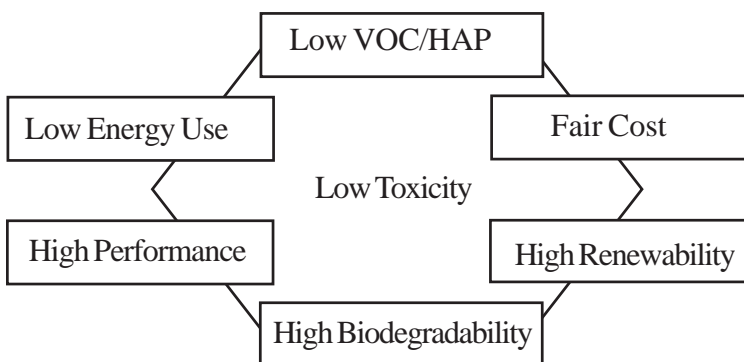


No-Tox[®] Bio-Green Inks

NS29
(12/09)

No-Tox[®] Bio-Green inks and coatings are designed with your sustainability objectives in mind for any substrate or printing process.

Typical Objectives:



Position of Current Inks & Coatings

Many of our inks and coatings are prepared using renewable direct or indirect food additives in water.

The tasks listed below are being pursued in parallel to establish the degree of sustainability of our direct or indirect food contact inks:

- Data gathering from suppliers of raw materials.
- Data gathering from companies using our inks in compostable products.

Typical Waterbased (WB) & Solventbased (SB) Inks

Component	SB Ink %	WB Ink %
Pigments	12 - 15	12 - 15
Waxes	2	2
Additives	2	2
Resins	20 - 25	20 - 25
VOC	50 - 60	5 - 10
Water	0	40 - 50

Typical Ink Viscosity vs. Printing Process at 25°C

Printing Process	Ink Viscosity (cP)	Ink Efflux Time (s)	Ink State
Lithographic	10,000 - 50,000	NA	Paste
Letterpress	1,000 - 50,000	NA	Paste
Screen	1,000 - 5,000	NA	Paste/Liquid
Flexographic	50 - 500	Z2: 23 - 60	Liquid
Rotogravure	30 - 200	Z2: SB 17 - 30 Z2: WB 20 - 35	Liquid
Inkjet	3 - 20	Z2: 18	Liquid