

CAM PET the Revolution in Bottles

- + ***CAMPET® barrier technology for protecting the freshness of beverages***
- + ***KHS Plasmax revolutionizes beverage market with innovative process for clients and consumers***
- + ***76% of consumers would buy FreshSafe-PET®***
- + ***Environment: PET beats glass / New: CAMPET® integrates benefits of glass***

KHS Plasmax GmbH offers CAMPET® – the ultimate solution for premium beverages, which could well result in substantial changes in the beverage market segment over the coming years. The interior coating of PET bottles with a protective glass layer is the solution for more freshness, taste, and protection for mineral water and sensitive beverages such as juice, beer and wine. 76% of all consumers would buy bottles labeled with the CAMPET® logo. KHS Plasmax sets the course for the future, because the barrier technology can also be used for other packed products such as fruit, vegetables, and other foods.

In view of the market requirements for high-quality, fresh beverages, Hamburg-based KHS Plasmax, a member of the KHS group and 100% subsidiary of Salzgitter AG, focused on improving the barrier characteristics of PET bottles and other containers. The overriding aims of protecting delicate beverages even more effectively and to guarantee their freshness for customers even longer have been achieved. What seemed a long way off only a couple of years ago is now possible: CAMPET® combines the benefits of PET and glass bottles in a single product. The considerably improved protection of bottled products, in particular sensitive beverages, is a top sales argument. The vitamins contained in fruit juices are extremely well protected and preserved right up to consumption, the beverages have a longer shelf life, and the taste is retained for longer than in conventional PET containers. Because no additives are used, full recyclability of the crystal-clear bottles with the CAMPET® logo is guaranteed without restriction. This is a further strong argument for future large-scale production and distribution.

For the majority consumers the combination of optimum product protection, easier handling and sustainability aspects is becoming increasingly important.¹ KHS Plasmax recognized this development at an early stage. With the innovative barrier coating and the associated CAMPET® logo the company offers a compelling answer, both for beverage producers and consumers. These days, environmental criteria are an essential consideration for production in the food industry. The Plasmax technology with the CAMPET® logo from KHS Plasmax, which in 2012 was awarded the Italian packaging OSCAR, is a response to this trend: the efficient and sustainable glass coating of PET bottles can be very easily separated from the base material and the PET raw material during recycling. Even the coating itself is sustainable, since the InnoPET Plasmax packaging machines operate in a particularly resource-conserving manner: The barrier coating of the PET bottles uses a minimum amount of silicon oxide and can in fact even reduce PET consumption. One gram of silicon oxide is sufficient for coating around 500 bottles. In addition, thanks to their non-permeable coating, FreshSafe-PET®

bottles are even lighter than conventional PET bottles.

In late 2012 KHS commissioned a consumer study² to realistically assess the acceptance and thus the market opportunities for the FreshSafe-PET[®] solution. The study confirmed the very high acceptance of the PET barrier technology with the FreshSafe-PET[®] logo, which combines the benefits of glass containers with the benefits of PET bottles. The survey was based on a representative sample of about 1,000 persons. Starting off with general questions on what criteria are regarded as important for beverage packaging, motivation for purchasing beverages and subjective irreconcilableness of certain beverages with certain packaging shapes and styles, PET bottles – in addition to Glass containers – emerged as clear favorites. Outstanding plus points that were repeatedly mentioned were lower weight, unbreakability, and convenient handling. Advantages of glass bottles included quality, better taste of the beverages, hygiene, and environment-friendliness. The respondents were then introduced to the Plasmax coating technology in the form of the FreshSafe-PET[®] solution with advantages such as higher quality and vitamin protection, longer shelf life, fresher taste and 100% recyclability.

² <SPOTLIGHT>

High approval rate

KHS consumer study – questions & answers

Would you use a PET bottle labeled with the CAMPET logo?

"Very happily" or "happily" (76 percent).

Would you buy such a bottle even if it cost 1 or 2 euro cents more?

"Yes" (almost all of the respondents who were inclined to buy).

Would you be inclined to look out for the new CAMPET logo as a seal of quality when you buy drinks in PET bottles in the future?

"Yes" (56 percent).

The study reconfirms KHS Plasmax's strategy of offering innovative and sophisticated premium packaging for premium products. With the newly developed Plasmax⁺ process, in which an additional top coating is applied for sensitive beverages such as tea, vegetable juices, and foods and, which makes the bottles even more resistant, optimum product protection is extended to four times the period that could be achieved in the past, even for products with higher pHs.

In terms of costs the new solution offers a distinct advantage compared to other barrier solutions, such as multi-layer PET bottles. Market availability is a further positive aspect.

In addition to high-quality fruit juice, Plasmax-coated bottles can also be used for wine, beer, soft drinks, ketchup, sauces, and other liquid foods. The premium technology with the FreshSafe-PET[®] logo represents a cutting-edge investment in the future.

