

T45

Technical Data Sheet			Pad Printing inks		
1. Application field Versatile one component ink for pad printing on ABS, acrylic glass, lacquered surfaces, rigid PVC, paper, carton, polyamide, polycarbonate, polystyrole. 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.			Black	(high opacity)	T45-9022
2. CHARACTERISTICS: This glossy, physically drying and chemical reactive pad printing ink exhibits good mechanical and chemical resistance, as well as a good flexibility. The colour shades of T 45 are light fast, weather resistant and guarantee high opacity. 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.			1. 应用领域: 多用途单组份油墨，用于印刷在 ABS，丙烯酸玻璃，罩光油面，硬质 PVC，纸，纸板，聚酰胺，聚碳酸酯以及聚苯乙烯基材上。基材通常由其化学结构或生产方式决定。在印刷前必须测试其适用性。抗静电剂，脱模剂和流平剂可能对附着力产生负面效果，应在印刷前检测并去除。		
3. RANGE OF COLOURS: The basic ink mixing system consists of 12 basic colours and may be used for the mixing of a wide colour shade range. Field proven mixing formulations exist for Pantone®, HKS, RAL, NCS, etc..			2. 特性: 本移印油墨光泽高，物理干燥，并具有化学反应活性，具有优异的机械和化学耐受性的特点，并且柔韧性好。T45 系列的色都具有很好的牢度、耐侯和高遮盖力的特点。在生产前推荐进行适印行测试。 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）。		
3.1 Basic colours:			3. 色域: 本油墨包含 12 种基准色，可以互相混合调出广泛颜色。行业中的配色标准有 PANTONE, HKS, RAL, NCS 等。		
Light Yellow	B 1	T45-2025	3.1 基准色		
Medium Yellow	B 2	T45-2026	淡黄色	B 1	T45-2025
Orange	B 3	T45-3078	黄色	B 2	T45-2026
Light Red	B 4	T45-3079	橙色	B 3	T45-3078
Red	B 5	T45-3080	淡红色	B 4	T45-3079
Pink	B 6	T45-3081	红色	B 5	T45-3080
Violet	B 7	T45-5058	粉红色	B 6	T45-3081
Blue	B 8	T45-5059	紫色	B 7	T45-5058
Green	B 91	T45-6311	蓝色	B 8	T45-5059
Brown	B 10	T45-8011	绿色	B 91	T45-6311
White	B 11	T45-1006	褐色	B 10	T45-8011
Black	B 12	T45-9008	白色	B 11	T45-1006
Clear Base		T45-0003	黑色	B 12	T45-9008
3.2 Special Products:			透明基质		T45-0003
High Opacity Formulations: White (high opacity) T45-1041			3.2 特种产品: 高遮盖力产品:		

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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白色	(高遮盖)	T45-1041	dium drying retarder, VZ 34 392 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 VZ 35 928 as a thinner to adjust the viscosity of the ink.	
黑色	(高遮盖)	T45-9022		
3.3 Euro-Colours / 4-Colour Process Printing Inks:			3.3 欧系颜色 / 4 色印刷油墨:	
For 4-colour process printing according to DIN 16538, 4 Euro-basic colours are available:			根据 DIN 16538 规定的 4 色印刷工艺, 我们可以提供 4 种欧洲基准色系:	
Euro-Yellow		T45-2013	欧系黄	T45-2013
Euro-Magenta		T45-3035	欧系品红	T45-3035
Euro-Cyan		T45-5027	欧系青蓝	T45-5027
Halftone Black		T45-9016	中色黑	T45-9016
3.4 Bronze Colours:			3.4 金属颜色:	
See separate "Bronze Colours" leaflet “			见另外的“金属颜色”技术资料。	
4. ADDITIONAL PRODUCTS:			4. 增加的产品:	
Raster paste can be added to reduce “Dot Gain” and to achieve sharper dots.			光栅膏可用来减少丰点现象, 达到分辨率更高的点。	
Overprinting Lacquer		T45-0011	罩光油	T45-0011
Raster Paste	(max. addition: 10 %)	T45-0002	光栅膏	(最多添加: 10 %) T45-0002
5. ADDITIVES:			5. 添加剂:	
5.1 Thinner:			5.1 稀释剂:	
Prior to production, the pad printing ink has to be adjusted to the printing viscosity by the addition of thinner.			生产前, 移印油墨需添加稀释剂来调整到可印刷的粘度。	
Thinner, very fast	(addition: 15 - 25 %)	VS 35 353	稀释剂, 非常快	(添加: 15 - 25 %) VS 35 353
Thinner, standard	(addition: 15 - 25 %)	VD 38 571	稀释剂, 标准的	(添加: 15 - 25 %) VD 38 571
While printing on plastics such as ABS, acrylic glass and styrene tension corrosion can appear while using certain solvents. In order to avoid such effect the special thinner 35 696 should be used.			当在例如 ABS, 丙烯酸玻璃和聚苯乙烯等塑料上印刷时, 在使用某些溶剂时可能会出现张力腐蚀。要避免这种情况, 推荐使用特种稀释剂 35696。	
Special Thinner	(addition: 15 - 25 %)	35 696		
5.2 Retarder				
Retarder will influence the drying time of the ink under different climate conditions. Retarder VZ 35 928 is a me-				

