

# PRODUCTLINE™

## SOFTWARE FOR FORMULATION MANAGEMENT

**PRODUCTLINE** provides companies a powerful tool to quickly respond to new and evolving market demands. This software deals with formulation management. Controlling of formulations play a major role in ensuring system compliance.

**PRODUCTLINE** will help in generating, storing and changing formulations /blends, supplementing and complementing raw materials for recycling, validating & monitoring tests etc...

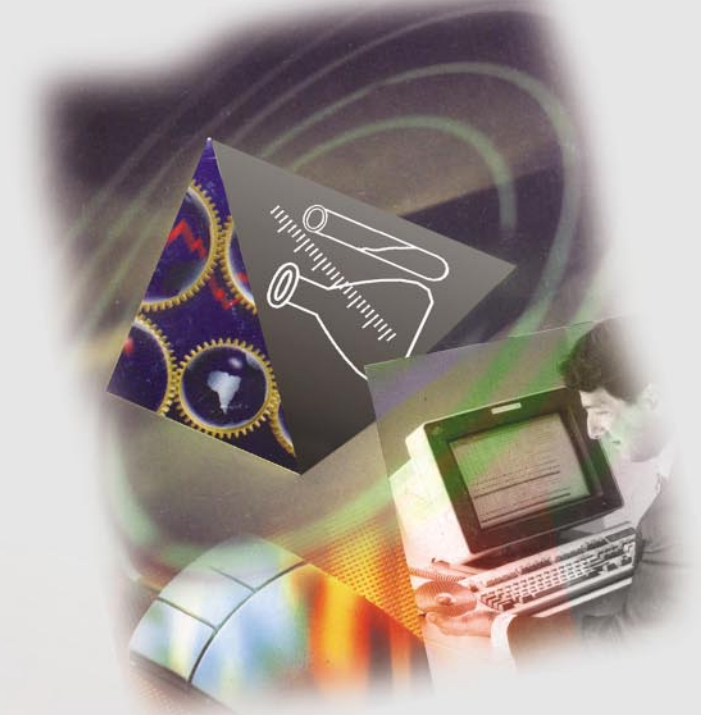
It helps in maintaining a database of Grades, Colors and Formulations. It can be used to plan or specify the process used in the formulation of a product by using options for calculations (full mathematical functionality).

### The basic features of **PRODUCTLINE** are

- Managing of raw material & recyclables data
- Generating formulations or creating blends
- Adjustments for differences in raw material while recycling
- Calculating costs
- Specifying testing requirements
- Generation of process plan or specification
- Provisions for RM replacement

### The benefits

- Provide fast response to changes
- Plan material requirements
- Support quality assurance
- Maintaining formulations simplified.
  - ◆ Approved formulations may be "secured" to prevent accidental changes.
  - ◆ All formula revisions are automatically maintained with full change tracking.
  - ◆ Special formulations may be archived to separate them from production formulations.
- Greatly reduces the effort required in creating new products and enhancing existing formulations
- Data integrity ensured
- Reduce inventory of recyclables
- Reduce errors in blend calculations.
- New raw materials and formulations may be copied/created entirely from existing items.
- Handle even the most complex formulations with ease.
- Raw material replacement features allow rapid and accurate substitution of obsolete ingredients.
- Automatically perform all calculations quickly and accurately.
- Create and enhance products for quicker release to the marketplace.
- Efficiently manage input of all raw material information required for formulation.
- Automatic conversions between weight and volume.



