



## WHY USE PREMIXED GALVALUME?

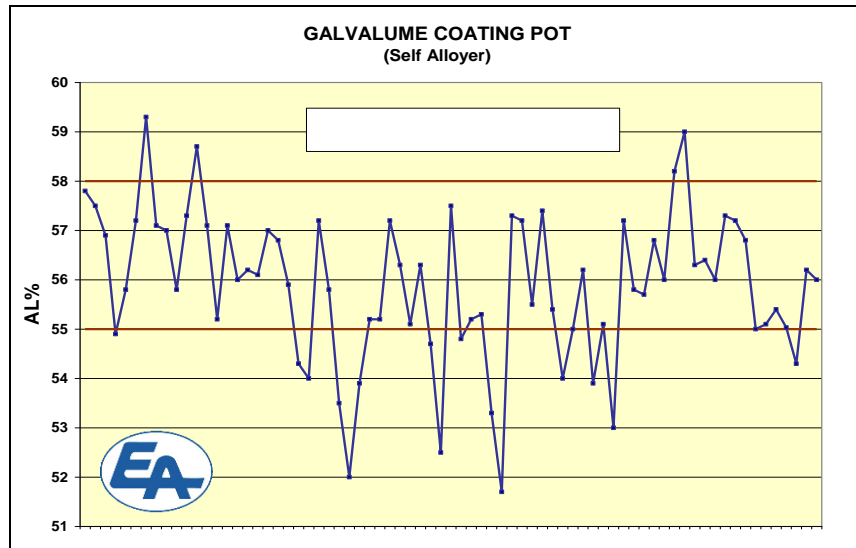
Galvalume is a premium coated steel product. The unique properties come from the coating alloy composition. Maintaining product quality starts with keeping the coating consistent. At minimum, this requires maintaining a consistent composition in the coating bath. Eastern Alloys' Quality Assurance techniques combined with our efficient batch processing is a proven process that produces a premixed Galvalume that is tightly controlled within specification limits. The premixed Galvalume alloy supplied by Eastern Alloys eliminates the alloying step and associated problems for our customers.

The following is a summary of the benefits that can be obtained by using Premix Galvalume:

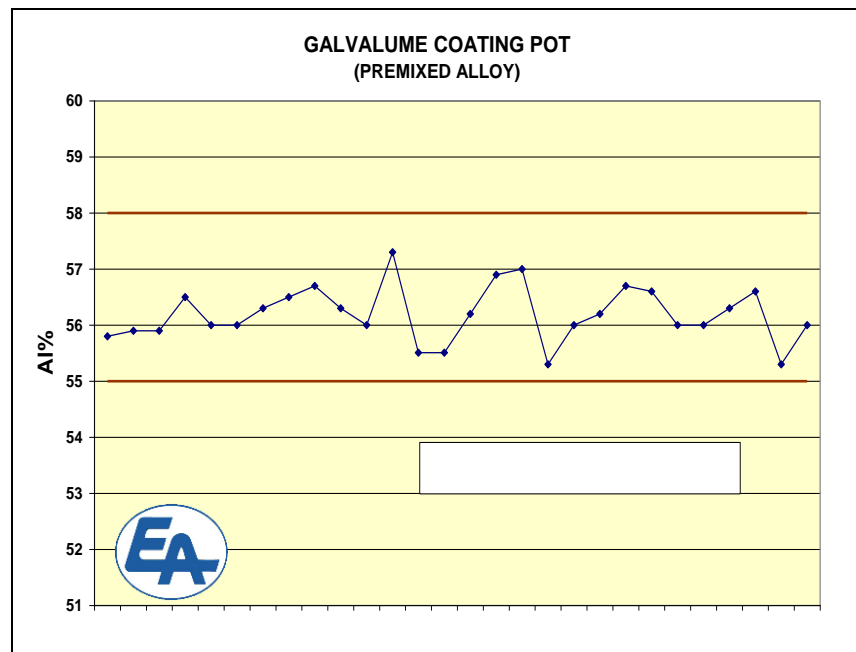
<b>Possible Issues by Self-Alloying Galvalume:</b>	<b>Benefit using Premixed Galvalume:</b>
Inconsistent Alloy composition	If the alloy chemistry is not consistent, the coating weight and thickness could vary significantly. One solution is to overcoat to ensure a minimum coating thickness. Of course this is wasteful and costly. Using premix helps eliminate these inconsistent bath chemistries. Tests have shown that chemistry variation in Premix alloy was 1/3 to 1/2 that of self alloyed material. <b>(See graphs 1 and 2)</b>
Higher Energy Costs	With energy costs on the rise, reducing energy use is important. Studies have shown that using premix alloy saves approximately 7% in energy costs.
More Dross	Studies have shown that dross in premixed alloy is approximately 50% lower than that of self-alloying the material.
Cost of Inventory / Security of Inventory	With premix there is only one item to procure and maintain in inventory. There is no need to track and store multiple raw materials, each with their own minimum safety level quantities. With multiple alloying components the risk of interruption due to breaks in the supply chain are multiplied by the number of components. A one component inventory simplifies inventory management and reduces security risks. In addition, with our consignment program, you have the security of a large working raw material inventory without the associated costs. Eastern Alloys has two geographically separate facilities with a combined rated monthly capacity of 6 million pounds of premix Galvalume alloy. Each facility has the capability to meet the users' needs. This redundancy means security of inventory.
Material Handling	Premix alloy comes in a convenient to handle shape, thus minimizing material handling costs associated with handling multiple, varying sized component items.

