

YOUR COMPLETE GUIDE TO THE **ZHUORIM** TTR UK THERMAL TRANSFER RIBBON RANGE



Quality starts with OUR film

**YOUR COMPLETE GUIDE TO
THE  TTR UK
THERMAL TRANSFER
RIBBON RANGE**

Your Complete Guide to The TTR Range



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Your Complete Guide to The TTR Range



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Your Partner for TTR Supplies



GB

Zhuorim TTR UK stands for...

- ✚ Long years of experience in the printing market
- ✚ Innovation and a wide range of products with in-house development and technical support
- ✚ ISO and ISEGA certification

As one of the leading manufacturers of printing supplies in Europe, Zhuorim TTR UK is proud of its long experience in development and production. The Zhuorim brand is well established in the market and stands for reliability, quality, and innovation. Our partners include a great number of OEM's, dealers with private labelling or products in neutral packing, as well as packing/labelling companies and the industry in general.

D

Zhuorim TTR UK steht für...

- ✚ Langjährige Erfahrung im Druckermarkt
- ✚ Innovation und ein breites Sortiment mit eigener Entwicklung und technischem Support
- ✚ ISO and ISEGA Zertifizierung

Als eines der größten Unternehmen für Druckerzubehör in Europa verfügt Zhuorim TTR UK über langjährige Produktions- und Entwicklungskompetenz. Unsere im Markt etablierte Marke Zhuorim bürgt für Zuverlässigkeit, Qualität und Innovation. Darauf vertrauen unsere Partner zu denen zahlreiche Drucker- OEM's, Händler mit Eigenmarken oder neutralen Verpackungen sowie Unternehmen der Verpackungs-, Etikettierungs- und der verarbeitenden Industrie zählen.

F

Zhuorim TTR UK représente...

- ✚ Longue expérience dans l'imprimerie
- ✚ Innovation et une large gamme de produits avec développement interne et appui technique
- ✚ Certification d'ISO et d'ISEGA

En tant que plus grande entreprise pour des accessoires imprimantes en Europe Zhuorim TTR UK est fière d'une longue compétence de développement et de production. La marque de Zhuorim est bien établie sur le marché et représente la fiabilité, la qualité et l'innovation. Nos associés incluent un grand nombre de FEO, revendeurs avec marque privée ou produits en emballage neutre, aussi bien que des fabricants d'emballage et d'étiquettes et l'industrie en général.

ES

Zhuorim TTR UK representa...

- ✚ Muchos años de experiencia en el mercado de imprenta
- ✚ Innovación y un amplio abanico de productos con desarrollo interno y apoyo técnico
- ✚ Certificación de ISO e ISEGA

Como mayor empresa para accesorios de impresoras en Europa Zhuorim TTR UK es orgullosa de su capacidad duradera de desarrollo y de producción. La marca Zhuorim está bien establecida en el mercado y representa fiabilidad, calidad e innovación. Nuestros socios incluyen un gran número de empresas OEM, vendedores con marcas propias o productos en embalaje neutral, así como fabricantes de embalaje, de etiquetas y la industria en general.

Products and Services



GB

Zhuorim Thermal Transfer Ribbons (TTR) are used in all the major barcode printers by OEMs and industrial partners all over the world. Together we work on optimised solutions of different applications. We manufacture ribbons in various coatings (wax, wax/resin and resin) predominantly in black but also in various colours. It is commonplace for us to work closely with our partners and by taking into consideration the printers, working specifications, application requirements (e.g. smudge and scratch resistance, or heat and solvent resistant labels) and the substrate involved (e.g. paper, synthetics, textiles, plastic ID-cards etc.) it is possible to develop bespoke products and achieve the best solution for a multitude of TTR applications like the successful development of ribbon grades that comply with food regulations. In addition, Zhuorim TTR UK also manufactures a range of MICR ribbons and fluorescent ribbons as well as nylon ribbons with up to 10 colours, fax ribbons, carbon paper and much more.

D

Zhuorim Thermo- Transfer Folien (TTF) werden von OEMs und unseren Industriepartnern in aller Welt eingesetzt. Gemeinsam mit ihnen erarbeiten wir optimale Lösungen für die verschiedensten TTF- Anwendungen. Wir produzieren Folien mit diversen Beschichtungen (Wachs, Wachs/Harz, Harz), hauptsächlich in schwarz aber auch in unterschiedlichen Farben. Mit den individuell auf Anwendungen und Gerät abgestimmten und entwickelten Produkten sind Drucke auf Papier, Kunststoff, Textilien und ID- Karten möglich. Unsere im Einsatz in allen gebräuchlichen Barcode- Druckern erprobten TTF- Bänder sind in wisch- und kratz- festen oder auch in hitze- oder lösungsmittel- resistenten Qualitäten zu haben. Zu unserer Spezialität zählen auch für Lebensmittel zugelassene Rezepturen und nach Kundenwünschen maßgeschneiderte Rezepte. Darüber hinaus produzieren wir auch MICR- und fluoreszierende Bänder sowie Nylon- Farbbänder mit bis zu 10 Farben, Fax- und Korrekturbänder, Kohle- Papier und vieles mehr.

