

TATA STEEL



MagiZinc®Auto

The new high performance coating for inner parts and outer panels



INNOVATIVE COATING TO REDUCE YOUR TOTAL COST OF OWNERSHIP

MagiZinc® Auto is an innovative hot-dip zinc coating alloyed with aluminium and magnesium. The coating offers the automotive industry a number of advantages over conventional zinc coatings. Outstanding resistance against corrosion and excellent stone chipping performance allow a reduction of coating thickness without loss of performance. Excellent press and assembly performance ensures better production yields. MagiZinc Auto offers multiple ways to reduce your total cost of ownership (TCO).

MagiZinc Auto at a glance:

- Hot-dip zinc coating alloyed with aluminium and magnesium (1.6% Al, 1.6% Mg)
- Reduced galling and tool pollution for higher press shop yield
- Lowers your total cost of ownership (TCO)
- Improved weldability for shorter cycle times
- Improved corrosion resistance (2 to 4 times)
- Lower weight and improved sustainability by enabling the use of thinner coatings
- Improved stone chipping resistance

High value in use

Due to its advanced properties, MagiZinc Auto helps lower your total cost of ownership (TCO) by ensuring better production yields and processing performance. It also improves sustainability through its outstanding corrosion resistance.

Improved press shop performance

Tata Steel's advanced MagiZinc coating offers the ability to reduce galling and tool pollution by up to 30 per cent. This results in increased productivity through a reduced need for tool maintenance. MagiZinc Auto has a stable surface texture that, unlike conventional galvanised coatings (GI), does not degrade in subsequent pressing stages. This reduces the need for additional (spot) lubrications and enlarges the process window.

These benefits have been demonstrated by in-house testing and various customer press shop trials. Our innovative TCO Scan MagiZinc service allows you to quantify the benefits of MagiZinc Auto in your own press shop. Our advanced product is suitable for all deep-drawn parts and is especially beneficial for large complex parts like the wheel arch or floor panel.

MagiZinc Auto simply revolutionises press shop efficiency.

Excellent paintability with improved weldability

It's paintability is comparable to conventional zinc coatings. Spot weldability is excellent with a wide weld current range (>1.7kA). As demonstrated in a series of welding trials, the electrode life of MagiZinc Auto 70 (ZM70) is high compared to GI100 and GI140 coatings. This improved weldability ensures shorter cycle times and increases productivity.

Ideal for corrosion-sensitive applications

Along with the advantages for press and assembly shops, MagiZinc Auto offers a number of benefits in vehicle engineering. This innovative coating offers two to four times more corrosion protection than GI. This makes it ideal for highly corrosive environments.

In addition to its improved corrosion resistance, the French Corrosion Institute also demonstrated the superior stone chipping resistance as compared to conventional zinc coatings. This advantage, along with its galling and edge corrosion properties, means MagiZinc Auto is highly suitable for exterior panels.

Sustainability: achieving more with less

Due to its material properties, our product allows the use of thinner coatings while maintaining the corrosion and stone chipping performance of the end product. This results in reduced zinc consumption and saves natural resources.

Available for a variety of steel grades and in very wide dimensions

MagiZinc Auto is available for forming, high strength and advanced high strength steel grades with coating layers between 70 and 140 gr/m². It can be ordered in widths up to 2020mm and is available in MB and MC surface quality levels for application on inner parts and outer panels.

Exploiting MagiZinc Auto to your advantage

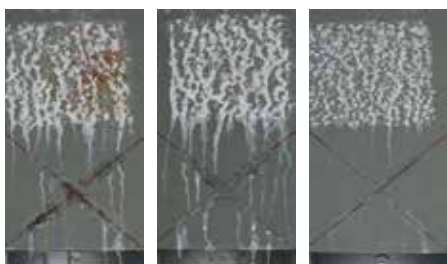
Our coating specialists are here to support you and help you get the best out of MagiZinc Auto for your specific application. We offer expert advice on corrosion performance and pressing behaviour. By taking advantage of our TCO Scan MagiZinc we can quantify the benefits of MagiZinc Auto in your press shop. Please contact us to find out more – we will be very happy to help.

Together we make the difference

Working in partnership enables us to deliver advanced products and services that make the difference to your business – today, tomorrow and beyond.

MagiZinc Auto demonstrates better corrosion performance compared to GI

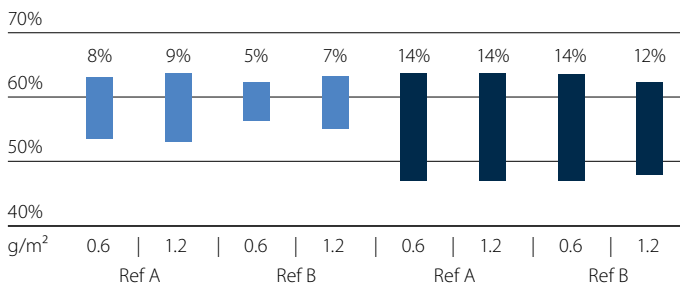
GI100 GI140 MagiZinc Auto 70



Scribe creep corrosion test according to VDA 621-415 standard 20 cycles, scribing 621-436

MagiZinc Auto demonstrates better press shop performance

GI versus MagiZinc Auto



Key

- GI 140
- MagiZinc Auto 70

Block shapes indicate the safe areas between rupture and wrinkling. Tested with 2 oil types: ref A and ref B. Tested with 2 amounts of oil: 0.6 g/m² and 1.2 g/m². Cross die test to evaluate draw in control room with GI versus MagiZinc Auto

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