Printability and varnishability

The paperboard choice
Since one of the main purposes of paperboard is to convey a message, which can be informative or promotional, printability is a vital property to consider when choosing paperboard. Printability is mainly determined by surface features, that is, the surface coating composition and the ply properties of underlying baseboard.

The paperboard properties listed in the following text are important in obtaining high print quality. Good print runnability is also important for achieving efficiency because stoppages are costly. The paperboard printability must always be related to the printing method and the inks to be used. Test printing under press-room conditions will provide the specifier with valuable information.

Both Folding Box Board (mechanical pulp with chemical pulp in the surface plies) and Solid Bleached Board (pure chemical pulp) give excellent printability, mainly due to their predictable paperboard properties.

Printability characteristics
Printability can be defined as the paperboard’s ability to reproduce printed text, pictures and patterns. The printing might be in one or more colours. Several printing processes are used with paperboard and they have different characteristics which must be considered.

Good printability is achieved by a combination of features involving the use of primary fibre, the method of forming and manufacturing paperboard, the types and methods of coating, and the finishing operation.

Assessment of printability
Assessing printability is of critical importance in the quality procedures at Iggesund Paperboard and in our product and process development work. The printability of a paperboard can be assessed by eye, by instrumental techniques and above all by printing under press-room conditions.

Key properties
The following paperboard features are involved in achieving good printability:
- whiteness (colour)
- opacity
- smoothness
- board gloss
- ink absorption, drying, and setting
- surface strength
- flatness and dimensional stability
- moisture content
- print rub resistance
- ink and varnish gloss enhancement
- clean edges and surfaces
- surface pH
- solvent release
- surface tension for plastic-coated surfaces.