**Technical Data Sheet**

**Screen printing inks**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>G 8</td>
<td>10KK5720</td>
</tr>
<tr>
<td>Green</td>
<td>G 91</td>
<td>10KK6702</td>
</tr>
<tr>
<td>White</td>
<td>G 11</td>
<td>10KK1045</td>
</tr>
<tr>
<td>Black</td>
<td>G 12</td>
<td>10KK9025</td>
</tr>
<tr>
<td>Clear Base</td>
<td></td>
<td>10KK0026</td>
</tr>
</tbody>
</table>

**3.2 Special Products:**

3.2.1 High Opacity Formulations:

<table>
<thead>
<tr>
<th>Colour</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>(high opacity)</td>
<td>10KK1047</td>
</tr>
<tr>
<td>Black</td>
<td>(high opacity)</td>
<td>10KK9026</td>
</tr>
</tbody>
</table>

**3.3 Euro-Colours / 4-Colour Process Printing Inks:**

For 4-colour process printing according to DIN 16538, 4 Euro-basics colours are available:

<table>
<thead>
<tr>
<th>Colour</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euro-Yellow</td>
<td>10KK2187</td>
</tr>
<tr>
<td>Euro-Magenta</td>
<td>10KK3561</td>
</tr>
<tr>
<td>Euro-Cyan</td>
<td>10KK5629</td>
</tr>
<tr>
<td>Halftone Black</td>
<td>10KK9035</td>
</tr>
</tbody>
</table>

**4. ADDITIONAL PRODUCTS:**

Raster paste can be added to reduce “Dot Gain” and to achieve sharper dots.

- Overprinting Lacquer: 10KK011
- Raster Paste: (max. addition 10%) 10KK0018

**5. ADDITIVES:**

**5.1 Thinner:**

Prior to production, the screen printing ink has to be adjusted to the printing viscosity by the addition of thinner.

- Thinner, very fast: (addition 15 - 25%) 100VR1185
- Thinner, standard: (addition 15 - 25%) 100VR1279
- Thinner, for glass: (addition 15 - 25%) 100VR1390

**5.2 Retarder:**

Retarder will influence the drying time of the ink under different climate conditions. Retarder 35928 is a medium drying retarder, 34392 is a very slow drying retarder. While using the ink under extreme climate conditions (Temperature higher than 28°C) it is recommended to use the retarder 35928 as a thinner to adjust the viscosity of the ink.

- Retarder, standard: (addition 5 – 10%) 35928
- Retarder, slow: (max. addition 5%) 34392

It must be noted that an excessive addition of retarder may negatively influence the ink transfer and bulk good resistance, due to the slow evaporation of the retarder.

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The above statements are accurate to our best knowledge and belief. However, due to the great number of possible influences during the manufacture of the substrate and the variation in the application process we suggest that suitability testing take place under actual conditions before production. No legally binding guarantee of certain properties or of the suitability for a definite application purpose can be derived from the above information.

TDS_10KK_EN_20200227-11
Retarder 34392 should only be used in conjunction with thinner 100VR1279 or retarder 35928.

Special Retarder, very slow (addition 10 - 20%) 100VR1170

5.3 Hardener:

Hardener 100VR1433 is the standard hardener. At room temperature of 20°C a pot life of approximately 12 hours can be achieved. For printing onto glass hardener 100VR1294 is recommended in order to achieve a better adhesion and resistance. Afterwards heat treatment at 180°C for 25 min is required.

Hardener, standard (addition max. 20%) 100VR1433
Hardener, printing on glass (max. addition 5%) 100VR1294

Please note that the final chemical and physical resistance of the inks of series 10KK is only achieved after 36 hours at room temperature of 20°C.

During processing and drying of the printed ink, the temperature should not be lower than 15°C otherwise the chemical crosslinking is stopped. Also avoid high humidity for several hours after printing as the hardener is sensitive to humidity. While using hardener please note that multi-colour jobs have to be printed during 36 hours. The completely dried ink can not be overprinted.

5.4 Levelling Agent:

The levelling of the ink surface can be optimised by the use of a levelling agent. It must be noted that excessive addition of levelling agent can have a negative influence on the over printability.

Levelling Agent (max. addition 0.5-1%) 100VR133

6. PROCESSING INSTRUCTIONS:

6.1 Pre-treatment:

Pre-treatment of polyolefins (PE/PP) must be performed by Flame Treatment or CORONA-discharge in order to insure the adhesion of the UV screen printing ink to the substrate. In case of PE, surface tension needs to be at least 42 mN/m (Dynes/cm), in case of PP at least 52 mN/m (Dynes/cm).

6.2 Stencils/Printing Equipment:

The inks of 10KK series can be printed with all commonly available screen printing meshes. They can be used with all screen printing machines with printing speeds of about 800 - 1.600 pieces/hour with screen printing stencils currently used for industrial applications. The colour mixing formulations are based on a 120-34 threads/cm mesh.

6.3 Curing Conditions:

The inks of 10KK series are physically drying through the evaporation of solvent within 1 hour. While multi-colour printing we recommend an intermediate drying process by infrared lamps or hot air blower. The finally drying will be achieved at 70 – 80°C during 4 – 6 minutes.

7. CLEANING:

Screens and squeegees and as well as other working materials can be cleaned with the RUCO screen cleaner 32335. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

Universal Cleaner 32335
Cleaner for cleaning equipment 100VR1240C
Bio degradable Cleaner 100VR1272

8. SHELF LIFE:

A shelf life of 24 months is guaranteed when storing the inks at 21°C and in the original packing container. At higher storage temperatures the shelf life will be reduced.

9. PRECAUTIONS:

For further information on the safety, storage and environmental aspects concerning these products, please refer to the Material Safety Data Sheet (MSDS).

Additional technical information may be obtained from our staff of the Product Management Department.

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