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特别稀释剂 (添加: 15 - 25 %) 35 696

5.2 缓凝剂:

缓凝剂将影响在不同气候条件下的干燥时间。缓凝剂 VZ 35 928 是中等干燥缓凝剂, VZ 34 392 是非常慢干的缓凝剂。当在极端气候条件下 (气温超过 28 度) 使用油墨时, 推荐用缓凝剂 VZ 35 928, 作为稀释剂来调整油墨的粘度。

Retarder, standard (addition 5 - 10 %) VZ 35 928
Retarder, slow (addition max. 5 %) VZ 34 392
It must be noted that an excessive addition of retarder may negatively influence the ink transfer and bulk goods resistance, due to the slow evaporation of the retarder. Retarder VZ 34 392 should only be used in conjunction with thinner VD 38 571 or retarder VZ 35 928.
Special Retarder, very slow (addition max. 10%) 100 VR 1170

5.3 Adhesion Modifier:

In order to achieve an adhesion onto not pre-treated Polypropylene (PP) the addition of adhesion modifier HV 100 VR 1260 is recommended. Please note that the addition of adhesion modifier HV 100 VR 1260 will increase the drying of the ink.
Adhesion Modifier (addition 10 - 20 %) HV 100 VR 1260

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 overprintability.
Levelling Agent (max. add.: 0.5-1 %) VM 100 VR 133

6. PROCESSING INSTRUCTIONS:

6.1 Cliché/Printing Equipment/Pad :

The T 45 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 hard-

ness of the pad, the adjustment of the ink (addition of thinner and/or retarder) as well as printing speed may influence the printing result.

6.2 Curing Conditions:

At room temperatures (21° C) the inks of T 45 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.

缓凝剂, 标准的 (添加: 5 - 10 %) VZ 35 928

缓凝剂, 慢的 (最多添加: 5 %) VZ 34 392

必须注意如果过量添加缓凝剂, 由于缓凝剂蒸发缓慢, 将负面影响油墨迁移和一些良好的耐受性。缓凝剂 34 392 只能与稀释剂 VD 38 571 或者缓凝剂 VZ35 928 联合使用。

特别的缓凝剂, 非常慢 (最多添加: 10%) 100 VR 1170

5.3 附着力调节剂:

为达到在未经表面处理的 PP 上的附着力, 推荐使用附着力调节剂 HV 100 VR 1260。请注意添加附着力调节剂 HV 100 VR 1260 将加快油墨干燥速度。

附着力调节剂: (添加: 10 - 20 %) HV 100 VR 1260

5.4 流平剂:

油墨表面的流平性可以用流平剂来优化。必须注意过量使用流平剂将对罩印性有负面影响。

流平剂 (最多添加 0.5-1%) VM 100VR133

6. 工艺要求:

6.1 印版/印刷机械/印头:

T45 系列适用于目前工业应用中的所有移印机械, 包括印版和印头。然而, 必须注意印版类型 (网格) 和蚀刻深度, 印



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头的形状和硬度，油墨的调整（添加稀释剂和/或缓凝剂），以及印刷速度会影响印刷效果。

6.2 固化条件:

室温下（21 度）T45 系列油墨可在 5 分钟内表干。当油墨中添加固化剂时，油墨干燥速度室温下约 36 小时。为加速基材表面油墨的干燥，推荐使用热风吹或者红外灯。必须注意热处理后，必须安装冷却部分，以避免印刷部分互相粘连。

7. 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.

Universal Cleaner	UR32 335
Cleaner for cleaning equipment	WR100 VR1240C
Bio degradable Cleaner	BR100
VR1272	

8. SHELF LIFE:

A shelf life of 12 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 Technical Application Department.

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7. 清洁:

印版，刮片和其他部分可以用迪高公司通用清洁剂 32 335 来清洁。必须注意印头不能接触溶剂。印头的清洁，请参照印头生产商的应用指南。如果不能用自动清洁设备清洁，必须戴上保护手套。

通用清洁剂	UR32 335
设备清洁	WR100 VR1240C
生物降解清洁剂	BR100 VR1272

8. 储存期:

在 21 度并在原包装内保存油墨时，可担保 12 个月的储存期。温度升高时储存期缩短。

9. 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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