



German Technology inside®

Kelvin chemical GmbH



**Solutions for the laminates & plywood industry
We make your quality better.**





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About Kelvin Chemical GmbH

We work to create the best solutions for you and your company.

Founded in 2003, Kelvin Chemical is a global specialty materials company that produces a broad range of products found in items people use every day. With the purpose of enhancing the quality of life in a material way, Kelvin Chemical works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability. The company's innovation-driven growth model takes advantage of world-class technology platforms, deep customer engagement, and differentiated application development to grow its leading positions in attractive end-markets such as transportation, building and construction, and consumables. As a globally inclusive and diverse company, Kelvin Chemical employs approximately 14,500 people around the world and serves customers in more than 100 countries. The company had 2020 revenues of approximately \$8.5 billion.

Additives for Laminate Production



Wetting Agent	4
Release Agent	5
Anti Foaming Agent	6
Hardener	7
Antiblocking Agent	8
Plasticizer	9
Gloss Enhancer	10
Micro Scratch Resistan	11
Press Plates Cleaner	12
Paintability Enhancer	13



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Wetting Agent

Wetting Agents Improve Speed And Homogeneity of Resin Penetration In the Paper.

Our Selection Of Special Raw Materials Allows To Obtain Extremely Low Foam Additives Without Addition Of Antifoam Agent In The Bath Recipe. Avoiding Any Risk Of Surface Defect.

The Whole Range Is Without Wax And Silicone And Is Nonyphenol Free.

Name	Dosage	Benefit
Penta WET-3337	0.1 % - 0.5%	<ul style="list-style-type: none"> • Increases Impregnation Speed And Enables Homogenous Resin Penetration In to difficult Papers (dark And Unicolor) • Supports Homogenous Corundum Distribution In The Impregnation Resin
Penta WET-3247	0.1 % - 0.5%	<ul style="list-style-type: none"> • Improves Transparency Of Final Laminates • Excellent Wetting Of The Resin Towards Inorganic Particles • Extremely Low Foam Formation • Universal Wetting Agent For UF, MF And Phenolic resins



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Release Agent

Release agents avoid the sticking of impregnated papers over the press plate.

Thanks to their special formula our additives produce an excellent release from any kind of press plates (embossed, high gloss, super mat), prevent the formation of resin build-up on the press plates, improving productivity and quality of the laminate surface.

Name	Dosage	Benefit
Penta IRA-5551	0.1 % - 0.5%	<ul style="list-style-type: none">• Strong release agent for UF, MF and PF resins• Thanks to special emulsifiers it guarantees simple mixing and best compatibility with all resin systems
Penta ERA-5542	0.1 % - 0.5%	



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Anti Foaming Agent

Penta AFS-7207 & AFX -7306 is designed to
Provide optimum anti foam performance
Combined with good dilution stability
And good foam knock down performance.

This range not only burst the foams but control re- generation and
Extensively known in market for its purity and quality.
The additive is APEO free .

Name	Dosage	Benefit
Penta AFS-7207	0.2 % - 0.5%	<ul style="list-style-type: none">• Non reactive• Stable over wide temp range• Very good foam knock• Excellent foam control
Penta AFX-7306	0.2 % - 0.5%	<ul style="list-style-type: none">• Persistence• Easy to disperse in non Aqueous system• By diluting with suitable Solvent.• Stable over wide ph range.



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Hardener

Hardeners speed up and control the polymerization of amino resins.

All our hardeners are latent and chlorine free. They reduce the pressing time needed for the curing of resins and guarantee a good pot life to the impregnation bath.

dosage is recommended according to the required reactivity in the resin bath.

Name	Dosage	Benefit
Penta HRD-9331 penta HRD-9232	0.2%	• Very High Reactivity Even At Low Dosage

Penta HRD- 9331 is a latent hardener for MF resin . Developed to be active only at high temperature it avoids the pre-reticulation of the resin during the impregnation that might cause surface problems like heat lines and lack of homogeneity and gloss. It also optimizes the resin flow especially in the production of embossed laminates. The product, under the press at high temperatures, starts its activity and guarantees optimal catalysis of the impregnated paper with no need to change the normal pressing cycle.



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Antiblocking Agent

An Antiblocking agent is recommended to prevent sticking of stored impregnated papers.

Penta ABC- 1114 is usually added in the MF bath and can be added in smaller amounts to the first impregnation bath (pure UF resin or UF/MF mixture) in order to prevent urea migration to the top of the impregnated paper.