F

Les rubans transfert thermique (TT) de Zhuorim sont utilisés dans le monde entier, dans toutes les imprimantes de codes-barres les plus connues par des FEO et nos partenaires industrielles. Nous élaborons ensemble solutions optimisées pour des diverses applications de TT. Nous fabriquons des rubans aux couches diverses (cire, cire/résine et résine) principalement en noir, mais également dans des couleurs différentes. Avec nos produits développés et syntonisés selon vos besoins, il est possible d'imprimer sur papier, sur toute matière plastique, sur des textiles et sur des cartes d'identité. Nos rubans TT son résistants à l'abrasion et aux bavures ainsi qu'aux solvants et à la chaleur. Notre entreprise est spécialiste en développer des produits sur mesure et réaliser la meilleure solution pour une multitude d'applications de ruban TT ; par exemple, nous développons des qualités de ruban qui sont conformes aux règlementations de sécurité alimentaire. De plus, Zhuorim TTR UK fabrique également une gamme de rubans de RCEM et de rubans fluorescents ainsi que des rubans en nylon en jusqu'à 10 couleurs, des rubans de fax, du papier carbone et plus encore.

ES

Las cintas transferencia térmica (TTO) de Zhuorim son utilizadas por todo el mundo, para todas las impresoras de códigos de barras más conocidas, por empresas OEM y por nuestros socios comerciales. Elaboramos juntos soluciones optimizadas para diversas aplicaciones de TTO. Fabricamos cintas con capas distintas (cera, cera/resina y resina) principalmente en negro, pero también en colores diferentes. Con nuestros productos desarrollados según sus requisitos y especificaciones técnicas, es posible imprimir sobre papel, todos tipos de plástico, sobre tejidos y sobre DNI. Además, nuestras cintas son resistentes a raspones y manchas, así como a disolventes y al calor. Nuestra empresa se especializa en desarrollar productos diseñados a pedido de nuestras clientes y realizar la mejor solución para una multitud de aplicaciones de TTO; p. ej. desarrollamos clasificaciones de cinta que se adecuan a las normas de seguridad alimentaria. Es más, Zhuorim TTR UK fabrica una gama de cintas de RCTM y de cintas fluorescentes, así como las cintas de nailon de hasta 10 colores, cintas de fax, papel carbono y mucho más.

The History of the Factory in Turriff



From 1967 to 2022 and into A Global Future

The Scottish plant was established in Turriff, Aberdeenshire in 1967 from Caribonum Ltd. producing Film and Paper Carbon until late 1992 when the business was taken over as Pelikan Hardcopy Scotland Ltd. and has expanded to its current size of 15,000m² (165,000 sq. ft.) employing over 50 staff to meet the demand of the market.

In January 2018 the factory and the assets of Pelikan were bought by the privately owned Chinese Zhuoli Imaging Technology Co. Ltd. and is now trading as Zhuorim TTR UK. As part of the Zhuoli Group the future of the factory is secured.

The focus of the Scottish factory is in the manufacturing of Thermal Transfer film products. Regarded as a 'Centre of Excellence' all facets of the products which includes laboratory research & development, ink production, commercial coating, slitting and worldwide distribution are encompassed. The TTR products are produced in Scotland with the additional advantage of expanding the range with products of the Zhuoli Group produced in China.

Zhuoli Imaging Technologies Co. Ltd., based out of Jiaozuo City, P.R. China, is the world's only vertically integrated producer of both 4.5-micron PET film and thermal transfer ribbon, specialising in the manufacturing and export of a complete range of thermal transfer and hot stamping consumables. Products include thermal transfer ribbons, date coding hot stamping foil, pharmaceutical grade hot stamping foil, and hot ink rollers. Zhuoli has the largest solvent coating capacity in China and distributes products globally to 62 countries throughout the world.

ISO 9001, 14001, and 18001 certified Zhuoli Imaging Technologies Co. Ltd. operates with 16 solvent and hot melt coating lines and 40 slitters. With 820 employees, including 140 specialized quality and R&D technicians, they currently hold 24 patents and recently received the National Torch Program Award for key high-tech enterprises from China's Ministry of Science and Technology.

International Media Products (IMP) is the American subsidiary of Zhuorim. Established in Alpharetta, Georgia, U.S.A. in 2013, IMP has slitting, and distribution facilities located in the US. They have quickly become the fastest growing TTR supplier in North and South America. Adding to their list of achievements beyond outstanding local customer service, they have become a leader in offering a full line supplier of value alternatives to the Legacy TTR providers. IMP's goal is to be the next generation ribbon supplier of one-stop shopping, plug and play alternatives by offering its' resellers alternatives with a lower cost of ownership which mature markets are demanding today.

