Panametrics
a Baker Hughes business

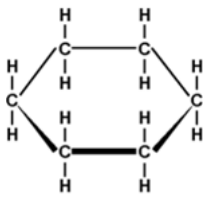
Application note

Moisture in cyclohexane solvent for plastic

Benefits:

By using a Panametrics analyzer for rapid moisture measurement, solvents with moisture contents above specification are rejected for use in the production or compounding of plastics.

The time to make the measurement more than offsets the costs associated with using off-grade material.



Cyclohexane, C_6H_{12}

Summary

The presence of moisture in solvents being used for the preparation of polymer suspensions and solutions cause changes in viscosity, drying times and curing cycles. Moisture also causes difficulties in what would otherwise be uncomplicated processes.

Application

Moisture is measured in cyclohexane, a solvent used in producing plastics.

Application specifications

Water content range:	0.5 to 10 ppmw
Dew point range:	-40 °C to 20 °C (-40 °F to 68 °F)

Challenge

In the past, spot-checking of samples sent to the analytical laboratory served as the only means of quality control for these solvents.

The solution

Process measurements are possible using a portable moisture analyzer such as the PM880 aluminum oxide hygrometer. Solvents, such as cyclohexane, are tested by placing a sensor either in a 55-gallon (208-liter) drum or directly in a solvent utility line. Within minutes after inserting the sensor, reliable readings of moisture content are obtained. Moisture content is measured in ppmw from the hygrometer inputs of dew point, temperature, and saturation data from selected chemical documentation.

Any Panametrics microprocessor-based aluminum oxide based hygrometer with compatible temperature option can be selected, based on installation needs.

Panametrics, a Baker Hughes business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement.

Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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