

Our Services:

Manufacturing Systems

- Quality
- Datasheets
- Formulations
- Laboratory
- Stock
- Production Management
- SPC

Production Scheduling

- Benefit Analysis
- System Specification
- System Selection
- Implementation

Business Process Modelling

- Re-Engineering
- Technology Impact
- Information Systems

Events

- Seminars
- Conferences
- Workshops

Our Clients:

- ABB
- AEA Technology
- Arthur D Little
- Bridon
- Cambridge Consultants
- DTI
- Eli Lilly
- GlaxoSmithKline
- Hickson
- Humber Chemical Focus
- ICI
- J R Crompton
- Manro
- Newcastle University
- Norsk Hydro
- Roche
- Scott Bader
- Severn Trent Water
- SIRA
- Stepan
- The Carbon Trust
- Yorkshire Forward

(Partial List)

Dynamic COMAH Classification System

"We have a complex stock situation with rapidly changing quantities of agrochemicals which are often toxic or dangerous to the environment. We need to know at any time what our COMAH position is, and to prove it if necessary. We also need to assess the impact of accepting a future order on our situation. The MS² system interfaces to our existing stock systems, provides a validated and rapid answer to the COMAH question, can be used easily for "what ifs?" and is appropriate for SMEs. It takes more than a simple spreadsheet to answer the COMAH question."

Martin Usher

Managing Director, Grotech Production Ltd

Grotech Production Limited is a contract manufacturer and packer specialising in the agrochemical and industrial chemical sectors. Based in Goole, East Yorkshire, the Company operates a 10,000 square foot factory with additional warehouse space. Powders, granules, liquids and suspensions can be blended and packed from and to IBC's, drums, sacks, bottles and bags. It places a high degree of importance on quality, is ISO9001 registered and has successfully undergone client audits including ICI and Home Depot.

In 2004 Grotech implemented the MS² Dynamic COMAH Classification system, with funding support from DTI's e4C programme. Developed by AJM Consulting as part of the MS² Manufacturing Support System, it is designed to help companies with complex stock and materials situations to identify and manage their COMAH liability.

COMAH

Legislative compliance is probably the most important issue facing the UK's chemical industries today. The COMAH (Control of Major Accident Hazards) regulations require that sites which hold hazardous materials implement procedures which can be complex and costly. This may be avoided by holding a quantity which is less than required for registration under the act – and for many reasons it is good practice to hold low stocks anyway. In practice the calculation involved in determining the COMAH situation for a typical speciality chemical site is quite complex and beyond the scope of spreadsheets.

Whether or not a site needs to register as a COMAH site is dependent on the quantities and hazard ratings of all materials held on site. With Grotech's complex materials storage situation the system needs to include over 2,000 materials in its calculation.

Validation

With a calculation of this complexity it is necessary to ensure that every item of stock has been included in the calculation - otherwise an erroneously low hazard rating would be the result. The MS² system ensures that all necessary data are present, such as the quantity of material, the type of quantity units in which stock is expressed, the specific gravity if needed, and so on. For each stock entry, the system also checks that the material has been allocated to a COMAH classification. Any entries with missing data are clearly indicated as errors.

continued overleaf...

Stock Hazard Identification

One of the principal benefits of the system for Grotech is the ability to produce an accurate stock hazard report showing the quantities and principal hazards of all materials on site - an obvious benefit when implementing plans for emergency management. Another important feature is its ability to hold electronic versions of material safety data sheets, further enabling it to assist in the event of a site emergency.

Archiving and Audit Capability

The ability to retrieve historic data relating to COMAH is essential. MS² provides historic trending with comprehensive “drill down” to all components of the calculation, showing when stock readings were taken, what hazard categories were allocated to each stock item and so on. Any potential calculation errors caused by missing data is also shown, providing a comprehensive audit trail.

System Development

The solution developed for Grotech is a development of the existing MS² system, with specific needs of SMEs taken into account. It is capable of running on a network or as a standalone system and has extensive validation to simplify training and use. A specific interface to Grotech’s existing commercial system was developed which enables rapid identification of COMAH status using existing stock data.

| Category | Substance | Aggregation 1 | | Aggregation 2 | | Aggregation 3 | |
|--------------------|------------------------------------|---------------|-----------|---------------|-----------|---------------|-----------|
| | | Low Tier | High Tier | Low Tier | High Tier | Low Tier | High Tier |
| Generic Category | Dangerous to the environment (R50) | | | 0.0100 | 0.0040 | | |
| Generic Category | Dangerous to the environment (R51) | | | 0.0029 | 0.0007 | | |
| Generic Category | Toxic | | | 0.4500 | 0.1125 | | |
| Generic Category | Very Toxic | | | 0.3400 | 0.0850 | | |
| Aggregation Totals | | 0.0000 | 0.0000 | 0.8029 | 0.2022 | 0.0000 | 0.0000 |

Low Tier Value: 0.8029 High Tier Value: 0.2022

BELOW ALL COMAH THRESHOLDS

Our Capability

AJM Consulting has developed the MS² suite of applications specifically for the chemical and related downstream industries. Its great flexibility allows it to be applied in situations as diverse as an industry support agency like Humber Chemical Focus, a government-funded information dissemination programme, a complex batch chemical plant and management of a Belgian factory operating the world’s largest Chemithon continuous reactor. It is designed to provide functions which are not commonly available but which add value to the organisation, and to do so in a highly cost-effective way. Its power can be increased further by integration with other systems such as production scheduling or process monitoring and control.

With our background in chemical sector consulting we understand many issues which the industry faces and can apply that understanding to the design of specific solutions, further increasing the speed of implementation and the benefits of those solutions.



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