The Zhuoli Group adopted a long-term vision by focussing all R&D efforts on developing technologies to meet the challenges of the future, with new products and markets which are environmentally friendly and protect the planet. As part of our commitment to protect the environment Zhuorim TTR UK operates a regenerative thermal oxidiser. On a regular base we are inspected by SEPA, the Scottish Environmental Protection Agency, a government body to ensure that we are working according to EU laws and consistently meeting the targets set by the EU.



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Thermal Transfer Ribbon Range

| Ref. | Wax | Print Type | Print Speed mm/s | Energy | ISEGA | Main Substrates |
|-------------|--------------|--------------|------------------|---------|--------------|---|
| T084 | Standard | FH | 200 | low/med | ISEGA | Vellum, Semi-coated, Glossy, Shipping + Logistics |
| T056 | Universal | FH | 200 | low/med | ISEGA | Vellum, Semi-coated, Glossy, Tags, Shipping + Logistics |
| T160 | Premium | FH | 200 | low/med | | Vellum, Semi-coated, Glossy, Tags, Shipping + Logistics |
| T017 | Blue | FH/NE | 200 | low/med | | Vellum, Semi-coated, Glossy, Tags, Shipping + Logistics |
| T018 | Red | FH/NE | 200 | low/med | | Vellum, Semi-coated, Glossy, Tags, Shipping + Logistics |
| T019 | Green | FH/NE | 200 | low/med | | Vellum, Semi-coated, Glossy, Tags, Shipping + Logistics |
| T052 | Premium | NE | 300 | low/med | ISEGA | Vellum, Semi-coated, Glossy, Flexible Packaging |

| Ref. | Wax Resin | Print Type | Print Speed mm/s | Energy | ISEGA | Main Substrates |
|-------------|-----------------|------------|------------------|---------|--------------|--|
| T001 | Universal | FH | 200 | medium | ISEGA | Coated + Uncoated Paper, Card, Tag, Foil, Shipping + Logistics |
| T260 | Premium | FH | 250 | low/med | ISEGA | Coated + Uncoated Paper, Card, Tag, Foil, Shipping + Logistics |
| T037 | Premium | NE | 300 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T074 | 4 μ Premium | NE | 1000 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T075 | Premium | NE | 600 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T079 | White | NE | 250 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T080 | Blue | NE | 350 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T081 | Red | NE | 350 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T082 | Green | NE | 350 | low/med | ISEGA | Coated, Synthetic, PP, PE, PVC, PET |
| T004 | Silver | NE | 250 | low/med | | Coated, Synthetic, PP, PE, PVC, PET |

Tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Important note: We can slit almost every size, tailored to your requirement. Please ask for details.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions.

Thermal Transfer Ribbon Range

| Ref. | Resin | Print Type | Print Speed mm/s | Energy | ISEGA | Main Substrates |
|-------|---------------|--------------|------------------|--------|--------------|---|
| T015 | Economy | FH | 100 | med/hi | | Coated, Synthetic, PP, PE, PVC, PET, Alu. |
| T016 | Standard | FH | 100 | med/hi | ISEGA | Coated, Synthetic, PP, PE, PVC, PET, Alu., BS5609, UL, CLP hazardous warning GHS labels |
| T016R | Red | FH | 100 | med/hi | ISEGA | Coated, Synthetic, PP, PE, PVC, PET, Alu., BS5609, CLP hazardous warning GHS labels |
| T016W | White | FH | 100 | med/hi | ISEGA | Coated, Synthetic, PP, PE, PVC, PET, Alu., BS5609, CLP hazardous warning GHS labels |
| T016B | Blue | FH | 100 | med/hi | | Coated, Synthetic, PP, PE, PVC, PET, Alu., BS5609, CLP hazardous warning GHS labels |
| T016G | Green | FH | 100 | med/hi | | Coated, Synthetic, PP, PE, PVC, PET, Alu., BS5609, CLP hazardous warning GHS labels |
| T350 | Premium | FH | 250 | med/hi | | Coated, Synthetic, PP, PE, PVC, PET, Alu., UL, CLP hazardous warning GHS labels |
| Ref. | Special Resin | Print Type | Print Speed mm/s | Energy | ISEGA | Main Substrates |
| T050 | Premium | FH/NE | 300 | medium | | Coated, Synthetic, PP, PE, PVC, PET, Alu. labels |
| T087 | HT Premium | NE | 250 | med/hi | | Coated, Synthetic, PP, PE, PVC, PET, Alu. labels High Temperature packaging |
| T088 | Automotive | FH | 300 | high | | Coated, Synthetic, PP, PE, PVC, PET, Alu. labels |
| T550 | Wash Care | FH | 250 | med/hi | | Textiles |
| T560 | Wash Care | FH | 350 | med/hi | | Textiles |

Tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Important note: We can slit almost every size, tailored to your requirement. Please ask for details.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



and



certified where stated.

