

*Total Distribution, Inc.*



**TOTAL DISTRIBUTION, INC.**

*USER GUIDE: PROCESSING*

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# BLENDING

Process	Materials	Description	Application
Ribbon Blending	Powders, Pellets	Gently mixed with helical blades	De-Agglomeration; Homogenization of multiple lots. Addition of oils, liquids, or additives
Precision Gravimetric Blending	Powders, Pellets	Precise measuring via computer-controlled weigh cell and vacuum system. Small, precise batches are then blended to form a continuous flow of materials	Formation of specific colors, alteration of melt flows or other physical properties, homogenization of multiple lots, creation of tight tolerance masterbatches
Cone Blender	Powders, Pellets	420 Cubic feet dual cone blender. Fully automated from loading to packaging. Packaging options- Fiber Drum, Gaylord, Supersack, Small bag	Gentle, thorough mixing of powders or pellets to form homogeneous blends
High Intensity	Powders, Pellets	High sheer aggressive blending using variable speed impellers and rotation of blender vessel	Coating of materials with additives, blending ultrafine powders, coating pellets with a liquid
Gravimetric Solution Blending	Liquids, Powders	Blending of liquids or dissolving of fine chemicals	Creation of complex mixtures and solutions, dilution of concentrated materials, private labeled products
Tote Blending	Powders	Gentle blending of powders	Pool chemicals, pesticides, and fine chemicals



# SORTING

Process	Materials	Description	Application
Fine Speck Optical Sorting	Pellets	Removes pellets containing carbon contamination down to 60 micron.	Standard product can be raised to a higher specification or non-standard returned to standard specification
Optical Sorting, Gravity Fed	Pellets, Prills	Removes off color pellets	Removal of die drool, burnt pellets, silo contamination, truck or rail car contamination, increases quality of re-grind, very useful for elastomers and spongy materials
UV Sorting	Pellets	Separates materials dependent on UV absorption	Remove white, clear and/ or natural pellets from resins
Size Classification	Pellets & Powders	Screening classification of pellets and powders based on size	Separates over-sized, married and overs and unders, reduces fines, removes agglomerated powders or elastomers, removal of foreign materials
Density Separation	Pellets	Separation of pellets based on a difference in density	Silo contamination, truck and rail car contamination
Metal Removal	Pellets & Powders	Removes ferrous, non-ferrous (down to 0.3 mm), and stainless steel (down to 0.5 mm) from resins or free flowing powders.	Separates extraneous metal caused by process upsets or rail car/ truck contamination, improves resin grade for critical applications such as medical and food grade

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# TRANS-LOADING

Process	Materials	Description	Application
Rail Car to Tanker	Liquids	Transfer materials between rail cars and tankers	Repack to meet customer specification, optimize freight costs
Rail Car to Hopper Truck	Pellets, Powders	Transfer material between rail cars and hopper trucks	Repack to meet customer specification, optimize freight costs
Sea Bulk to Non-Bulk	Pellets, Powders	Transfer material between sea bulk and non-bulk packages	Repack to meet customer specification, optimize freight costs
Hopper Truck to Non-Bulk	Pellets, Powders	Transfer materials between hopper trucks and non-bulk packages	Repack to meet customer specification, optimize freight costs



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## FORM CHANGE

Process	Materials	Description	Application
Milling & Grinding	Pellets, Crumb, Flake	Reduces material size. Type of mill used is dependent on material properties.	Increase surface area of materials, can improve material handling
Granulation	Pellets, Blobs, Elastomers	Reduces the size of larger materials	Recovery of blobs or tombstones, recycling of molded plastic
Pan Agglomeration	Powders	Increase in particle size using binding agents	Control of particle size, reduction of dust
Delumping	Powders	FIBC (supersacks) are massaged using hydraulic arms to break up agglomerated powder	Stored/ stacked powders can be converted back to free-flowing powder to improve material handling

## DRYING & PURGING

Process	Materials	Description	Application
Desicated Air Drying	Pellets	Moisture removal using super dried warm air	Return resin to prime, reduce moisture level for critical applications like films
Tempering/ Purging	Pellets	Removal of VOCs or residual solvents	Medical or food-grade plastics, improve olfactory performance, auto interiors, critical off-gassing applications
Air Drying	Pellets	Surface moisture removal using ambient air	Resins with very low Tg and melt temperatures that are wet

