SAGE MAS 500

Process Manufacturing Solution

Powered by O2

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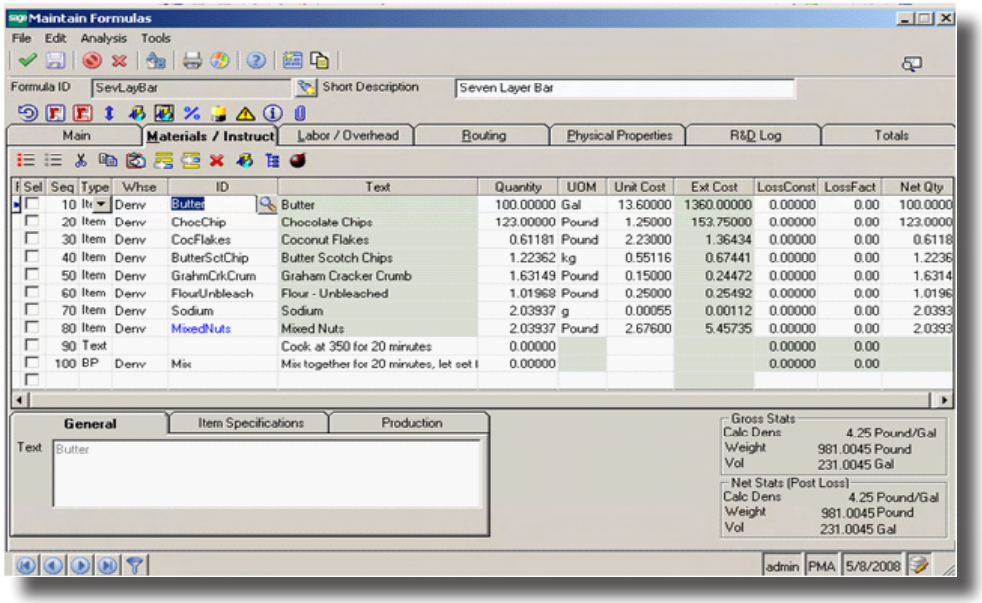
Formulas

- ***Formulate by percentage***
- ***"What-if" cost scenarios***
- ***Formulation security***
- ***Revision history***
- ***Laboratory calculations***

Formulation and formula management are the foundation of a process manufacturing environment. O2 combines powerful formulation and analysis functionality with formula management capabilities such as formula group security and Quality Control standards.

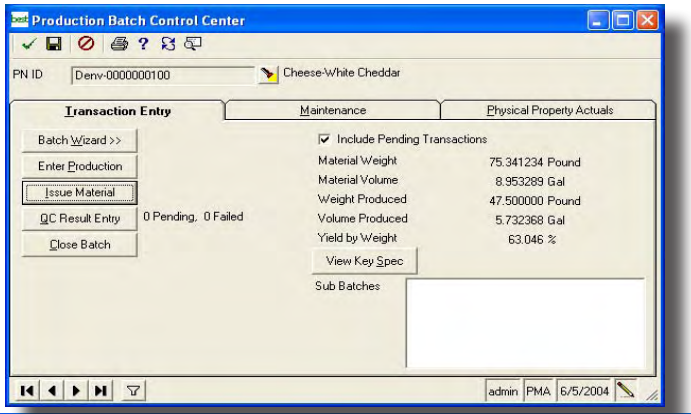
Many process manufacturing companies currently using a formula management system find themselves maintaining ancillary Excel and Access databases to keep track of key formula specifications and physical properties. Not with O2: O2's formulation module takes full advantage of the physical property functionality. With O2, you can formulate to multiple specifications and perform many complex calculations quickly and accurately; eliminating the need for complex and mistake-prone spreadsheets.