T084 Standard Wax

T084 is an excellent standard wax quality offering optimum cost benefits. It covers most general purpose requirements expected from a wax ribbon for a solid performance on paper substrates. It provides clear, crisp barcodes – standard, rotated or 2-D on a variety of paper stocks.

| General Item Data | | |
|-------------------|---|---------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" = 250mm/s |
| Print Energy | : | Low - Medium |

| Substrate Application Range | | | |
|-----------------------------|---|--------------|---|
| Vellum | ✓ | Gloss Coated | ✓ |
| Matt Coated | ✓ | Tag | ✓ |
| Semi-Gloss | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Printing Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T056 Universal Wax

T056 is a highly versatile resin enhanced universal wax for flat head and some near edge printers, gives outstanding print performance on plain and coated paper through to synthetic substrates. The added durability of this enhanced wax grade can also satisfy more demanding applications. A high quality and performance thermal transfer ribbon offering optimum cost benefits.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" = 250mm/s |
| Print Energy | : | Low - Medium |

| Substrate Application Range | | | |
|-----------------------------|---|---------------------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | Gloss Coated | ✓ |
| Semi-Gloss | ✓ | | |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Printing Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T160 Premium Wax

T160 is a solvent-free premium wax ribbon produces crisp, dark and durable images. designed for printing speed up to 12ips (300mm/s) at nominal energy settings with its extremely wide printing window. T160 can be used as a "plug and play" alternative to other industry leading premium/resin-enhanced wax formulations. It offers our best all-around performance when considering optical density, image durability, print quality and wide receiver material latitude.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 12" = 300mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|---------------------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Semi-Gloss | ✓ | Gloss Coated | ✓ |
| Matt Coated | ✓ | Synthetic | ✓ |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Printing Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T017 Blue Standard Wax

T017 is a general purpose blue wax grade for use on flat head and near edge printers which is designed for using on plain and coated paper label stock. It provides an economic method of producing high quality bar codes.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 8" = 200mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 3005M |

| Substrate Application Range | | | |
|-----------------------------|---|---------------------|---|
| Vellum | ✓ | Gloss Coated | ✓ |
| Semi-Gloss | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | | |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T018 Red Standard Wax

T018 is a general purpose red wax grade for use on flat head and near edge printers which is designed for using on plain and coated paper label stock. It provides an economic method of producing high quality bar codes.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 8" = 200mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 032M |

| Substrate Application Range | | | |
|-----------------------------|---|---------------------|---|
| Vellum | ✓ | Gloss Coated | ✓ |
| Semi-Gloss | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | | |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T019 Green Standard Wax

T019 is a general purpose green wax grade for use on flat head and near edge printers which is designed for use on plain and coated paper label stock. It provides an economic method of producing high quality bar codes.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 8" = 200mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 3395M |

| Substrate Application Range | | | |
|-----------------------------|---|---------------------|---|
| Vellum | ✓ | Gloss Coated | ✓ |
| Semi-Gloss | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | | |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T052 Universal Near Edge Wax

T052 is an excellent wax quality covers all general-purpose requirements for near edge machines. It has been accredited for use within the food industry by ISEGA. It provides clear, crisp barcodes – standard, rotated or 2-D – and images on a variety of paper label stocks.

| General Item Data | | |
|-------------------|---|---------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 16" = 406mm/s |
| Print Energy | : | Low - Medium |

| Substrate Application Range | | | |
|-----------------------------|---|--------------|---|
| Vellum | ✓ | Gloss Coated | ✓ |
| Semi-Gloss | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | | |
| | | | |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Printing Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T001 Standard Wax Resin

T001 is high quality wax resin formulation designed for use on a variety of flat head printers. It has been accredited for use within the food industry to ISEGA. It is suitable for using on label face stocks ranging from paper to film. The resultant print shows excellent scratch and smudge resistance, as well as a good chemical resistance.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" = 250mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| Semi-Gloss | ✓ | PE | ✓ |
| Matt Coated | ✓ | PET | ✓ |
| Gloss Coated | ✓ | PP | ✓ |
| Tag Board | ✓ | PVC | ✓ |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T260 Premium Wax Resin

T260 is a UL-recognized premium wax/resin ribbon and delivers superior image durability on a wide variety of labels, tags and films. Along with increased abrasion and heat resistance, this ribbon also provides excellent print darkness and high-definition characters and images. T260 prints up to 12ips (300mm/s) with lower darkness. It offers "plug & play" compatibility with industry leading ink and re-defines the price/performance equation in the industry.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 12" = 300mm/s |
| Print Energy | : | Low - Medium |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| Semi-Gloss | ✓ | PE | ✓ |
| Matt Coated | ✓ | PET | ✓ |
| Gloss Coated | ✓ | PP | ✓ |
| Tag Board | ✓ | PVC | ✓ |
| Synthetic | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T037 Premium NE Wax Resin