<p>Quality Assurance Analytical costs</p>	<p>Eastern Alloys premix Galvalume alloy is a quality product and a proven way of achieving consistent, stable, controlled coating bath chemistry. Eastern Alloys, Inc is an ISO 9000 company, in addition we maintain an A2LA accredited (ISO 17025) laboratory. These validations of our Quality Systems for both Production and Laboratory give peace of mind and confidence in the quality of our product. With only one inventory item of proven quality, premix alloy, you minimize or eliminate the need for pre-inspection and the associated analytical costs. With the tight bath chemistry control that you can achieve with premix you can minimize or eliminate the need for in-process chemical analysis and the associated costs.</p>
<p>Inductor Life</p>	<p>Inductors fail for many reasons. The two most common causes are lining failure and clogging. Inductor lining failure is often associated with catastrophic metal run out, whereas clogging is assumed to be a slow process allowing for planned shutdown and replacement. However, both modes can result in unplanned, catastrophic shutdown. Many factors combine that lead to buildup of corundum &amp; blockage of inductor channels. Once this phenomenon begins it becomes increasingly more difficult to control and is a rapidly escalating domino effect. Buildup changes the electromagnetic flux of the channels which changes the energy input parameters. This leads to hotter flow, lower efficiency, slower melt-rate and faster buildup. The buildup accelerates the clogging process in an exponential manner, ultimately leading to channel blockage. This can be a very serious problem that leads to unplanned production stoppages. Very aggressive cleaning techniques are required to “unclog” the inductor channel. These mechanical methods are labor intensive. In addition they can shorten inductor life by damage to the channels and possibly result in inductor failure due to cracks and run out.</p> <p>Recent comparisons indicate that use of premixed Galvalume significantly reduces the clogging of channels to the point where a simple bubbling cleaning technique may be all that is required. The use of premix can reduce the frequency of inductor failure from clogging and breakdown from aggressive cleaning and thus increase inductor life by 50 to 200%.</p> <p>How much does it cost to rebuild an inductor? How much does it cost to schedule and change an inductor? How much does it cost to make an unscheduled, emergency inductor change? How much does the line downtime cost for an unplanned, emergency inductor change? How much could be saved by reducing the frequency of planned or unplanned inductor changes? These are important questions to consider and answer to fully appreciate the value of premix.</p> <p>Determining avoided costs is as important as calculating the upfront costs of raw materials when evaluating overall production costs.</p>
<p>Productivity</p>	<p>Premixed Galvalume melts 10-30% faster. This helps improve productivity and helps to ensure that the premix furnace is not the bottleneck in the production process.</p>

Although the material costs of Premix Galvalume is higher than the combined material costs of alloying ingredients, the purpose of this article is to highlight the other “hidden” costs associated with Self – Alloying. When taken into consideration, these “hidden costs” make using premix very attractive. Lost potential productivity gains and shortened inductor life are especially insidious and often unaccounted for when comparing the benefits of premix. The Galvalume sheet producer is in the business of producing a quality product. The use of premix allows the user to focus on making product, and not worry about alloying and the associated problems.



Graph 1 – Testing done showing chemical analysis results on Self Alloyed material.



Graph 2 – Testing done showing chemical analysis results on Premixed Alloy.