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# DRY PACKAGING

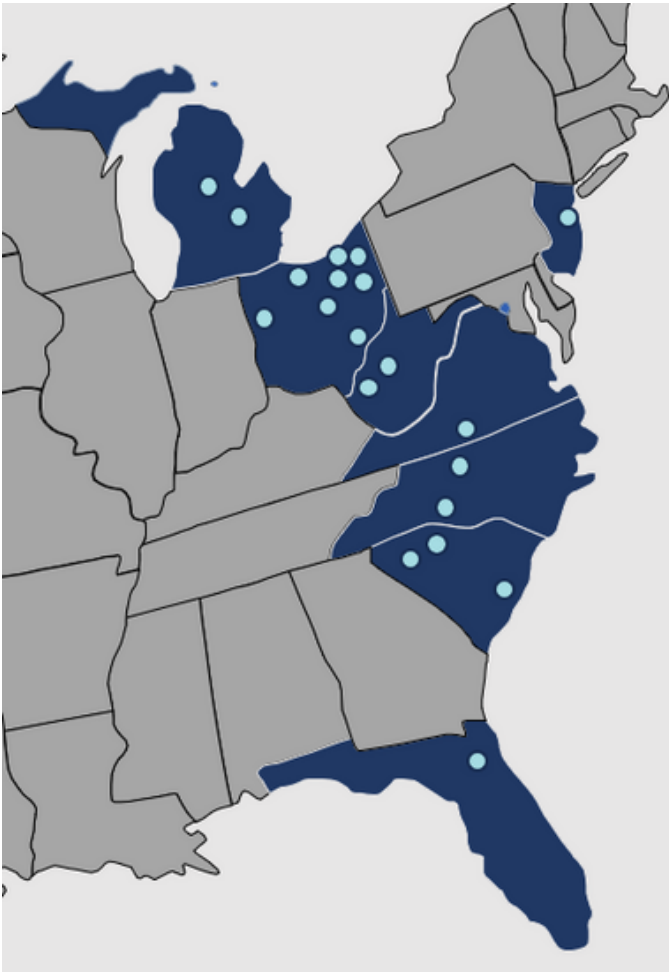
Process	Materials	Description	Application
11lb and less pouches	Powders, Granulars	Material packaged using form, fill and seal line. Pouches can be placed in display, shipping boxes or pails	Pesticides, pool chemical, lawn and garden, consumer products
5lb to 25lb bags	Powders, Pellets, Granulars	Materials packaged into an open top bag, bags thermally sealed	Pesticides, pool chemical, lawn and garden, consumer and industrial products
25lb to 55lb bags	Powders, Pellets, Granulars	Material packaged into an open top or valve bag	Industrial and agricultural products
FIBC	Powders, Pellets, Granulars	Material packaged into a flexible intermediate bulk container with no liner, poly liner or foil liner	Industrial and agricultural products
5lb to 25lb boxes	Powders, Pellets, Granulars	Material packaged into a box with no liner, poly liner or foil liner	Pesticides, pool chemicals, lawn and garden products, general consumer and industrial products
25lb to 55lb boxes	Powders, Pellets, Granulars	Material packaged into a box with no liner, poly liner or foil liner	Industrial and agricultural products
Bulk Box	Powders, Pellets, Granulars	Material packaged into a bulk box with no liner, poly liner or foil liner	Industrial and agricultural products
Fiber Drums	Powders, Pellets, Granulars	Material packed into a fiber drum with no liner or poly liner	Industrial and agricultural products
Buckets	Powders, Pellets, Granulars	Material packed into buckets with no liner or poly liner	Pesticides, pool chemical, lawn and garden products, consumer and industrial products
Bottles	Powders, Pellets, Granulars	Material packed into buckets with no liner or poly liner	Pesticides, pool chemicals, lawn and garden products, consumer and industrial products

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# LIQUID PACKAGING

Process	Materials	Description	Application
Buckets	Liquids	Placing liquids into buckets, labeling and palletizing	Pesticides, pool chemical, lawn and garden products, consumer and industrial products
Drumming	Liquids	Packaging liquids into steel or poly drums	Industrial Products
Totes	Liquids	Packaging liquids into single or multiple use	Industrial Products
Bottles	Liquids	Packaging liquids into bottles from 8 oz. to 2.5 gallons	Industrial and Consumer Products



## 71 LOCATIONS

**Michigan:** Midland and Saginaw

**New Jersey:** Bayonne

**Ohio:** multiple facilities throughout

**Virginia:** Salem

**West Virginia:** multiple facilities throughout

**North Carolina:** Charlotte and Winston-Salem

**South Carolina:** Greenville, Spartanburg, Greer

**Florida:** Jacksonville

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