

AT ISSUE

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Rotomoulding Polyethylene Supply – Why All The Shortages?



We thought we were nearing the end of a tumultuous two years of Covid and that we could look forward to returning to some normality.

Instead, we have a never-ending global supply chain problem, a major energy crisis, and rampant inflation!

One of the biggest concerns for many rotomoulders worldwide throughout the pandemic has been the supply and cost of Polyethylene. Issues surrounding material availability have been different in different parts of the world, but some regions have had a tough time.

If I give you my take on what has happened recently in Europe, hopefully molders in other regions can gain some valuable insights.

Over the past two years, this continent has been impacted more than any other region on earth. Having invented Polyethylene in 1933 (in England), Europe became a pioneer in developing the polymer and used to be a significant producer and net exporter of Polyethylene.

However, over the past 30 years, there has been minimal new capacity built in Europe, where traditionally, Polyethylene has

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mainly been produced from oil (naphtha). Instead, a massive wave of new Polyethylene plants were built in the Middle East region, benefitting from abundant, cheap, and sometimes excessive gas feedstock that was often previously just burnt off.

So, Europe became a net importer of Polyethylene, dependent upon supplies of polymer from the Middle East and worldwide.

And then in early 2020, Covid hit us all. The world seemed frozen, Europe was locked down, and everyone thought demand would plummet, so producers cut back capacity.

But at the same time, every country in the world became desperate for PPE, healthcare products, and plastic containers for the growing demand for super-market food and take-aways! Suddenly single-use plastic was ironically our saviour, and the demand for our planet's most popular plastic, Polyethylene, soared, and there became a global shortage.

And in China, the world's two most prominent manufacturers of shipping containers suspended production on the assumption that Covid would reduce world trade and there would be too many shipping containers. Shipping companies brought forward the scrapping of older vessels and cancelled orders for new ships.

But as we know, the opposite happened. The demand for ships and shipping containers surged as the supply reduced. Due to multiple issues between sailors, port workers, truck drivers, and customers, the supply chain was snarled. This resulted in massive port congestion, containers stuck on ships or at ports, and the resultant scramble for more containers, more shipping space, and more port capacity.

So back in import-dependent Europe, the cost of shipping a container from East Asia to Europe rose more than ten times from \$2,000 to over \$20,000! The issue became not about price but whether you would receive your container and how many months late it would be.

The price of Polyethylene in Europe rose to historic levels as it became unrealistic to import material due to the container and sea freight situation. Manufacturers of the polymer were highly incentivised to maximise output, but this brought about further frustrations as the availability of critical additives and ingredients became sparse. Due to the lack of new capacity being

built over the past 30 years many European factories are old and less reliable. These factors led to a series of force majeure being declared and availability being reduced by some suppliers, further amplifying the shortage.

So, Europe became starved of Polyethylene. There was insufficient local capacity, and it became challenging to import, so although prices rose substantially, there was still a shortage.

Two years since the Covid crisis began, Europe is starting to



adapt to "Living with Covid", but the supply chain problems don't seem to be disappearing anytime soon.

And Europe is facing yet another crisis! Some eastern European countries that were part of the Soviet Union more than 30 years ago view Russia's invasion of Ukraine as an existential threat. And crucially, Europe is highly dependent on Russian gas and oil, with more than 50% of Germany's gas coming from Russia.

If the supply of gas from Russia is cut, there could be rationing of gas, and this could seriously affect rotomoulders ability to mould their parts. In addition, even if this does not happen there is already a significant impact on the price of energy globally and therefore the cost of Polyethylene, which impacts all of us.

Rotomoulding and the rest of the plastics industry have been on a bumpy ride for the past two years, and I'm afraid we must remain buckled up. ■