T037 wax resin designed for using on near edge barcode printers. It shows great print quality on a wide range of paper label stocks. The print is resistant to chemicals such as anti-freeze and methanol and gives medium scratch and smudge resistance.

| General Item Data | | |
|-------------------|---|---------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 16" = 406mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|--------------|---|
| Vellum | ✓ | Synthetic | ✓ |
| Semi-Gloss | ✓ | Tag Board | ✓ |
| Matt Coated | ✓ | Gloss Coated | ✓ |
| | | | |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T074 Premium NE Wax Resin

T074 is a Premium wax resin on thinner 4µm film designed for using on both TTO and near edge barcode printers. It shows superior print quality on a wide range of label stocks. The print has a recognizable resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is also formulated to work in trans-missive mode.

| General Item Data | | |
|-----------------------|---|-----------------------|
| Film Thickness | : | 4.0µm |
| Print Speed | : | 40" = 1000mm/s |
| Print Energy | : | Low |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| Vellum | ✓ | PE | ✓ |
| Semi-Gloss | ✓ | PET | ✓ |
| Matt Coated | ✓ | PP | ✓ |
| Gloss Coated | ✓ | PVC | ✓ |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

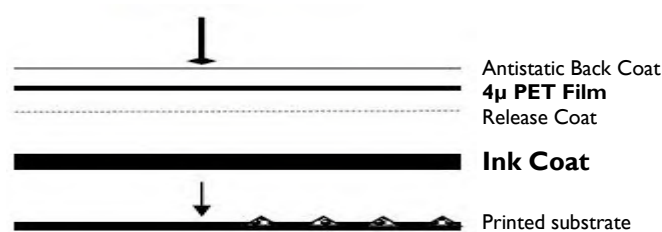
A material safety datasheet or certificate is available on request. The quality follows



The **NEW** T074 Near Edge Wax Resin on 4µm Film

With the new development of T074 on a 4µm PET film we responded to the needs of our partners to achieve higher economic prints. As a result, a 4µm carrier film allows longer linear meters ribbon to less the ribbon changing downtime through longer production cycles.

All that and more at high speeds for the most price/performance prints possible. A ribbon you can rely on for the future of inline and packaging printing and the benefit for you: great overall cost savings!



Against a standard Near Edge Wax Resin ribbon on 4.5µm film...

| | | | | | | | | | | | |
|------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Blackness | med-high | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the blackness has improved by 10%

| | | | | | | | | | | | |
|---------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Print Energy | low | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the print Energy can be reduced up to 20% = longer print head life

| | | | | | | | | | | | |
|--------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Print Speed | high | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the print Speed can be increased up to 30%, max. 40"/s = 1000mm/s

| | | | | | | | | | | | |
|-------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Resistance | med-high | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the heat, the chemical and the scratch resistances are uncompromised

| | | | | | | | | | | | |
|----------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Ribbon length | high | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the ribbon length can be extended to 1000m or more

| | | | | | | | | | | | |
|------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Ribbon OD | low | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|

...the outside diameter of a 1000 m ribbon is <100 mm

Samples are available in 55mm x 200m or 110mm x 50m

The tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. As all results are depending on the combination of ribbons and substrates used, customers are requested to assess the suitability of these products for their own use.

T075 Premium NE Wax Resin

T075 is a sister of T074 formula on standard base film designed for using on both TTO and near edge barcode printers. This wax resin grade shows excellent print quality on a wide range of label stocks and has been developed to offer superior print definition, particularly with barcode applications. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 24" = 600mm/s |
| Print Energy | : | Low |

| Substrate Application Range | | | |
|-----------------------------|---|------------------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Semi-Gloss | ✓ | PE | ✓ |
| Matt Coated | ✓ | PET | ✓ |
| Gloss Coated | ✓ | PP | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T079 White Premium NE Wax Resin

T079 is a premium white wax resin designed for using on both TTO and near edge barcode printers. This wax resin grade shows superior print quality on a wide range of label stocks. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is specially formulated to work in transmissive mode.

| General Item Data | | |
|-------------------|---|--------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" =250mm/s |
| Print Energy | : | Low - Medium |
| Pantone Colour | : | n/a |

| Substrate Application Range | | | |
|-----------------------------|---|------------------|---|
| Vellum | ✓ | | |
| Uncoated | ✓ | Tag Board | ✓ |
| Semi-Gloss | ✓ | PE | ✓ |
| Matt Coated | ✓ | PET | ✓ |
| Gloss Coated | ✓ | PP | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T080 Blue Premium NE Wax Resin

T080 is a premium white wax resin designed for using on both TTO and near edge barcode printers. This wax resin grade shows superior print quality on a wide range of label stocks. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is specially formulated to work in transmissive mode.

| General Item Data | | |
|-------------------|---|--------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 14" =350mm/s |
| Print Energy | : | Low - Medium |
| Pantone Colour | : | 3005M |

| Substrate Application Range | | | |
|-----------------------------|---|-----------|---|
| Vellum | ✓ | | |
| Uncoated | ✓ | Tag Board | ✓ |
| Semi-Gloss | ✓ | PE | ✓ |
| Matt Coated | ✓ | PET | ✓ |
| Gloss Coated | ✓ | PP | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T081 Red Premium NE Wax Resin

