

CLAIMS

We claim:

1. A smart and secure label stock **(9b)** with a plurality of security features comprising:
 - 5 a substrate **(9)**;
 - a plurality of coating material **(16, 17, 18, 19, 20 and 21)**;
 - 10 a sensitive adhesive **(22)**;
 - a release coat **(21)**;
 - a release coat agent **(24)**;
 - 15 a tamper evident holographic layer **(23)**; and
 - a release paper **(25)**;
 - 20 wherein,
 - said plurality of security features are added on the rear side of the substrate **(9)**;
 - said plurality of coating material **(16, 17, 18, 19, 20 and 21)** are coated on a specific area of the substrate forming a plurality of separate security features on separate
 - 25 portions of the label stock **(9b)**; and
 - said temper evident layer **(23)** masks the coating material **(16, 17, 18, 19, 20 and 21)** on rear side of the substrate **(9)** thereby provides a blank label stock.
- 30 2. The label stock **(9b)** as claimed in claim 1, wherein the substrate **(9)** is preferably a paper substrate including but not limited to chrome, art and map litho paper.
3. The label stock **(9b)** as claimed in claim 1, wherein the coating material includes specialized inks including but not limited to thermo chromic ink **(16)**, taggant coat
- 35 **(17)**, UV fluorescent ink **(18)**, special ink **(19)** for raster image and bio chromic ink **(20)**.

4. The label stock **(9b)** as claimed in claim **1**, wherein the plurality of security features include but are not limited to text, an artwork, a raster image, and partially visible features readable only using specialized readers.
5. The label stock **(9b)** as claimed in claim **1**, wherein the bio chromic ink **(20)** includes a two color UV ink visible in two UV lights out of which one is high wavelength UV light and other is low wavelength UV light.
6. The label stock **(9b)** as claimed in claim **1**, wherein the label stock **(9b)** helps in providing security to the product against counterfeiting using said plurality of security features made using specialized inks and said tamper evident layer **(23)** including but not limited to a tamper evident holographic layer or tamper evident plain layer or tamper evident mono or multicolour layer on the rear side of the substrate **(9)**.
7. The label stock **(9b)** as claimed in claim **1**, wherein the label stock **(9b)** is used either as a blank or printed label affixed on the product.
8. An assembly for manufacturing the label stock **(9b)** comprising:
 - a plurality of ink and a chemical coating station **(28)** for coating rear side of a substrate **(9)** with a plurality of coating materials **(16, 17, 18, 19, 20 and 21)**;
 - a metal coating station **(26)** to form a tamper evident layer on substrate **(9)**; and
 - a release lining station **(27)** to affix a release paper **(25)** on rear side of the substrate **(9)**;wherein,
 - the plurality of ink and the chemical coating station **(28)** comprise of a material tray **(8)**, a plurality of rollers **(1, 2, 3, 4)**, and a drying chamber **(10)**;
 - the metal coating station **(26)** comprises a plurality of rollers **(1, 2, 3, 4)**, the material tray **(8)** containing a sensitive adhesive **(22)**, an unwind shaft **(5)** carrying a metalized sheet roll that comes in contact with the substrate **(9)** to stick metal fumes and a metalized substrate **(9a)** is obtained; a drying chamber **(10)** to dry the

metalized substrate **(9a)**; a rewind shaft **(6)** to wind the used metalized sheet roll and a rewind shaft **(7)** to wind the metallized substrate **(9a)**; and

5 the release lining station **(27)** comprises of a release paper unwind shaft **(11)** carrying a release paper **(25)** roll, an adhesive header **(12)** to coat the release paper **(25)** with the sensitive adhesive **(22)**, an unwind shaft **(14)** carrying the metallized substrate **(9a)**; at least two chilled sandwich roller **(13)** for lining the adhesive coated release paper **(25)** with the metallized substrate **(9a)** forming the smart and secure label stock **(9b)** and a rewind shaft **(15)** for winding the smart and secure label stock
10 **(9b)**.

9. The assembly as claimed in claim **8**, wherein the plurality of rollers include but are not limited to a material lifting roller **(1)**, an ink transfer roller **(2)**, a die/printing cylinder **(3)**, and an impression roller **(4)**.

15 10. The assembly as claimed in claim **8**, wherein the plurality of coating material are specialized inks including but not limited to a thermo chromic ink **(16)**, a taggant coat **(17)**, a UV fluorescent ink **(18)**, a special ink **(19)** for raster image, and a bio chromic ink **(20)**.