## **MIDDLE EAST**

# **The Middle East coatings market**

As the world continues to get to grips with the upheaval caused by the COVID-19 pandemic, *Douglas Bohn*, Orr & Boss Consulting Incorporated, reports on the Middle East coatings market

he Middle East coatings market is an interesting and growing market within the global coatings market. The market, like other developing regions of the world, is projected to grow at a healthy rate as the world economy emerges from the pandemic. Also, there are some segments of the market like decorative coatings and protective coatings that are relatively sizable and will continue to offer good opportunities for growth.

#### TOTAL MARKET SIZE

The global coatings market is estimated to be US\$150bn. The Middle East coatings market is estimated to be US\$4.3bn. This puts it at 3% of the global market. Asia, Europe and North America are the three largest regions of the world followed by Latin America and then the Middle East. The gap between the Middle East and the Latin American region has been declining as the growth has been faster in the Middle East coatings market versus that in Latin America.



2020 Global Coatings Market

U\$\$150bn

Note: We are defining the Middle East as Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, UAE and Yemen. In this analysis, we have included Turkey in Europe and Egypt and the other North African countries in Africa.

The key segments of the Middle East market are decorative, protective, powder and general industrial (GI). These four segments account for more than 80% of the Middle Eastern coatings market.

The decorative coatings market is by far the largest, as it is in most regions of the world. The protective coatings market is actually quite large in the Middle East; this



makes sense due to the large presence of the oil and gas industry in the Middle East. Globally, the protective coatings market is about 11% of the global coatings market but in the Middle East, it is more than double that value. Also, powder coatings is a significant market in the Middle East. This is also tied to the oil & gas industry as powder is used in pipeline coatings.

From a geographic perspective, the key markets are Saudi Arabia, UAE, Israel and Iran. We estimate that these four countries account for more than 80% of the Middle Eastern Coatings market.

### MARKET GROWTH

Pre-pandemic, we think that the coatings market in the region was growing at an annual rate of 4%/yr. There were ups and downs, but this is our estimate of the annual rate. The key underlying drivers



of coatings market growth activity in the overall economy were oil & gas investment and building and construction activity. Overall, the Middle Eastern economies had been growing in the 2-3% range from 2015-2019.

## IMPACT OF THE PANDEMIC ON THE MARKETS

Like all countries of the world, the economies of Middle Eastern countries declined in 2020. The decline varied by country but most countries experienced GDP declines of 6-8%. The recession followed a similar trajectory in the Middle East as in the rest of the world. The year started off strong with lots of optimism. Then the markets declined significantly in Q2. Q3 was better than Q2 but still down versus Q3 2019. Finally, the markets in Q4 started to grow. For the year, we estimate



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that the Middle Eastern coatings markets were down 6%.

Going forward, the IMF expects growth to pick up and be faster than the pre-pandemic levels in 2021-2025. GDP growth is expected to be in the 2-4.5% range depending upon the country. We expect the coatings market to grow faster than over GDP as investment in building & construction and per capita paint consumption should increase faster in the region. Our estimate for the coatings market in the region is that it should grow in the 4.5-5.5%/yr range from 2021-2025.

#### MARKET TRENDS

The main trend over the last few years impacting this market has been the growth of building & construction investment in these countries. Saudi Arabia and the UAE especially have seen large growth spurred on by government incentives that have propelled the paint markets upward.

One other trend that occurred in 2020 was the growth in the lower price or economic paint market segment. Due to the recession and financial uncertainty caused by the pandemic, consumers are looking for less expensive building products and have shifted towards economy paints. We have seen this trend occurring in other regions of the world, especially Latin America, as well as South Asia and south east Asia.

Another trend relates to the oil & gas industry. Since it is a relatively large portion of the coatings market in the Middle East, it has a large impact on the overall market. In 2020, we think that the protective coatings that go into the oil & gas segment fell by about 30%. The market for oil & gas coatings has since stabilised. Although oil prices have not yet reached their prepandemic levels, they have more than doubled since their low point in April. We expect going forward to start to see some growth in this market as the global economy recovers and oil prices rise.