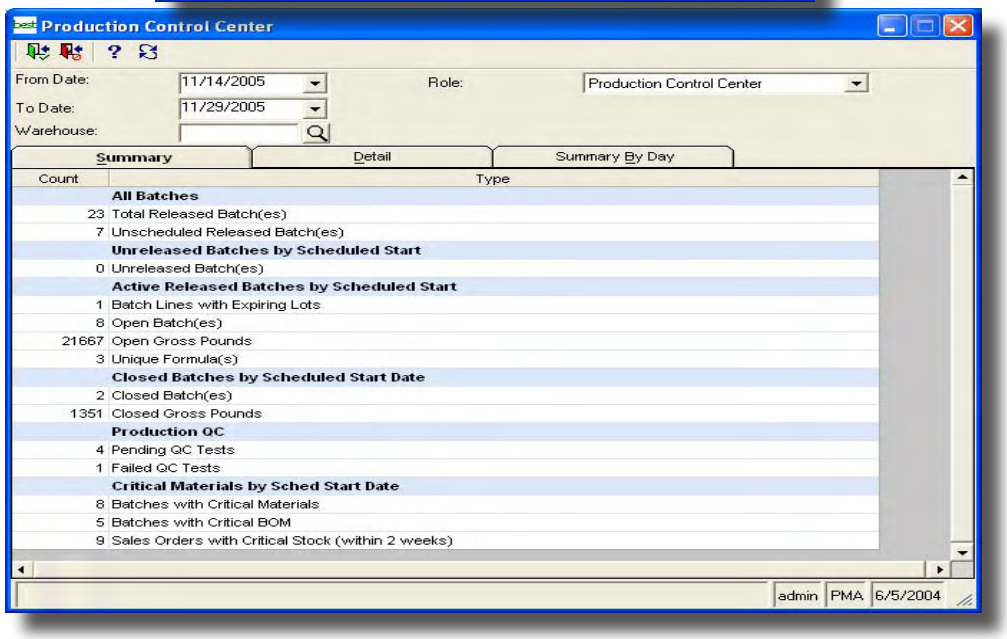


Production

- *"Soft" and "hard" allocation of inventory*
- *Produce multiple co-products and by-products from a single batch*
- *Production calculations from lot properties*
- *Production yield validation*
- *Material substitution*

Production and production planning are the key components of operational efficiency in the process manufacturing environment. The Production Module provides powerful operational and analytic tools to help process manufacturers maximized efficiency and intuitively analyze historical operations. Whether you produce complete batches, require finished goods to ship before a batch is closed or operate in a "continuous flow' environment, O2 can easily facilitate your manufacturing method. The "Active Role Interface" is a completely customizable workbench which provides a powerful tool to manage your operational schedule.





