



Our Custom Manufacture division sets and maintains exemplary standards and strives to continually improve customer service.

The safe operation of our manufacturing assets is our first priority. We have experience in the operation of a wide range of different chemistries at scale, from free radical polymerisations to nitrations at 100s MT per annum scale.

We employ a dedicated team of chemists, chemical and process engineers who use a systematic approach to assess the safety of a chemical process. This four stage hazard and operability study, captured by our routinely audited ISO procedures, involves the generation of information used to identify and quantify the potential for hazardous energy release from chemical processes in different operational scenarios.

Thomas Swan has invested in and operates a range of complementary laboratory facilities for this purpose. Our Differential Scanning Calorimeter (DSC) is used as a "screening tool".

Sophisticated equipment used to generate more detailed information includes:

Thermal Screening Unit - the TSU provides information regarding reaction 'onset temperatures', rates of temperature rise as well as crucial information regarding the rates and magnitudes of pressure rise.

Phi TEC - an adiabatic calorimeter with the capability of simulating the behaviour of a large-scale chemical reactor under conditions virtually identical to a large-scale plant, while using only 10-100mL of sample.

Similar - a high specification automated isothermal reaction calorimeter with special features that enable energy and rate of heat release from the reaction being performed to be determined.

The process safety study is designed to ensure that our high standards of safety are maintained during scale up and manufacture and to ensure a robust process safety envelope is identified for all our manufacturing processes.

"Process safety assessment is paramount to Thomas Swan during project assessment and scale up, leading to a safe, efficient and economical manufacturing model."




Thomas Swan
Custom Manufacture

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Committed to Responsible Care