket technology, is now the order of the day for coating cylinder coverings. With experience in the design and supply of both rollers and blankets, Böttcher has the know-how to produce coating cylinders with quick release surfaces, which go a long way to eliminating the problem.



New chemical formulations backed up by new technology in surface finishing are the building blocks in these new generation roller coverings. These same features also significantly reduce the problem of edge swell and instability on grooved rollers: repeat and welding gaps remain open, even in the critical corner areas, avoiding waste and downtime for changing the coating cylinder.

And best of all: Böttcher’s new coating cylinder coverings are specially designed to make it easy for you to reproduce this quick release surface when re-grinding cylinders on your own equipment. Should you experience any problems at all in this respect, Böttcher will support you through highly trained surface finishing specialists who will help you fine-tune your grinding process to consistently achieve the best possible result.

Compound ( Rubber)	Application
Magicoat 726 40	Softer (40 Shore A) cylinder covering in EPDM
Magicoat 731 50	50 Shore A covering, excellent grindability, suitable for laser engraving
Magicoat 733 50	50 Shore A, exceptional swell resistance, suitable for laser engraving

Compound ( Polyurethane)	Application
Magicoat 50 Magicoat 55 Magicoat 60	For all coating and varnishing applications. Good transfer properties.
Magicoat S 50 Magicoat S 55 Magicoat S 60	Excellent mechanical properties, stable edges, low swell in BPA-NI coatings. Improved release properties for coating on low-gauge sheets.
Magicoat Plus 50	Top of the range for chemical resistance to all coatings, including BPA-NI. Excellent edge stability and sheet release.

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