



## Material Allocator

i2 Material Allocator™ is a powerful and flexible attribute-based matching solution. i2 Material Allocator supports planning and scheduling by finding efficient matches between orders and material supply—helping companies significantly reduce inventory.

i2 Material Allocator enables companies to:

- Effectively use material supply (automatically or manually)
- Reduce inventory levels and increase equipment availability
- Make optimal material decisions by using attribute matching instead of part numbers when considering all assignment options

### Benefits

#### *Optimal Matching*

- Handles wide variety of attributes including character, numeric or ranges, and user-defined/configurable
- Includes wide selection of attributes such as color, chemical composition, grade, bio content, etc.
- Optimizes selection based on attributes such as cost, age, etc.

#### *Inventory Reduction*

- Assigns unapplied inventory to orders
- Assigns diversions and non-prime products to orders

#### *Aged Inventory Reduction*

- Integrates with order planning systems, providing constant updates about inventory that has been applied to orders on the books

#### *Lead Time Reduction*

- Searches for inventory assignments, including work-in-process orders, across the entire routing for an order

#### *Minimize Diversions*

- Matches across multiple attributes, using complex matching criteria, to help assign non-prime orders to material that usually gets diverted

## **Solution Capabilities**

### ***View and Understand Assignment Options***

i2 Material Allocator has a powerful user interface that enables users to view inventory and orders, filter information in a simple, flexible and intuitive way, and execute searches manually or automatically.

### ***Effectively Use Material Supply***

In any production process, a significant amount of available material often ends up sitting in the shop floor, along the production line, in one or more inventory areas. To reuse this material, an effective search must consider and compare the physical characteristics between orders and material, as well as the location and state of the material. Sometimes available material has intermediate characteristics that don't match a final product directly, but with some additional treatment, the material could still be used. When supply is constrained, companies also have the capability to consider using available higher quality material to supply a slightly lower quality order. i2 Material Allocator can compare the possible alternatives to determine the better trade-off and use of available material.

### ***Reduce Inventory Levels and Increase Equipment Availability***

By using plug-in optimizers, i2 Material Allocator can also identify the best combination of orders and inventory by taking into account process restrictions and constraints, helping to minimize losses. This optimization capability can help reduce inventory and maintain low inventory levels. When used with other planning and scheduling tools, users can create smart workflows that enable the planning system to take advantage of available material very efficiently, increasing the availability of upstream equipment.

### ***Choose from Multiple Assignment Workflows***

i2 Material Allocator can run automatically or manually. It supports a multitude of workflows, ranging from overnight single batch runs to real-time searches and assignments. Material and orders can be added, updated, and deleted in real time from the database as needed without restarting, shutting down, or reloading the system. More than a simple assignment system, i2 Material Allocator supports a single user as well as several concurrent ones, enabling multiple assignment workflows to occur simultaneously.

## Solution Differentiators

### *Customize Search Based on Requirements*

Users can create search configurations, providing detailed instructions on how to perform the search, including which attributes to compare, whether it is a single operation or the entire route. It is possible to save search configurations to be used in the future by automated workflows or other users. Users can customize the results report by combining, grouping, sorting, or filtering order and material attributes as desired. This way, all possibilities can be checked and highlighted, enabling fact-based decisions. Additionally, when doing automatic searches, output results can be tailored to fit external systems calls.

### *Optimize Searches for Better Results*

i2 Material Allocator is unique when it comes to its assignment systems. Searches are made based on the material's attributes, instead of part number or product type, enabling users to find alternates whenever a perfect match is not possible. i2 Material Allocator can optimize assignments by considering physical characteristics, location, and state of material, while also considering alternates and non-perfect matches.

## Key Features

### *Scalable Search Performance*

- One or more users and external systems can execute searches simultaneously.
- Users can prepare, configure and execute searches within the user interface.
- Multiple search engines can run concurrently, leading to increased performance.
- Multiple database instances can be created, and data can be broken into clusters if full database capacity is reached, resulting in improved performance.

### *Fast Search Capabilities*

- Searches are broken down into two levels to improve performance.
- Basic search uses an optimized relational database engine to quickly compare attributes.
- The second level uses a sophisticated rules engine to analyze basic search results and consider additional complex logic necessary to evaluate the matching.

### *Flexible Configurations*

- Searches in i2 Material Allocator can be bidirectional; they can start from open orders and search for material, or start from available material and search for orders.
- Searches can be applied to a particular operation or the entire production route.
- Matches can be classified according to an objective function so the best matches are considered first.
- Filter configurations can be created and named, and then referenced in searches made by other users or by automated workflows.
- Data can be copied directly from the i2 Material Allocator user interface to spreadsheets for reporting.
- Search constraints can be relaxed by ignoring attributes or by providing extended ranges to attributes.
- A new enhanced allocation map interface shows the allocation map for a selected material.

### ***Secure Access***

- i2 Material Allocator provides configurable user access and control based on customizable roles.
- Activity logging support ensures that all searches and assignments are recorded in detail, providing customers with necessary traceability.

### ***Configurable Interface***

- To execute searches, i2 Material Allocator uses a plant model, which is user-defined and maintained in the i2 Material Allocator user interface.
- With each individual search, users can define the set of attributes, routes, operations on each route, acceptable range for each attribute, and alternate resources.
- i2 Material Allocator is configurable to virtually all customer needs.

### ***Integrated Workflows***

- i2 Material Allocator can be integrated with an external system in different ways such as flat files or direct database integration via standard database middleware.
- Integration workflows generally include i2 Factory Planner™ or external planning and scheduling systems, where i2 Material Allocator provides the best material assignment information to these tools.

For more information on i2 Material Allocator and other i2 solutions, visit [www.i2.com](http://www.i2.com).



**The Supply Chain Company®**

11701 Luna Road  
Dallas, Texas 75234, USA  
Phone 1.877.926.9286  
Email [info@i2.com](mailto:info@i2.com)  
Web [www.i2.com](http://www.i2.com)