

SERIES T28 FOR GLASS



Technical Data Sheet

Pad Printing Inks

1. APPLICATION FIELDS:

Versatile two component ink for pad printing on **glass** and metal. Substrates may differ in their chemical structure or method of manufacture. A test for suitability must always be carried out before printing. Antistatic, Mould Release Agents and Slip Additives may have negative effects on adhesion, and should be detected and removed prior to printing.

2. CHARACTERISTICS:

This glossy, physically drying and chemical reactive pad printing ink exhibits good mechanical and chemical resistance, as well as a good flexibility. A special product test is recommended prior to production.

The raw materials used meet with the limits stipulated by the EEC regulation EN 71 (Safety of Toys), part 3 (Migration of Certain Elements) of December 1994.

3. RANGE OF COLOURS:

White	B 11	T28-1011
Black	B 12	T28-9016

4. ADDITIVES:

4.1 Thinner:

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

Thinner for glass (addition: 15 - 25 %) 100VR1390

4.2 Hardener:

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, for printing on glass 100VR1294 (add max. 5%)

Please note that the final chemical and physical resistance of the ink 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.

1. 应用领域:

多用途玻璃和金属双组份移印油墨。由于基材的化学机构或者是制造方法不同, 所以印刷前的适印行测试是必须的。抗静电剂, 脱模剂和滑动剂可能反作用于附着力, 应该检测并清除掉。

2. 特性:

该系列光泽度好, 物理干燥和化学反应的移印油墨, 表现出很好的机械和化学耐受性以及很好的柔韧性。

生产前的印刷测试是必须的。

所用原材料均符合 1994 年 12 月颁布的 EEC 法规 EN 71 (玩具安全), 第三部分 (特定元素的迁移)。

3. 色域:

白色	B11	T28-1011
黑色	B12	T28-9016

4. 附加产品:

4.1 稀释剂:

生产前移印油墨需要添加稀释剂调整到适合印刷的粘度。

玻璃稀释剂 (添加比例: 15-25%) 100VR1390

4.2 固化剂:

玻璃印刷为了达到更好的附着和耐受性推荐使用固化剂 100VR1294。印刷完成后需要 180°C 烘烤 25 分钟。

固化剂 印刷玻璃 100VR1294 (最多添加 5%)

请记住最终的物理和化学耐受性是要在室温 20°C 下放置 36 小时才能够完全达到。

在印刷和油墨干燥过程中, 环境温度不能低于 15 度, 否则化学交联反应停止, 同时避免在高湿情况下放置几个小时, 因为固化剂对潮湿敏感。当使用固化剂进行多色印刷时, 叠色工作必须在 36 小时内完成, 因为完全干燥的油墨无法罩印。

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4.3 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 overprintability.

Levelling Agent (max. add.: 0,5-1 %) VM 100VR133

5. PROCESSING INSTRUCTIONS:

5.1 Pre-treatment:

Pre-treatment of polyolefines (PE/PP) must be performed by Flame Treatment or CORONA-discharge in order to insure the adhesion of the 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).

5.2 Cliché/Printing Equipment/Pad:

The T 28 series can be used with all pad printing machines with clichés and pads currently used for industrial applications. However, it has to be noted that type (screen) and etching depth of the cliché, mould and hardness of the pad, the adjustment of the ink (addition of thinner and/or retarder) as well as printing speed may influence the printing result.

5.3 Drying Conditions:

At room temperatures (21° C) the inks of T 28 series are grip dry within 5 minutes. While adding hardener to the ink, drying of the ink will take approximately 36 hours at room temperature. To accelerate the ink drying onto the substrate the use of hot air blower or infrared lamps is recommended. It must be noted that after heat treatment a cooling section must be installed in order to avoid that the printed parts stick together.

6. CLEANING:

Clichés, squeegees and so on can be cleaned with the RUCO Universal cleaner 32 335. It must be noted that the pad does not come into contact with solvents. For the cleaning of the pad please see to the application references of the pad manufacturers. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

4.3 流平剂:

油墨表面的流平效果可以通过添加流平剂进行优化, 需要注意, 过多添加流平剂对于叠印有副作用。

流平剂 (最多添加 0.5-1%) VM 100VR133

5. 印刷工艺:

5.1 预处理:

聚烯烃 (PE/PP) 必须使用火焰或者电晕处理, 以保证印刷油墨在基材上的附着效果。PE 材料表面张力要达到至少 42mN/m, PP 材料至少要 52 mN/m。

5.2 模版/印刷设备/胶头:

T28 适用于所有工业生产中的移印机, 印版以及胶头。然而, 需要注意不同类型 (丝网) 和印版蚀刻深度, 胶头脱模, 硬度, 油墨的调整 (稀释剂或者缓凝剂的添加), 还有印刷速度, 这些都会影响到印刷结果。

5.3 干燥条件:

室温下 (21 度) T28 表干可以在 5 分钟内完成。如果添加了固化剂, 室温下油墨的干燥时间大约需要 36 个小时, 如果要加速干燥速度可以用吹热风或者红外灯。需要注意的是加热干燥后要有一个冷却装置防止印刷件粘在一起。

6. 清洁剂:

模版, 胶刮等可以用迪高通用清洁剂 35352 来清洗。需要注意的是胶头不能与溶剂接触。胶头的清洗请参看胶头生产厂商的使用说明书。

如果清洗设备不是全自动的, 需要戴防护手套。

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Universal Cleaner	UR32335
Cleaner for cleaning equipment	WR 100VR1240C
Bio degradable Cleaner	BR100VR1272

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多用途清洗剂	UR32335
设备清洗剂	WR100VR1240C
生物降解清洗剂	BR100VR1272

7. 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.

7. 存储期:

在原包装 21 度下可以保证 24 个月的存储时间。高温下存储时间会缩短。

8. 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 Technical Application Department.

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8. 注意事项:

针对这些产品的安全性，储存性和环境问题，请参考材料安全说明书（MSDS）。

可以从我们的技术应用部门的员工中获得进一步的技术信息。

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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.

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