T081 is a premium white wax resin designed for using on both TTO and near edge barcode printers. This wax resin grade shows superior print quality on a wide range of label stocks. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is specially formulated to work in transmissive mode.

| General Item Data | | |
|-------------------|---|--------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 14" =350mm/s |
| Print Energy | : | Low - Medium |
| Pantone Colour | : | 032M |

| Substrate Application Range | | | |
|-----------------------------|---|-----------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Uncoated | ✓ | PE | ✓ |
| Semi-Gloss | ✓ | PET | ✓ |
| Matt Coated | ✓ | PP | ✓ |
| Gloss Coated | ✓ | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T082 Green Premium NE Wax Resin

T082 is a premium white wax resin designed for using on both TTO and near edge barcode printers. This wax resin grade shows superior print quality on a wide range of label stocks. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is specially formulated to work in transmissive mode.

| General Item Data | | |
|-------------------|---|--------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 14" =350mm/s |
| Print Energy | : | Low - Medium |
| Pantone Colour | : | 3395M |

| Substrate Application Range | | | |
|-----------------------------|---|-----------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Uncoated | ✓ | PE | ✓ |
| Semi Gloss | ✓ | PET | ✓ |
| Matt Coated | ✓ | PP | ✓ |
| Gloss Coated | ✓ | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T004 Silver Premium NE Wax Resin

T004 is a premium white wax resin designed for using on both TTO and near edge barcode printers. This wax resin grade shows superior print quality on a wide range of label stocks. The print has a moderate degree of resistance to chemicals, as well as an excellent scratch and smudge resistance. The coating is specially formulated to work in transmissive mode.

| General Item Data | | |
|-------------------|---|-----------------|
| Film Thickness | : | 4.0µm |
| Print Speed | : | 10" =250mm/s |
| Print Energy | : | Low - Medium |
| Colour | : | Metallic Silver |

| Substrate Application Range | | | |
|-----------------------------|---|-----------|---|
| Vellum | ✓ | Tag Board | ✓ |
| Uncoated | ✓ | PE | ✓ |
| Semi Gloss | ✓ | PET | ✓ |
| Matt Coated | ✓ | PP | ✓ |
| Gloss Coated | ✓ | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T015 Economy Resin

T015 is a valued resin for general purpose application, provides high density prints from flat head printers show excellent scratch and smudge resistance and various chemicals resistance BUT with significant saving.

| General Item Data | | |
|-------------------|---|---------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |

| Substrate Application Range | | | |
|-----------------------------|---|-----|---|
| PE | ✓ | PET | ✓ |
| PP | ✓ | PVC | ✓ |
| Synthetic | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T016 Standard Resin

T016 is a high-quality resin for using in a wide range of industries. The high density prints from flat head printers show excellent scratch and smudge resistance. It also has excellent resistance to various chemicals such as IPA, industrial alcohols, hydraulic oil, anti-freeze, etc. The back coat has a very low friction co-efficient and contains an anti-static additive to prolong the life of the print head. T016 is ISEGA + BS5609 certified, suitable for CLP hazard warning labelling and with more than 500 labels UL listed.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| PE | ✓ | | |
| PP | ✓ | PET | ✓ |
| Synthetic | ✓ | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Revision D

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions
 Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T050 Premium Resin

T050 is a premium resin quality flexiblily works on both flat head and near edge printers. It is designed primarily for using on synthetic material and even wash care fabrics such as nylon, satin and polyester labels. The product can also be used for filmic substrates, such as polyimide and polyester. It shows high heat and hot steam resistance paired with good chemical resistance properties.

| General Item Data | | |
|-----------------------|---|---------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 6" = 150mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|------------------|---|
| Polycarbonate | ✓ | Synthetic | |
| Nylon | ✓ | PE | ✓ |
| Polyester | ✓ | PP | ✓ |
| Acetate | ✓ | PET | ✓ |
| Polyimide | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T350 Premium Resin

T350 premium resin is a flat-head ink formula on a 3.8µm base film which expands the boundaries of traditional resin formulations, in terms of print speed and substrates sensitivity. T350 is capable of high-speed printing, up to 10ips(250mm/s), allowing significant improvements to labeling productivity and the use in high-speed print/apply applications. The low energy characteristic of this ribbon allows lower darkness levels therefore extending the life of printhead, ideally suited for the rapidly growing desktop printing market.