Name	Dosage	Benefit
Penta ABC-1114	0.3%-0.5% in MF bath 0.1%-0.3% in UF bath	<ul style="list-style-type: none">• Prevents the sticking of impregnated papers during storage.• Prevents the migration of urea to the top of the impregnated paper



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Plasticizer

The plasticizer is recommended for the impregnation with MF and Phenolic resins.

our plasticizers are suitable for the production of standard post Forming systems and, being glycols free, they don't reduce the Moisture resistance of the final laminate. They are tailored to Be perfectly compatible with mf resins.

Name	Dosage	Benefit
Penta plast -5056	2 % - 8 %	<ul style="list-style-type: none">• Increase flexibility• Prohibits surface cracks• Improves resin flow• Without free glycols• Improves gloss of final laminate



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Gloss Enhancer

High Performance Gloss
Enhancer For Mf Resins.

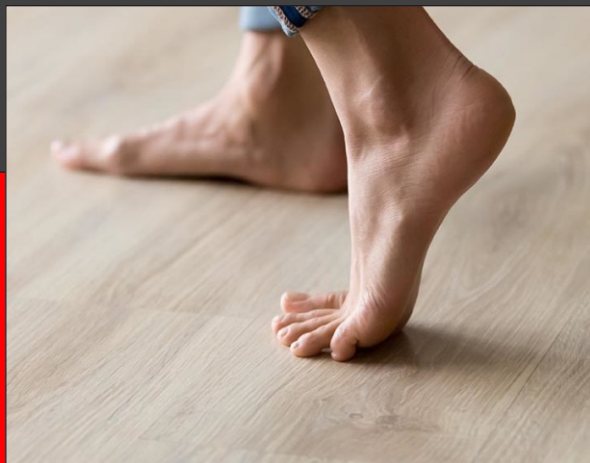
Obtaining a very good and high gloss surface in direct lamination depends on multiple variable and parameters related to volatile content and resin reactivity. Anyway this may be not enough to obtain perfect quality, therefore resin modification by means of a proper gloss enhancer is the only way to reach a top gloss value and panel appearance.

Penta HGL-1735 combines a perfect solubility and compatibility in the melamine

Name	Dosage	Benefit
Penta HGL-1735	2%-6%	•High glossy surfaces



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Micro Scratch Resistance Agent

Penta DURE 7.0 Is Designed To Dramatically Increase The Microscratch Resistance Of Melamine Surfaces.

It is easy to use and, like any other additive, has just to be added in to the liquid MF resin and doesn't require any special device to be applied.

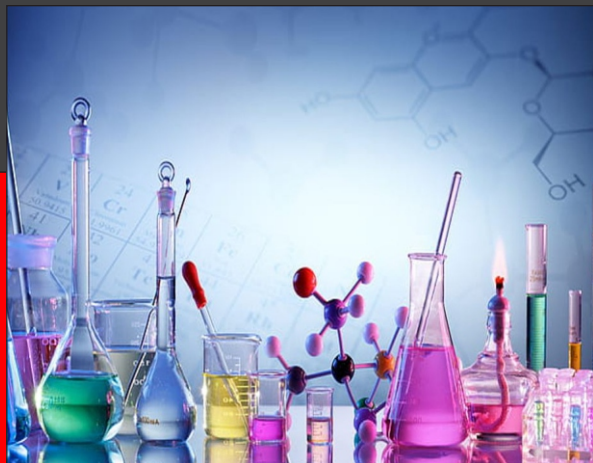
Thanks to its special formulation, it is totally compative with melamine resin and it does not interface with reactivity and laminate color and trr and transparency.

Penta DURE 7.0 is corundum free and, not being a powder dispersion, it

Name	Dosage	Benefit
Penta DURE 7.0	2% - 3%	<ul style="list-style-type: none">• Scratch resistance increasing• Corundum-free, safe for press plates• stable solution, no need to be stirred before use



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PRESS PLATES CLEANER

Penta PLC-1933 CLEANER is an efficient cleaning agent able to remove resin build up from metal press plates.

Directly applied on cold plates, it does not interact with metal and dissolves resin spots and halos. Penta PLC-1933 CLEANER leaves a thin protective film that postpones the following cleaning operation.





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Paintability Enhancer

Penta EHN-2932 is an efficient paintability enhancer to get perfect paintable surface for production of particle boards and fiber boards.

Closing the microholes of particle and fiber boards, is allows a save in the needed amount of paint.

Used alone or mixed with release agent, Penta EHN-2932 can be sprayed before entering the press to guarantee a perfect closing of the board surf closing of the board surface.

Name	Dilution	Dosage	Benefit
Penta EHN-2932	10%-15%	20-40 ml/m ²	<ul style="list-style-type: none">•Perfect closed surface•Fully compatible with Release agents

We Make Your Quality Better

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