

The Solubility is the Solution

BELLAND® *Hotmelt BellStx*

BELLAND® *Hotmelts* for Pressure Sensitive Adhesives (HMPSA)

BELLAND® *BellStx* HMPSA offers the solution for applications where the adhesive layer has to be peel able (well balanced adhesion-cohesion) and, after usage, to fully vanish without surface residue. **BellStx HMPSA** brings water resistant and have some hydrophilic characteristics.

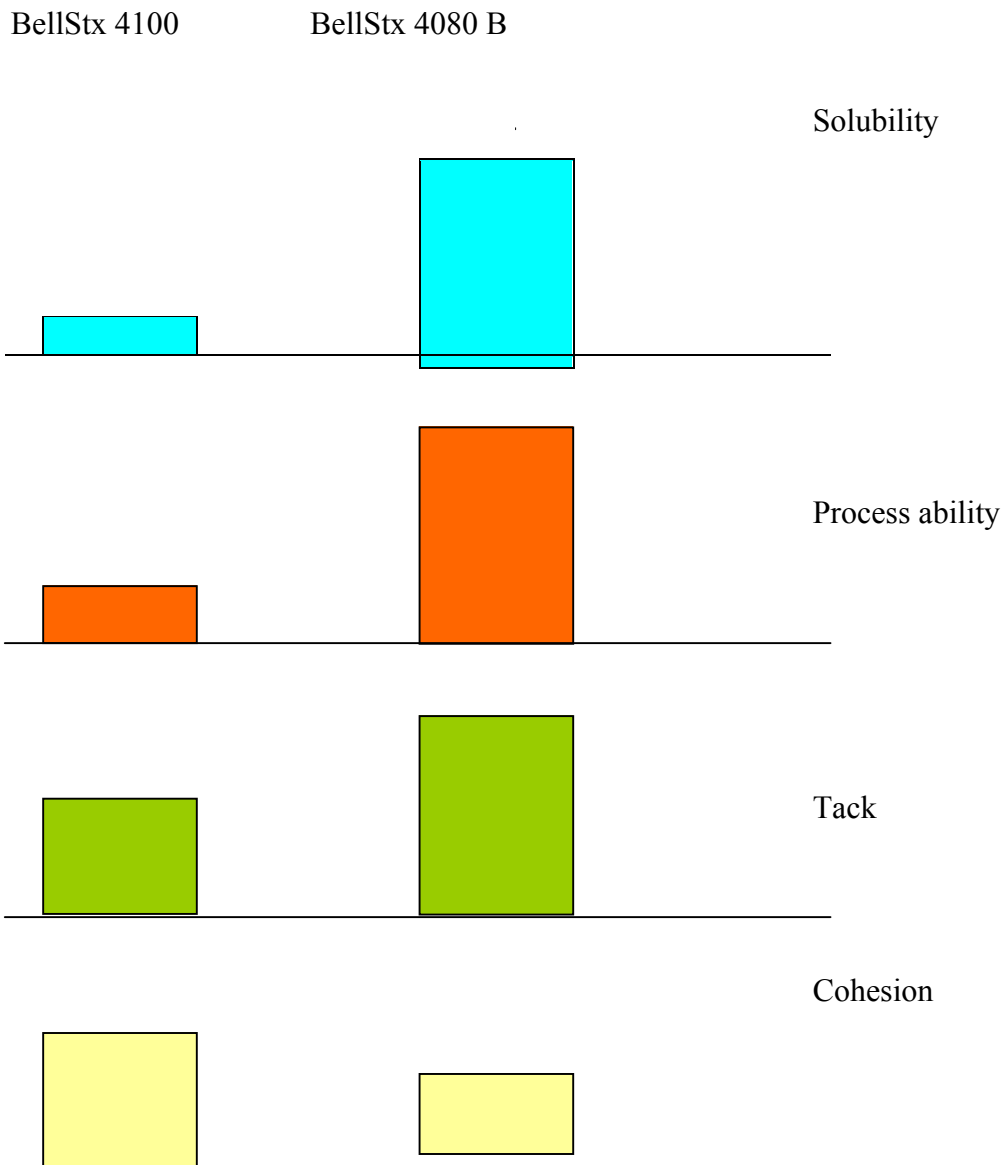
Each version can be adjusted and formulated with tackifiers and plasticizers so as to meet specific properties and performances.

According to the processing requirements, the desired adhesive properties and the specific dissolution conditions, different types of tackifiers and plasticizers are applicable as exemplified in the section “Formulation with BellStx Polymers”.

BELLAND® *Hotmelt polymers*

BellStx 4100 high viscosity, soluble at elevated temperatures, good tack, good cohesion

BellStx 4080 B low viscosity, very good solubility, high tack, medium cohesion



Formulations with BellStx Base Polymers

BELLAND® BellStx hot melts can be blended with tackifiers and plasticizers to achieve certain goals without hampering the solubility in alkaline solutions.

The base polymers are thermally stable up to 160°C and 45 hours, they do not gel and the viscosity does not alter.

Solubility of BELLAND® *BellStx* hot melts

BELLAND® *BellStx* hot melts are soluble in organic solvents like alcohols and ketones, however, their uniqueness is the solubility in alkaline solutions. The dissolution speed depends of course on several parameters such as the layer thickness, the temperature and the type and concentration of the alkaline solution.

At room temperature

1% NH ₄ OH	aqueous solution pH 11.5	(ammonium hydroxide)
1% NaOH	pH 13	(sodium hydroxide)
1% Na ₂ CO ₃	aqueous solution	(sodium carbonate)

Resistant in water and urine

At elevated temperatures:

Various cleaning agents	
0,5% - 0,1% NH ₄ OH	aqueous solution
1% Na ₂ CO ₃	aqueous solution

Approvals

BELLAND® *BellStx* hot melts comply with the requirements for composition of BGVV-XIV and are not skin irritant.

Technical Information

Hot Melt PS Adhesive BELLAND® *BellStx* 4100

Alkali soluble HMA

Physical appearance clear, highly viscous

Melting point app. 80°C

Processing temperature app. 160°C

Specific Gravity 1.1 g/cm³

Melt Index 100°C/2,16 kg 4.5 g/10min

Viscosity 160°C
(Brookfield) 220.000 cP

180° Peel test (Finat-1 Glas) 22 N

Adhesion (Finat-9) 4 N

Cohesion (Finat 8) app. 25 min.

Cold Flow
(Belland Method) 0.1 cm/10 days

Technical Information

Hot Melt PSA	BELLAND® <i>BellStx</i> 4080 B
---------------------	---------------------------------------

Alkaline soluble hot melt

Appearance	clear, low viscosity
Solidification temperature	app. 80°C
Processing temperature	app. 160°C

Specific Gravity	1.1 g/cm ³
------------------	-----------------------

Melt Flow Index 100°C/2,16 kg	15 g/10 min
-------------------------------	-------------

Viscosity 160°C (Brookfield)	40.000 cP
---------------------------------	-----------

180° Peel test (Finat 1 Glas)	24 N
-------------------------------	------

Adhesion (Finat-9)	4.5 N
--------------------	-------

Cohesion (Finat-8)	26 min.
--------------------	---------

Cold Flow (Belland Method)	0.5 cm/10 days
-------------------------------	----------------