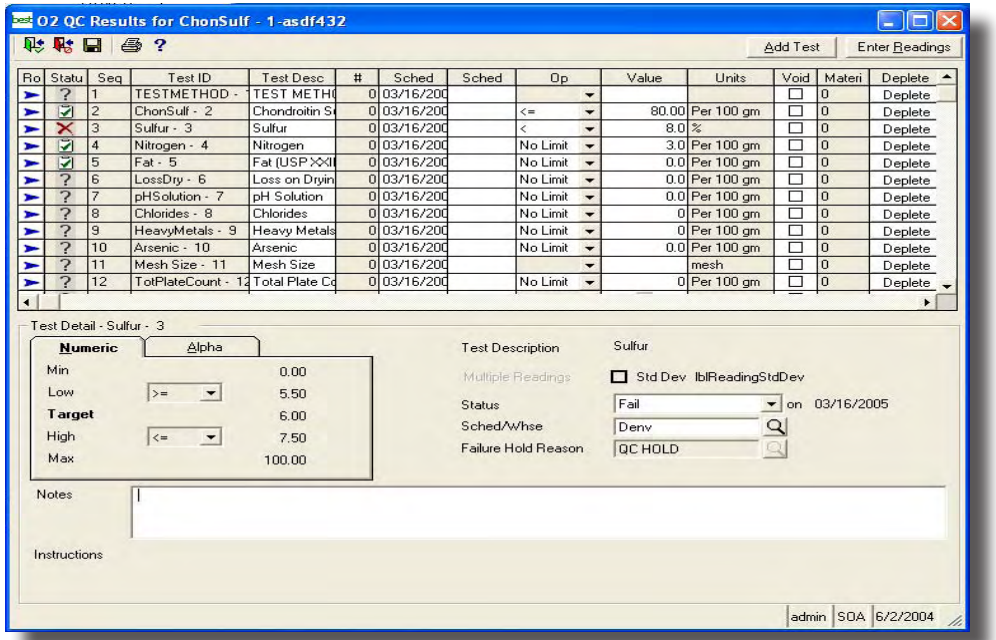
Quality Control

- *Enter multiple readings*
- *Link the results of a QC test to an item/lot physical property*
- *Failed QC test lot hold*
- *Certificate of Analysis*

For most process manufacturers, quality control and analytics are a necessity due to cGMP and other quality regulations. With O2's Quality Control Module you can define a battery of tests to perform for purchased materials or manufactured products and set the acceptable range for the tests. When the item is received or produced, a user-friendly display is used to enter test results. If a test fails, the lot can be placed on hold.

With the Quality Control Module, a "work queue" can be used to help alert the quality control personnel of products which need to be tested, from purchase order requests or production batches.

Once test results are entered into the system, use Business Insights to graph historical trends or use the pivot table function to make raw data into useful information for business decisions.



Cost Sets

- ***Maintain multiple cost sets and perform "what-if" scenarios***
- ***Roll up finished good standard costs based on a cost set***
- ***Utilize a linked Excel spreadsheet to update standard costs, then import the costs with a click of the mouse***

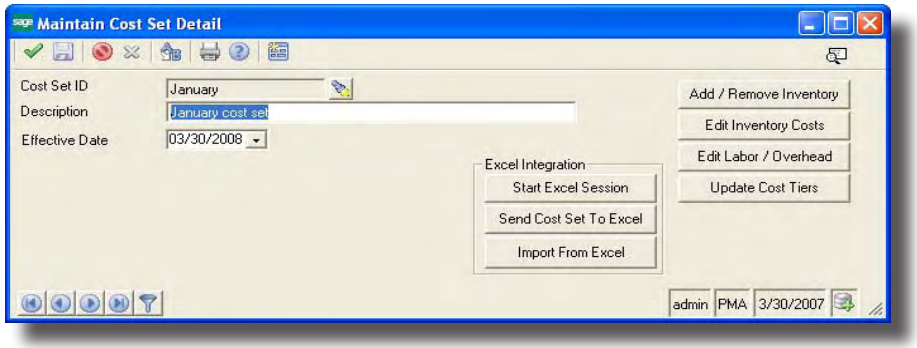
A challenge many companies face is trying to efficiently project finished good inventory costs based on expected future cost changes of raw materials.

The O2 Cost Set Module for MAS 500 allows users to define multiple cost set scenarios. Each cost set can have the same inventory items or different groupings of inventory items. A user can then use a cost set to roll up finished good costs to perform "what-if" scenarios. A "what-if" scenario could have a cost set for: 1) Expected 10% increase in cost 2) Expected 15% increase 3) Expected 20% increase in Type A products. With each scenario, a company can determine the expected impact of the cost change on finished good.

Simplify the updating process by utilizing a linked Excel spreadsheet. With the click of a button your cost set will export to an Excel spreadsheet where you can easily manipulate your costs. When done, simply click the import button and your standard cost set in MAS 500 will be updated.

If the organization is on standard cost, the O2 Cost Module will update the standard cost and prepare all of the necessary inventory transactions and general ledger entries.

The O2 Cost Set Module can also be utilized to roll up costs to other inventory buckets such as replacement cost and landed cost. This module is a flexible and powerful module for anyone who uses MAS 500 manufacturing.



Nutritional Database & Labeling

- ***Integrates with USDA National Nutritional Database***
- ***Nutritional Label, ingredient statement, allergen declaration***

O2's Nutritional Database & Labeling Module completely integrates with the USDA's National Nutrient Database for Standard Reference. This data is the foundation of most food and nutrition databases in the US, used in food policy, research and nutrition monitoring as the US national standard. The FDA's regulations meet the provisions of the Nutrition Labeling and Education Act the FDA to make nutrition labeling mandatory for almost all processed foods.