Finally, some of the countries in the region have had quite a bit of instability. The instability has held back the paint & coatings markets in these countries. But if and when the countries stabilise, there could be opportunities for paint companies. The ongoing conflict in Syria is now in its tenth year.

The international sanctions imposed on Syria, as well as the conflict itself has made it a difficult place to do business but when the situation stabilises, there could be opportunities. Iran would be an even larger opportunity. Iran has the second largest GDP in the region after Saudi Arabia and has the largest population in the region with more than twice the population of the next largest countries of Iraq and Saudi Arabia. If sanctions were to be lifted, the Iranian paint market could be a significant growth market for coatings companies.

# CONCLUDING REMARKS

How the coatings market in this region fares in the coming years will be largely dependent upon events in the global economy. But we are relatively optimistic. The coatings markets in the Middle East are always impacted by political events and the instability does make it difficult to do business. Despite these challenges, there are sizable and growing markets in the Middle Eastern countries. We are relatively optimistic about the future of the coatings market in the Middle East. As the world emerges from the pandemic, oil prices should start to rise and overall economic activity in the region should increase. We estimate that the market should start growing in the 4.5-5.5%/yr range going forward.

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# Particle-free conductive inks as an advantageous alternative: IDTechEx explores

Conductive inks are a long-established technology, with silver flake-based inks used extensively in multiple industries, including solar panels and glucose test strips. However, technology rarely stands still and there is extensive innovation within the conductive ink space. Particle-free inks are an especially promising example with multiple advantages and applications.

In a particle-free ink, a solvated metal salt is reduced *in-situ* to produce a metal. In complete contrast to more conventional conductive inks, this means that the uncured particle-free ink is often transparent. The chemical reaction is induced by heat, light or plasma and produces a smooth conductive metal layer.

High conductivity is a key advantage of particle-free inks. Because the metal is formed *in-situ* and the proportion of binder

A transparent metal salt solution is transformed into a metal by a chemical reaction, enabling smooth and thin metal layers to be printed



materials can be very low, conductivity can be as high as 80% of the bulk metal. This, of course, means that less ink can be used, with the additional benefit of there being less solvent to evaporate away during curing.

#### Permeability for e-textiles

Combining electronic functionality with textiles promises sensing of biometric parameters in a comfortable, conformal manner. While there are many different strategies to make fabrics conductive, such as applying inks printed onto a stretchable substrate, particle-free inks are well suited to directly printing on textiles. Unlike flake-based stretchable inks, their low viscosity and lack of particles enables particle-free inks to permeate textile fibres. Once the ink is metallised by curing, the fibres themselves become conductive, thus retaining the breathability and stretchability of the original fabric.

#### **Highly smooth surfaces**

A classic school chemistry experiment is using Tollens' reagent to produce a silver mirror on the inside of a test tube using a reducing agent (see left-hand picture) – this process is similar to that employed with particle-free silver inks. The reflectiveness of the silver coating is due to its smooth surface, which is a key benefit of particlefree inks over their flake-based and even nanoparticle-based alternatives.

Aside from making a reflective surface, smooth conductive traces are highly desirable for radio frequency (RF) applications. This is because as signal frequency increases, surface roughness rather than bulk conductivity increasingly dominates impedance.

Furthermore, particle-free conductive inks can be deposited in very thin layers due to their low viscosity. This is advantageous since at higher frequencies, conduction only occurs close to the surface within the 'skin depth' of the material, so thinner layers reduce costs as less silver (or other metal) is needed.

To learn more about existing and future applications for conductive inks and other solution-processable materials for printed/flexible electronics, please see the IDTechEx reports "Conductive Ink Markets 2020-2030: Forecasts, Technologies, Players" and "Materials for Printed/Flexible Electronics 2021-2031: Technologies, Applications, Market Forecasts". www.IDTechEx.com