

An integrated solution to moisture in plastic granule transportation

Expertise in logistics and drying saves production processes

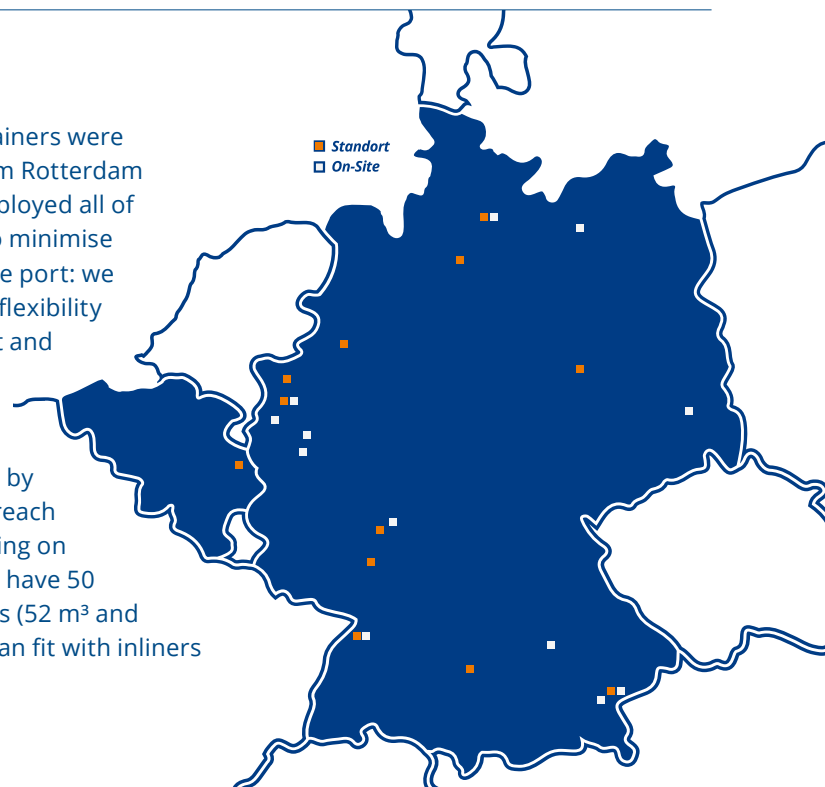
When plastic granules are not transported properly and arrive with high residual moisture, every hour counts – especially when the next stages of processing have already been planned. This is the very situation in which our long-standing chemical customer found itself before it contacted GREIWING at short notice. We took over the entire logistics chain, from container handover at the Port of Rotterdam to material drying to just-in-time delivery, and helped prevent production from grinding to a halt.

Fifteen overseas containers with sensitive granules showed elevated moisture levels. This was because an external supplier had used the wrong inliners. The first inspection on the end customer's premises revealed that, with a moisture content of 2,500 ppm, the goods were not suitable for processing; the target value was 800 ppm. The customer stopped unloading at the port to avoid further damage and delays. The end customer's production processes were at risk of grinding to a halt, which would have had considerable financial consequences.

Coordinated logistics safeguard the process chain

Michael Scholtyssek, Site Manager in Wesel, reacted immediately. With more than 25 years of logistics experience, he knew what mattered most: speed, precision and flawless coordination between everyone involved. We developed a comprehensive package of measures with our team of dispatchers in Greven, who served as a central link between the customer and the operations in Wesel. The goal was to assume full control of handling, from container collection in Rotterdam to material drying to delivery.

Firstly, the containers were transported from Rotterdam to Wesel. We deployed all of our resources to minimise demurrage in the port: we offer maximum flexibility with 250 40-foot and 70 30-foot silo pressurised containers. The units are moved by portal crane or reach stacker, depending on the site. We also have 50 aluminium boxes (52 m³ and 56 m³) that we can fit with inliners as required.





Closed-loop drying

After the containers arrived in Wesel, we transferred the granules immediately in a quick, controlled process – thanks to our integrated rotary valves. The containers with defective inliners were sent back immediately so as to minimise detention costs.

We then opted for a dry air process, using an adsorption dryer to remove the moisture from the material. In this process, air passes through a desiccant that removes the water from it. It reaches a dew point of between -20°C and -60°C . This dry, heated air flows up through the granules and into the drying hopper. The moisture inside diffuses out onto the surface and is transported away. The closed cycle keeps the drying process efficient and its materials controllable.

The drying temperature, volume of air and dew point were aligned precisely with the type of plastic in order to avoid excessive drying. As a result, the moisture content of the hygroscopic goods was reduced strategically to 800 ppm. We used Karl Fischer titration to calculate and document the residual moisture precisely.

Just-in-time delivery and a satisfied customer

When the granules reached the target value, we transferred them to a silo pressurised container for secure, airtight storage and on-call delivery. By coordinating closely with the customer, we were able to integrate the processed granules into the production process just in time. Everything went seamlessly thanks to our 30-foot tipping chassis and reach stacker, from emptying to drying to storage.

This way, we were able to avoid any disruptions to production. Our customer was extremely satisfied with the quick, smooth execution: yet more evidence of our tried-and-true, trusting collaboration for more than a decade.

At a glance:

- Rapid problem-solving through cross-site coordination
- Flexible transport and storage solutions with silo pressurised containers and aluminium boxes with rotary valves
- Professional closed-loop material drying with an adsorption dryer
- Quality control with laboratory checks
- Experience, technology and teamwork for smooth execution

The operation shows how experience, modern technology and our interlinked divisions – from transport to drying to delivery – all come together. As a result, we managed to safeguard the production chain and be a dependable partner to our customer, even under time pressure.

“All divisions worked together seamlessly, from Dispatch to Engineering to Logistics. Otherwise, we would have been unable to deliver the granules on time and with the necessary quality to prevent our customer’s production process from grinding to a halt.”

Michael Scholtyssek,
Wesel Site Manager