Using the extensible O2 framework, nutritional data is included with the raw material items, easily creating nutritional labels, ingredient statements, allergen declarations and nutrient content. The O2 Nutritional Database & Labeling Module also calculates the serving size, recommended daily value and amount per serving for every batch created.

Nutrition Facts
Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving	
Calories 260	Calories from Fat 120
	% Daily Value*
Total Fat 13g	**20%**
Saturated Fat 5g	**25%**
Trans Fat 2g	
Cholesterol 30mg	**10%**
Sodium 660mg	**28%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g	**0%**
Sugars 5g	
Protein 5g	

Vitamin A 4% • Vitamin C 2%
Calcium 15% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

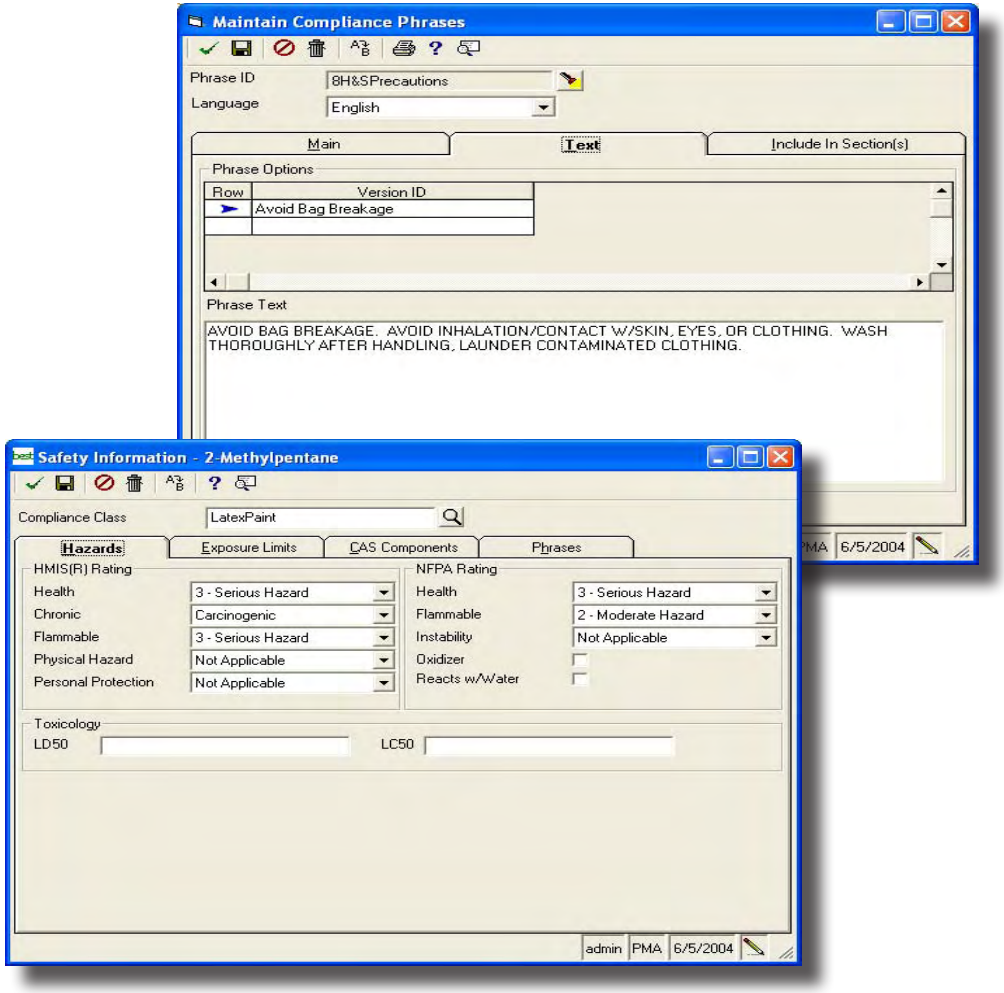
INGREDIENTS: UNBLEACHED ENRICHED WHEAT FLOUR (CONTAINS MALTED BARLEY FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE [VITAMIN B1], RIBOFLAVIN [VITAMIN B2], FOLIC ACID), VEGETABLE SHORTENING (PARTIALLY HYDROGENATED SOYBEAN OIL), YEAST, SALT, CORN AND MALT SYRUP, AND DRIED BREWERS YEAST. SESAME SEEDS.
CONTAINS: WHEAT AND SOY