- A combination of password protection and multi-level user access rights ensures complete control over access to **PRODUCTLINE** functions.
- Access to the formula database is strictly controlled through login procedures that prevent users from accessing the formulation outside of **PRODUCTLINE**
- Formulations may be secured by specifying access control lists to prevent unauthorized users from viewing or editing them.
- Approved formulations and raw materials may be "locked" to prohibit further changes



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## Blender Calculations

Blender Calculation

Blender Calculations

Formulation #:  Blend Ratio:

Lot Size (Kgs):  Blender Capacity(250 Kgs)

Feeder	Raw Material	Percentage	Kgs	Feeder 1(%)	Kgs	Feeder 3(%)	Kgs	Blender Feeder(%)	Kgs	
Blend+Feeder3	MI-3	80	4000	0	0	88	4400	-8	-400	
Blend	DECA	1.5	750	0	0	0	0	1.5	750	
Feeder 1	TALC	2	100	0	0	0	0	0	0	
Blend	L-1010	2	100	0	0	0	0	2	100	
Blend	MI-S	1	50	0	0	0	0	1	50	
		0	100	5000	0	0	88	4400	10	500

Calculate Clear Close

## Recycle Calculations

PRODUCTLINE 1

Recycle Calculations

Formulation #:  Formulation of blend to be recycled:

Quantity(Kgs):  Quantity(Kgs):

Raw Material	Formulation #1 (%)	Formulation #2 (%)	Formulation #1(Kgs)	Formulation #2(Kgs)	Quantity(Kgs)	Quantity(%)
MI-3	80	75	1600	375	3075	89.50
TALC	3	3	60	15	75	2.15
DECA	1.5	1.5	300	75	375	10.63
L-1010	2	2	400	100	500	14.29
T-64	100	100	2000	500	2500	72.43

New Formulation #:  Save New Formulation Calculate Clear Close

## Process Specification Sheet

Standard Process Specification Chart

SPE/TE/OAO1 Rev.No.00

SPEC # 28 Formulation 33 Grade 40588 Color 803

Rev.# 0 Rev.# 0 Type DEFAULT Type DEFAULT

Rev Dt 02/02/2003 Line # 0 Rev.# 0 Rev.# 0

Family 001001 Remarks

Blend Composition	EPC Setting	Parameter Setting	Specs
RMC Description	Item Qty(Kgs)	Feeder RM Code	% Setting Parameter(s)
110021 NY-3.5	14 NY-3.5	35	All Feeder Mass Flow Error Dc +/-15 %
110025 NY-3.8	23 NY	30	Extruder RPM 400-450
110033 CA-SR	6 BLEND	22	Torque @ (Minimum) 70
110039 FC-A	2	45	Feed Rate 400-450
110056 J-188	180	78	Screw Pitch Not Applicable
110057 GA-FRC3	5	38	Screw Design LSW73
110058 MILLED PBT 315	50		

Total: 288 Release Criteria

Property	Test Reference	Unit	Min	Max	Zone Temp
VR - ONLINE	GEPE	Hz/10 minut	0	30	Zone 250
VR - BAGGING	GEPE	Hz/10 minut	0	30	Zone 245
MVI 250/2.16 KGS	350-1133	CC/10 minut	9	13	Zone 240
TENSILE STRENGTH (F 150-527)		Mpa	111	13	Zone 235
FLEXURAL STRENGTH 150-178		Mpa	170	Zone	240
FLEXURAL MODULUS 150-178		Mpa	7000	Zone	245
Impact Strength 150-180/U		KJ/M	30	Zone	250
Filler Content	GEPE	%	28	32	

## Formulations

Formulation

Family:

Grade:  Type:  Revision #:

Color:  Type:  Revision #:

Formulation:

Raw Material	Type of RM	RM Description	RM Cost(Rs/kg)	% of RM in formulation	Cost of formulation (Rs/kg)
C1	Grade	Sulfur	67	25.56	16.614
F1	Grade	TALC	34	1.11	0.3774
D1	Color	DECA	40.5	37.78	15.309
F3	Color	L-1010	89	35.56	31.6484
Total					100

Adjustment

Specified Raw Material only  Grade only  All Formulation no.:  Rev. no.:

Adjust 100% Notes:

Save View Report Close

Created Date: 12-Feb-2003 Created by: Admin



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