

TRX-1

SONY



Specialty Resin



Sony's patented specialty resin ribbon uses UV-light curable technology to take thermal printing ink performance to the next level. TRX-1 is formulated to perform in a number of demanding environments.

Unprecedented performance such as Xtreme chemical resistance, Xtreme abrasion resistance and Xtreme temperature resistance should be expected from images printed with this ribbon.

Performance Characteristics

- Cross-linked polymer formed after exposure to UV light
- Will perform the same as standard resin inks if not cured
- Sony's SmoothCoat™ backcoat
- Special release primer
- Printability over a wide range of substrates
- Heat resistance >700°F (375°C)

Performance characteristics are based on proper curing of the ink

Provides unmatched solvent and chemical resistance. Often eliminates the need for overlaminated, anodized or etched labels. Superior resistance to:

- MEK (methyl ethyl ketone) • Toluene • Xylene
- IPA (isopropyl alcohol) • Gasoline • Brake Fluid • Engine Coolant
- Many other chemicals

TRX-1 is designed to transfer an excellent quality and extremely durable image onto the most popular label stocks for harsh environments

Condition

Value

Print Speed	2-6 IPS (inches per second) 4 IPS optimum (20 ft/min)
UV Irradiation UV Lamp	Mercury/"H" type bulb optimum λ: 260-320nm; 365nm
UV Dosage (320-390nm, UV Power Puck™ radiometer by EIT)	400-500 mJ/cm ²
UV Irradiance (320-390nm, UV Power Puck™ radiometer by EIT)	1100-1200 mW/cm ²

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Ribbon Properties		
Description	Specification	Measurement Method
Ink Material	UV Curable Resin	—
Total Thickness (µm)	7.0 ± 0.6	Micrometer
Base Film Thickness (µm)	5.0 ± 0.4	Micrometer
Ink Thickness (µm)	1.1 ± 0.2	Micrometer
Ribbon Transmission Density	≥ 1.1	Densitometer
Print Density	≥ 1.3	Densitometer
Durability of Printed Image		
Label Stock: Print treated White Polyester		
Print Speed: 4 IPS	Print Density: 1.39	
Smudge Resistance: ANSI A ¹	Scratch Resistance: ANSI B ¹	
Test Equipment: Smudge — Colorfastness Tester Scratch — Crockmeter (light arm)		
Conditions: Smudge Test: 2000 cycles @ 500 grams with cotton cloth		
Scratch Test: 2000 cycles @ 300 grams with stainless steel ball bearing		
Resistant to rubbing with: MEK (methyl ethyl ketone), Toluene, Xylene, IPA (isopropyl alcohol), Gasoline, Brake Fluid, Engine Coolant, Mineral Spirits, Formula 409		
¹ Represents the American National Standard Institute (ANSI) Grade measured at the given conditions. Grade levels are A, B, C, D, and F, where A is excellent, B is above average, C is average, D is below average, and F is poor.		
Label Stock: White Top Coated Polyimide & Uncoated Polyimide		
Scratch Resistance: No damage to image up to 700°F (375°C) ²		
Test Equipment: Crockmeter		
Conditions: 1000 cycles @ 300 grams with stainless steel ball bearing against two surfaces — 1.) ceramic hot plate and 2.) stainless steel		
² The upper temperature limit of the hotplate used is 700°F (375°C). Image should survive at higher temperatures		
Conversion Chart		
Millimeters (mm) to inches = mm ÷ 25.4		Inches to mm = Inches ÷ 0.03937
Meters (m) to Feet (ft) = m ÷ 0.3048		Feet to Meters = Feet ÷ 3.2808
C° to F° = (1.8 x C°) + 32 = F°		F° to C° = (F° ÷ 1.8) - 17.77 = C°
Thousand square inches (MSI) to m ² = msi x 0.645		MSI = m ² ÷ 0.645
Storage Conditions		
Keep ribbon out of stray light as much as possible and avoid storing in direct sunlight. Also, store in a dry area at a temperature not exceeding 104°F (40°C).		

The information on this data sheet was obtained in Sony Chemicals Corporation laboratories. Measured values may vary slightly when tested in a different environment. Information contained within this document is subject to change without notification.