Compliance Reporting

- ***Maintain multiple report formats***
- ***Purchased intermediates can have multiple reportable components***
- ***Multi-language support***
- ***Scheduled report printing***

For many process manufacturers, compliance reporting such as MSDS, SARA and HAPS are a legal requirement. The Compliance Reporting Module of O2 is a dynamic reporting solution designed for the complex demands of your organizations federally regulated requirements. With O2's Compliance Reporting Module, you will save time and money by enabling your organization to quickly and accurately generate compliance reports.

The O2 Compliance Reporting Module is completely integrated with the Sage MAS 500 ERP and O2 Process Manufacturing system thus streamlining the compliance reporting process, eliminating duplication of entry and maintaining a seamless workflow.



O2 Mobile Warehouse

Change is Difficult

- ***Smart-Barcode™ Technology***
- ***Increase accuracy and control of inventory***
- ***Benefits of real time data entry***
- ***Easily create bar code labels with Crystal Reports***

While change may be necessary for your organization, a change in systems, processes and culture is not easy for your employees. However, by minimizing the learning curve on new processes and technologies your employees will adopt to the new culture easier and more rapidly, increasing the return on investment of your new application. With Smart-Barcode™ technology, your warehouse automation system can navigate, lookup and validate entries with the scan of a single barcode. No longer do your employees have to hit a series of keys and commands to get to a function within the system, lookup selected data and risk putting the correct information in the wrong field (i.e. the lot number in the location field). Increase the visibility and accuracy of your warehouse operations while helping your employees quickly adapt to the change with O2 Mobile Warehouse and Smart-Barcode™ technology.

Purchase Order Receiving:

Increase the accuracy, speed and effectiveness of your receiving department with the O2 Mobile Warehouse. By utilizing Smart-Barcode™ technology your employees will learn in minutes, how to perform the receiving function. With a couple scans from a barcode reader, your inventory will be received, compared to the purchase order in MAS 500, validated against the receiving rules that you have defined and labels printed with any information you wish.

By empowering your receiving personnel to enter inventory receipts at the dock, you will have faster, more accurate inventory information of raw materials, better communication with production planning and scheduling functions and more timely information for material purchase planning.

Warehouse/Bin Movements:

Knowing specifically where your inventory is located within your organization is essential to effective inventory management. For companies that manage lot tracked items and/or expiration dates of materials, this information becomes critical. Historically, capturing this information has been prohibited by cost; both human-capital and dollars, slowness by which transactions are updated and the ability of systems to handle the transactions.

With O2 Mobile Warehouse and Smart-Barcode™ technology, bin movements within a location is as simple as scanning a couple barcodes. Warehouse employees will adopt the process change easily because the process doesn't significantly interfere with their normal duties. They will embrace the change the first time they are able to find missing inventory by querying the barcode scanner to get the precise location.

Process Manufacturing:

Process manufacturing generally has complex requirements in the warehouse environment. Warehouse personnel may have to manage inventory lots, expiration dates, hazardous materials, quality control release/quarantine, etc. O2 Mobile Ware

house was specifically designed to enable material handlers to effectively and easily manage these inventory complexities.

This module, in conjunction with the O2 Process Manufacturing module of MAS 500 allows your to create production pick tickets based on rules you define, FEFO (first-expire, first out), oldest lot, single lot picking, etc. and either request or require your material handlers to pick these lots. Do you allow your material handlers to determine the material to pick? No problem, O2 Mobile Warehouse can tell your material handlers what item to pick, where the items reside in your plant and allow them to chose the appropriate lots.

