



Gardofloc[®] Q technology:
Premium Paint Coagulation.

Chemetall
expect more⁺

End that sticky problem in your paint shop Gardofloc® paint coagulation at its best



Paint detackification is the process by which small and sticky paint overspray droplets are captured by a water source inside the paint booth. They are then rendered non-sticky by an agent circulating in the water. Once conveyed out of the paint booth and having been thoroughly detackified, the resulting tack-free sludge can then be removed from the system and dewatered by a sludge removal unit.

In most spray paint booths, the liquid paint overspray is caught by a water curtain which feeds the tacky paint droplets into a separate unit. In this unit, the paint is transformed into non-reactive flocs with the addition of paint denaturants or coagulants. In a further step, these flocs are then chemically converted into a removable sludge. The entire process of denaturation or paint kill is called paint detackification.

Gardofloc® for all paint systems

Chemetall's bio-degradable and cost-efficient Gardofloc® technology is the ideal solution to treat any kind of paint spray removal system. The outstanding performance and properties of our paint coagulation technology promotes greater productivity on site in two ways: by reducing the maintenance time required and enhancing process efficiency.



Customized paint coagulation

With our many years of experience we have the ability to achieve for our customers an easy and effective removal of excessive paint from spray lines – no matter if the paint is high solid water-based or solvent-based. Our broad portfolio of more than 200 specific products and additives – many of which are patent protected – gives our technical experts the flexibility to create customized solutions, irrespective of our customers location and local plant design restrictions.

Selection of our paint coagulation technologies:

- + Coagulants
- + Flocculants
- + Defoamers
- + Biocides
- + Special additives

Benefits at a glance:

- + Broad portfolio allows customized solutions
- + Excellent performance in paint denaturation and coagulation
- + Environmentally and installation friendly
- + Improved microbiological control
- + Reduced consumption of water and energy
- + Low waste volumes, disposal and incineration costs
- + Low process costs

Smooth and highly efficient Coagulated and tack-free paint perfectly manageable



Poorly coagulated and sticky paint is difficult to remove from the paint detack system. Recently developed Gardofloc® products are highly efficient in closed and semi-closed water circulation systems. Their superior reactivity and exceptional flocculation ability enables the detackified sludge to be conveyed through the system smoothly towards the desludging section where it can be removed and dewatered.

The benefits of using Gardofloc® paint coagulation technology are gaining wider recognition and not just in the automotive industry. The fast reaction rate and the excellent floc stability lead to a high solid content in the paint sludge and a low residual turbidity of the treated water.

Low consumption and extended bath life

By combining products from the Gardofloc® range it is possible to achieve an extended bath life of more than one year. Plus the low quantities of Gardofloc® products required and the extension gained for your air filter life makes your paint coagulation installations highly efficient.



Excellent paint coagulation with Gardofloc®: for sedimentation (left) and flotation (right)

Flotation or sedimentation?

Depending on the plant conditions and the selection of flocculants, coagulated paint can either float in the flocculation tank and be skimmed off, or it can sink and be removed by desludging systems. The appropriate procedure depends on various criteria. Chemetall's Gardofloc® technology helps customers to tackle the challenges.

'Flotation' is for example used when clean water is required in the spray booths, and sludge removal equipment is available. If there is no sludge removal equipment in the spray booths and there is a demand for semi-clean water, then the **'sedimentation'** method can be applied.

There is also the **'dispersion'** method which can be used when dirty water is acceptable and the sludge removal equipment requires a bypass to the coagulation tank.

Environmentally sound paint coagulation

From excellent products to worldwide support



Gardofloc® is the ideal solution to achieve maximum efficiency in your paint coagulation lines with only minimal chemical additions. Chemetall's environmentally sound coagulation technologies are free of VOCs, formaldehyde and oil, and all conform to legal regulations like REACH or GHS.

Chemetall's tailor-made Gardofloc® solutions include installation-friendly technologies with reduced chloride content and do not accelerate the corrosion of metallic equipment. Using premium raw-materials, Gardofloc® products are safe to handle and do not form poisonous hydrogen-sulfides.

Any bio-fouling and malodors can be considerably minimized – reducing also the number of odor related complaints from your neighbors. Due to the long service life in the coagulation system, Gardofloc® products over time contribute to reduced consumption of water and amount of sludge. By conserving natural resources, they support your goals for a sustainable production process.



Poor coagulation, paint still tacky



Well denatured paint with Gardofloc® – hand & fingers are kept clean

Outstanding technical & chemical expertise

For a paint coagulation system to run well it is not just about using excellent coagulation products. What makes Chemetall special in the eyes of our customers is our worldwide team of experts. Since each paint booth is unique, our technicians conduct thorough line audits which are then followed by comprehensive laboratory analysis, of for example the process water or the paint products used.

By considering all possible factors from the results of the audit and tests, the lab work will then continue with an investigation into the coagulation behavior of the analyzed paint in order to identify the most suitable products.

This follows the Chemetall principle: 'The right product at the right concentration dosed in the right place at the right time'.

Being a leader in surface treatment technology, Chemetall further provides advanced technologies for your pretreatment line and throughout the manufacturing process:

- ⊕ Maintenance products
- ⊕ Plant cleaners (booth, wall, floor, pit ...)
- ⊕ Booth and oven coatings
- ⊕ Purge cleaners
- ⊕ Paint strippers
- ⊕ (Waste) water treatment

Chemetall at a glance

Chemetall is a leading global surface treatment company, headquartered in Frankfurt, Germany. With our 2,500 employees, 40 subsidiaries and 21 production sites, we are a financially strong and fast growing company with a long-term orientation. Our aim is to further strengthen our quality and innovation leadership. With our own sales offices, production facilities, service teams, laboratories and warehouses at locations all around the world, we are operating in close proximity to our customers.

The chemical treatment of metal surfaces is our core competence. Our products are developed for cleaning, giving corrosion protection, sealing, improving paint adhesion, and facilitating the forming and treatment of metals. Our globally established technologies are used in the most diverse industry sectors and have played a leading role in shaping metal treatment.



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