The enhanced image sensitivity provides outstanding print quality onto a wider variety of materials, covering from paper to film, make easier supplies management and save frequently ribbon changing at production site.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" = 250mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|------------------|---|
| Paper | | Synthetic | |
| Polycarbonate | ✓ | PE | ✓ |
| Polyester | ✓ | PP | ✓ |
| Acetate | ✓ | PET | ✓ |
| Polyimide | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T016R Red Standard Resin

T016R lightfast red resin is for using in a wide range of industries and ISEGA certified in the food industry and BS5609 certified, suitable for CLP hazard warning labelling. The high density prints from flat head printers show excellent scratch and smudge resistance. It also has excellent resistance to various chemicals such as IPA, industrial alcohols, hydraulic oil, anti-freeze, etc.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 185C |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| PE | ✓ | | |
| PP | ✓ | | |
| | | PET | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T016W White Standard Resin

T016W lightfast red resin is for using in a wide range of industries and ISEGA certified in the food industry and BS5609 certified, suitable for CLP hazard warning labelling. The high density prints from flat head printers show excellent scratch and smudge resistance. It also has excellent resistance to various chemicals such as IPA, industrial alcohols, hydraulic oil, anti-freeze, etc.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | n/a |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| PE | ✓ | | |
| PP | ✓ | | |
| | | PET | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T016B Blue Standard Resin

T016B lightfast red resin is for using in a wide range of industries and ISEGA certified in the food industry and BS5609 certified, suitable for CLP hazard warning labelling. The high density prints from flat head printers show excellent scratch and smudge resistance. It also has excellent resistance to various chemicals such as IPA, industrial alcohols, hydraulic oil, anti-freeze, etc.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 300C |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| PE | ✓ | | |
| PP | ✓ | | |
| | | PET | ✓ |
| | | PVC | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T016G Green Standard Resin

T016W lightfast red resin is for using in a wide range of industries and ISEGA certified in the food industry and BS5609 certified, suitable for CLP hazard warning labelling. The high density prints from flat head printers show excellent scratch and smudge resistance. It also has excellent resistance to various chemicals such as IPA, industrial alcohols, hydraulic oil, anti-freeze, etc.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 4" = 100mm/s |
| Print Energy | : | Medium - High |
| Pantone Colour | : | 3395M |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| PE | ✓ | PET | ✓ |
| PP | ✓ | PVC | ✓ |
| | | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T087 HT Premium Resin

T087 is an ultra-grade resin is for TTO and near edge barcode printers, particularly designed with a high heat resistance in mind. The high-density prints show excellent scratch and smudge resistance together with a moderate resistance to various chemicals.

| General Item Data | | |
|-----------------------|---|----------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 10" = 250mm/s |
| Print Energy | : | Medium - High |

| Substrate Application Range | | | |
|-----------------------------|---|------------------------|---|
| PE | ✓ | | |
| PP | ✓ | | |
| | | PET | ✓ |
| | | PVC | ✓ |
| | | Metallised Foil | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Revision C

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

This quality follows



Chemical Resistance - Automotive Resins

These tests are performed using a Datamax M4208 Flat Head printer on a white semi-gloss PP substrate with standard of Zhuorim test methods. Similar results were obtained with the same printer on a PE and on a PVC substrate by optimised settings for each substrate.

| Ribbon Quality | T050 | T016 | T088 | T086 |
|---|---|---------------|---------------|---------------|
| Organic Liquids | Print Energy 30 - Print Speed 50.8mm/s | | | |
| Toluene, C ₆ H ₅ CH ₃ | 0 | 0 | 0 | 2 |
| Methyl Ethyl Ketone (MEK), C ₄ H ₈ O | 0 | 0 | 0 | 0 |
| Methanol, CH ₃ OH | 0 | 7 | 9 | 9 |
| denaturalised Ethanol (IMS), C ₂ H ₅ OH | 0 | 10 | 8 | 9 |
| ISO Propyl Alcohol (IPA), C ₃ H ₇ OH | 0 | 10 | 9 | 10 |
| Naphthalene, C ₁₀ H ₈ O | 0 | 0 | 9 | 9 |
| Dichloromethane, CH ₂ Cl ₂ | 0 | 0 | 0 | 0 |
| Ethyl Acetate, C ₄ H ₈ O ₂ | 0 | 0 | 0 | 0 |
| Inorganic Liquids | | | | |
| Sodium Hydroxide, NaOH, 40% Solution | 10 | 10 | 10 | 10 |
| Tap Water, 5.13 GD Hardness, pH 6.5-9.5 | 10 | 10 | 10 | 10 |
| Automotive Liquids | | | | |
| Petrol, unleaded ROZ 95 | 4 | 0 | 2 | 9 |
| Diesel (EN 590) | 10 | 10 | 10 | 10 |
| Petroleum Ether (120°C) | 10 | 10 | 10 | 10 |
| Brake Fluid DOT 4 | 0 | 0 | 9 | 9 |
| Hydraulic Oil (ISO 6743-4 Mineral Oil) | 10 | 10 | 10 | 10 |
| Engine Oil, Mineral 10W40 | 10 | 10 | 10 | 10 |
| Power Steering Fluid, Hydraulic ISO 32 | 10 | 10 | 10 | 10 |
| Transmission Fluid ATF | 10 | 10 | 10 | 10 |
| Engine Coolant, ASTM D3306, pink | 10 | 10 | 10 | 10 |
| Windscreen Wash, blue with Ethylene Glycol | 10 | 10 | 10 | 10 |
| Food Liquids | | | | |
| animal Lard Oil | 10 | 10 | 10 | 10 |
| organic Rapeseed Oil | 10 | 10 | 10 | 10 |
| Total Score | 124 | 147 | 166 | 177 |
| Overall Resistance Rating | 56/100 | 67/100 | 75/100 | 80/100 |