As materials are produced and potentially put on pallets or in containers, O2 Mobile Warehouse can allow your material handlers to enter quantities produced for the batch, identify the pallet/container that they are on and track that pallet/container throughout your warehouse.

Flexible, rules-driven, simplicity in operation; words that describe how O2 Mobile Warehouse with Smart-Barcode™ technology will manage the complexities of your process manufacturing operation while providing ease of use to your employees enabling your employees rapid adoption to process change.

Sales Order Shipping/Picking:

Sales order picking is a powerful and flexible function within O2 Mobile Warehouse and MAS 500. The warehouse management function of MAS 500 allows complex rules to determine what should be picked, where from, and how much. The O2 Mobile Warehouse will communicate the desired picks to your material handlers who will know exactly where in the warehouse the inventory resides. If you track inventory on containers or pallets, material handlers can load a pallet, homogeneous item, mixed items, mixed lots, etc. and stage the pallet for shipping. With O2 Mobile Warehouse and Smart-Barcode™ technology, shipping is a simple as a couple scans; shipping documents are printed, and MAS 500 is immediately updated for the shipment.

By enabling your material handling and shipping personnel to enter picking and shipping information, you will have faster, more accurate inventory information of inventory, exceptions to picks can be more easily noted, and you can have better communication with accounts receivable and production planning.

Physical and Cycle Counts:

Increase the speed and accuracy of your physical counts while minimizing the effort and costs to capture the required data with O2 Mobile Warehouse with Smart-Barcode™ technology.

Auditing & Security

- ***Audit any MAS 500 or 3rd party tables for updates, inserts and deletes***
- ***Recover deleted or revised records***
- ***Idle timeout enforced from the server***
- ***Track document revision notes***
- ***Enforce password expiration***

O2 facilitates compliance with government auditing and security regulations, including the Sarbanes-Oxley and the GDA 21 CFR part 11b. There are many systems that can process your data, O2 goes one step further by helping you validate and audit your data.

21 CFR 11b is the FDA's regulation regarding the security and audit-ability or electronic records. O2 provides the tools necessary for compliance.

Royalties & Rebates

The Royalties/Rebates Module provides the ability to automate royalties, rebates, field development, slotting fees, customer refunds or any other paid fee based on MAS 500 orders. The end result is to create an automated payable transaction to the vendor.

Now MAS 500 customers can set up relationships between items, vendors, and customers all in one maintenance screen. This relationship is used in a simple process screen that generates a payable transaction.

The Royalties/Rebates Module eliminates the need for "offline" spreadsheets to calculate what is owed to vendors and saves significant time at period-end.

Complimentary Solutions

Advanced Planning & Scheduling

Advanced Planning & Scheduling module has the ability to take an unlimited number of constraints into account and automatically alert planners to any violation. The Microsoft.Net architecture allows for easy addition of custom constraints unique to your business for production of schedules that respect your real-world requirements. The result is maximum production output, reduced time lost to cleanouts, and a planning process that is easy to manage.

EDI

MAS 500 offers more than just EDI integration software or network services. A modular approach enables MAS 500 to provide a comprehensive yet flexible EDI solution that delivers unparalleled scalability.

Route Sell

Route Sell is a comprehensive sales force automation and productivity tool designed specifically for distributed goods industries. Extending the order entry, pricing and inventory databases to the field utilizing PDAs, tablets or notebook mobile devices dramatically increases sales force productivity. Database synchronization with MAS 500 can be accomplished on a near real-time basis with cellular wireless or in batch mode across WAN, LAN, WiFi, Internet and dial-up modem.

Designed by and for sales professionals, the user interface is intuitive, yielding high user acceptance and a short implementation cycle. The software can be installed on the same server with MAS 500 or on a separate machine for larger implementations.

Forecasting

MAS 500 brings Sales Forecasting technology together with dynamic inventory policy simulations. Forecasting makes it easy to experiment with alternative supply strategies and see the effect on service and projected inventories immediately.

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