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First license of more sustainable isononyl alcohol production process to be in China

MIDLAND, Mich., LONDON, and ZIBO CITY, China – June 1, 2020 – Dow (NYSE: DOW) and Johnson Matthey (LSE: JMAT) today announced China-based company, Zibo Qixiang Tengda Chemical Company, Ltd. (SZSE: 002408, QXTD) has selected LP OxoSM Technology to produce isononyl alcohol (INA) at its new manufacturing facility.

“QXTD will be the first in the industry to take advantage of our process technology for more sustainable INA production,” said Donna Babcock, global business director for Industrial Solutions, a business segment of Dow. “This technology requires a smaller manufacturing footprint and less energy consumption compared to typical INA production processes, without a loss in efficiency and throughput.”

INA is often used to make plasticizers of Diisononyl Phthalate (DINP), Diisononyl Adipate (DINA), and Triisononyl Trimellitate (TINTM). Primarily used in the PVC industry, products made using INA can be found in automotive, wire, cable, and conducting applications, among others. Given the evolving health and environmental regulations associated with downstream applications, INA is well positioned to grow above industry average with its unique properties that meet these needs.

“We are happy to have been able to finalize our license agreement despite the impacts of COVID-19”, said Mr. Zhang Jin, Chairman of Cedar Holdings, the parent group of QXTD. “This licensed process will differentiate us in the industry as we are able to bring new INA volume online to enable downstream products with improved health and environmental profiles.”

“JM science is put to work every day to enhance lives, create a positive contribution to a cleaner and healthier world, and help keep our economy going. This will be our 56th license of LP OXOSM Technology in partnership with Dow, building on our current portfolio with our new INA process”, said John Gordon, Managing Director for Johnson Matthey. “We are committed to bringing value to QXTD and look forward to working with them through the design phase and commissioning of this innovative technology.”

The plant will be built at QXTD’s integrated petrochemical complex in Zibo City, China and produce 200,000 metric tons of annual capacity. The plant operation is expected to come online in 2023.

To date, the suite of LP OxoSM Technology has been licensed into a significant number of projects across 15 countries, representing a majority of the world's oxo alcohols capacity licensed over the past 45 years. Licensees are provided design and technical support at every step and performance warranties to ensure success. Learn more at www.dow.com.



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About Dow

Dow (NYSE: DOW) combines global breadth, asset integration and scale, focused innovation and leading business positions to achieve profitable growth. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure and consumer care. Dow operates 109 manufacturing sites in 31 countries and employs approximately 36,500 people. Dow delivered sales of approximately \$43 billion in 2019. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow [@DowNewsroom](https://twitter.com/DowNewsroom) on Twitter.

About Johnson Matthey

Johnson Matthey is a global leader in science that enables a cleaner and healthier world. With over 200 years of sustained commitment to innovation and technological breakthroughs, we improve the performance, function and safety of our customers' products. Our science has a global impact in areas such as low emission transport, pharmaceuticals, chemical processing and making the most efficient use of the planet's natural resources. Today around 15,000 Johnson Matthey professionals collaborate with our network of customers and partners to make a real difference to the world around us. For more information, visit www.matthey.com. Inspiring science, enhancing life.

Zibo Qixiang Tengda Chemical Company, Ltd. ("QXTD")

QXTD was founded on January 4, 2002 and launched IPO in Shenzhen Stock Exchange, China on May 18, 2010. It has grown to the largest C4 deep processing base in China, and even in the world. In 2019, QXTD achieved a breakthrough revenue of over 30 billion RMB, ranked 302 in Fortune China Top 500 Corporate. QXTD has C4 deep processing for the main business with more than 20 kinds of products, including MEK of 260 kta (the world largest producer), butadiene, isobutylene, tert-butanol, MTBE, butadiene rubber, carboxylated styrene butadiene latex and so on. For more information, visit www.qxtdgf.com.

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