In summary

The benefits of CAMPET[®] provide good arguments with differentiation potential for suppliers of quality beverages, in particular water, fruit juices, and other sensitive beverages, in their respective markets. The KHS study confirmed the Plasmax technique in conjunction with the CAMPET[®] logo as a premium process. It optimally combines the benefits of glass and PET, at a cost that is only marginally higher than untreated PET bottles. Many beverage producers have already expressed interest in the CAMPET[®] solution with its large market potential. KHS Plasmax will provide all participating companies with the CAMPET[®] logo. It enables producers to draw attention to the benefits for consumers offered by the bottles and their premium protection for high-quality beverages.

¹Additional information: PET & Sustainability

KHS Plasmax GmbH regards sustainability as a central concern and implicit commitment. Key eco audits on beverage packaging have always been a driving force for further improvements in the company's processes. Relevant eco audits see PET and glass ahead of other packaging materials and ultimately confirm the PET bottle as the most sustainable form of beverage packaging. The development of the Plasmax process with the CAMPET logo represents a consistent continuation of this attitude towards sustainable beverage packaging. The applicability of CAMPET to other food sectors with products such as fruit, vegetables, and other foods illustrates the tremendous market potential for the PET technology from KHS Plasmax.

For further information on CAMPET[®] see: www.freshsafepet.khs.com

Information about the company:

Like KHS GmbH, KHS Plasmax GmbH is part of the technology division of Salzgitter AG. It is integrated into the KHS group of companies as a 100% subsidiary and is therefore part of one of the leading global suppliers of turnkey systems and single machines for the food and beverage industries.

www.khs.com, www.khsplasmax.de

Contact

Bernd-Thomas Kempa
KHS Plasmax GmbH, Hamburg
Phone: +49 40 679 07-105
Email: bernd.kempa@khs.com

Andreas Klages
Plasmax GmbH, Hamburg
Phone: +49 40 679 07-466
Email: andreas.klages@khs.com

Press contact

Florian Lerche
KHS GmbH, Juchostr. 20, 44143 Dortmund, Germany
+49 231 5691196
Florian.Lerchematthias.damm@khs.com

Attachment (see press release for the general press)

1. Expert quote:

"In our search for an optimum coating solution for PET wine bottles we found the KHS Plasmax technology. It plays a major role in the success story of wine in PET in the U.S." Fred Piercy, business director for wine and spirits at Amcor Rigid Plastics

2. Optional link to life-cycle assessment (final report) by IFEU Institute:

http://www.gdb.de/Endbericht_Oekobilanz_GDB_2008.pdf

Enclosed:

- Artwork including CAMPET® logo
- Information and facts in brief: Products/Technology/Processes and Machines (I. – III.)
- InnoPET Plasmax P 12D and P20Q data sheet (2 pages)

Information and facts in brief

I. Top product quality thanks development of the new Plasmax⁺

- Areas of application: Sensitive beverages (juices, soft drinks, hot drinks, tea, coffee, sauces, fruits, including beverages with a pH greater than 4.5)
- Special feature: Additional topcoating. This is applied to the inside walls of the bottles after the silicon oxide coating applied in the Plasmax process.
- Result: optimum product protection for beverages with a pH greater than 4.5 for many months; up to four times longer freshness guaranteed versus the simple silicon oxide coating.

II. Highest standards of production & sustainability

The Plasmax technology meets maximum requirements regarding

PRODUCTION:

- versatile, top-quality barrier
- no change in the appearance of the bottle of the product
- approved for use with food products
- simple and fast format changeover
- efficient and simple handling
- no restrictions for bottle storage and transport
- minimum costs (TCO)

and SUSTAINABILITY:

- no effect on standard recycling process(es)
- bottle-to-bottle recycling (100%)
- resource conservation (reduced waste and energy consumption etc.)
- no contamination of packaging materials

III. Premium coating systems - InnoPET Plasmax

All-round concept

PET bottles with the top-quality, versatile barrier coating applied by the InnoPET Plasmax 12D prevent the permeation of gases such as oxygen into the beverages and the loss of carbon dioxide from the products. Another advantage The SiO_x barrier is 100% transparent, which means the PET containers retain their transparent appearance. Environmental protection made easy – the coated PET bottles can be fully recycled, just like ordinary segregated PET.

Benefits

- versatile barrier coating for highest quality requirements
- no visual alteration of the product
- high flexibility thanks to fast and simple product changeover

Environmental bonus

- resource-conserving process with low media consumption
- coated PET bottles can be added to the standard recycling process with segregated PET without damaging effect on the packing and recycled material

InnoPET Plasmax – the Plasmax machines

KHS Plasmax offers two machine types with the innovative technology for bottle between 100 ml and 1,500 ml in size: InnoPET Plasmax 12D and InnoPET Plasmax 20Q.

Current machines from the InnoPET Plasmax range can be retrofitted for the new Plasmax⁺ process. With these two machine sizes, KHS Plasmax covers the capacity range between 10,000 and 40,000 bottles per hour.

The InnoPET Plasmax 12D is equipped with twelve double coating stations and can coat up to 12,000 PET bottles per hour with a glass barrier layer.

The InnoPET 20Q with its 20 quadruple stations is designed for larger product lines and can process up to 40,000 PET bottles per hour.