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DSM on Track to Commercialize Production of Resins, Adhesives and Coatings from CO2

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DSM says it expects to be in a position to announce plans for the commercialization of specific products derived from CO2 feedstocks in the next 12-24 months. ñWe have sufficient perspective now to say we will continue down this road,ò the company tells *CW*. DSMôs activities until then will focus on product development and testing with customers.

DSM says it is developing a range of polymer resins including those for adhesives, coatings and inks that use CO2 as a feedstock. Other raw materials to be used in the process include propylene oxide. The company is developing specific products in conjunction with technology start-up Novomer (Waltham, MA) as part of an exclusive collaboration set up in 2007. DSM brings to the collaboration expertise in resins technology and market reach, while Novomer is providing a process based on a proprietary catalyst system.

Among the CO2-derived products DSM is planning to make is an aliphatic polycarbonate which would avoid the use of the ñsuspect elementò bisphenol A, DSM says. DSMôs proposed products-including polycarbonate-are set to be economically viable compared with current-use technologies, DSM says. There is potential for further cost benefits as in future some companies may pay to dispose of CO2 emissions.

DSM says it has designed the materials so thatôs its customers are able to readily introduce them into existing plants. ñBut the proof will have to come from the market,ò the company says.

The DSM-Novomer technology does not suffer from the need for high energy input for its processes due to the highly reactive nature of the catalyst platform Novomer has developed, DSM says. An additional advantage is availability of an abundant raw material that is not tied to fossil fuels, the company says.

DSM says it may look to introduce a further set of CO2-based chemicals once its first wave of CO2-based products has been commercialized.