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use. Material safety datasheets or certificates are available on request. The quality follows



T016 is ISEGA + BS5609 certified and with >500 labels UL listed

T088 Automotive Resin

T088 resin is a further development for film materials incl. PE, PP, PET, PVC, and even metalized PET. The high-density print shows excellent scratch and smudge resistance. It also has strongest resistance to a wide variety of chemicals such as IPA, industrial alcohols, screen wash and other automotive liquids.

| General Item Data | | |
|-----------------------|---|---------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 6" = 150mm/s |
| Print Energy | : | High |

| Substrate Application Range | | | |
|-----------------------------|---|-----------------------|---|
| PE | ✓ | | |
| PP | ✓ | | |
| | | PVC | ✓ |
| | | PET | ✓ |
| | | Metallised PET | ✓ |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Revision C

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T550 Textile Resin

T550 textile resin is a washable textile resin formula compatible with wider range of care label, offers excellent print quality and superior resistance to washing, ironing and dry-cleaning applications. Highly resistant to heat, water, and industrial solvents. T550 is compatible with variety of materials including Nylon, Acetate, Polyester, Rayon, and other synthetic fibres.

| General Item Data | | |
|-------------------|---|--------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 6" = 150mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|-----|---|
| Polycarbonate | ✓ | PE | ✓ |
| Nylon | ✓ | PP | ✓ |
| Polyester | ✓ | PET | ✓ |

| Characteristics Level | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



T560 Textile Resin

T560 textile resin ribbon is an ultra-durable resin for textile wash care label printing. It offers excellent print quality and superior resistance to sand washing, stone washing, ironing, and dry-cleaning applications. Highly resistant to heat, water, and industrial detergents. T560 textile resin ribbon is compatible with a wide variety of materials including Nylon, Satin, Polyester, Rayon, and other synthetic fibres.

| General Item Data | | |
|-----------------------|---|---------------------|
| Film Thickness | : | 4.5µm |
| Print Speed | : | 6" = 150mm/s |
| Print Energy | : | Medium |

| Substrate Application Range | | | |
|-----------------------------|---|------------|---|
| Polycarbonate | ✓ | PE | ✓ |
| Nylon | ✓ | PP | ✓ |
| Polyester | ✓ | PET | ✓ |
| Satin | ✓ | | |

| Characteristics Level | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|----|
| Chemical Resistance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Durability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Substrate Versatility | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Energy | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Print Speed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1 = Low 10 = High

These tests are performed using standard Zhuorim test methods and the features mentioned should be used as guidelines and not taken as a guarantee. Customers are requested to assess the suitability of these products for their own use.

Storage Conditions

Product shelf life has been proven through age testing up to 24 months under the following conditions: Out of direct sunlight, storage between temperatures of 5°C to 35°C in dry conditions

A material safety datasheet or certificate is available on request. The quality follows



Common Printing Problems - FAQ

No Image



Possible Reason and Corrective Action





-  No ribbon → insert ribbon
-  Print temperature too low → increase print energy
-  Ribbon facing wrong way round → insert right facing ribbon
-  Ribbon and Media are incompatible → please contact us for further advice

Image Not Dark Enough



Possible Reason and Corrective Action










-  Print speed too high → reduce print speed
-  Print temperature too low → increase print energy
-  Print head pressure too high → reduce pressure
-  Print head pressure too low → increase pressure
-  Ribbon and Media are incompatible → please contact us for further advice

Image Too Dark Or Smudging / Smearing








Possible Reason and Corrective Action

-  Print speed too low → increase print speed
-  Print temperature too high → reduce print energy
-  Print head pressure too high → reduce pressure
-  Ribbon and Media are incompatible → please contact us for further advice

Ghosting



Possible Reason and Corrective Action

-  Print temperature too high → reduce print energy
-  Print speed too high → reduce print speed
-  Print head pressure too high → reduce pressure
-  Ribbon is faster than the glossy media → rewind tension and adjust ratio to 1:1
-  Ribbon and media are incompatible → please contact us for further advice

Common Printing Problems - FAQ

Streaks Through the Print



Possible Reason and Corrective Action

- | | |
|--------------------------------|--|
| ✚ Wrinkled ribbon | → straighten ribbon |
| ✚ Ribbon size incorrect | → choose ribbon about +5 mm each side |
| ✚ Ribbon misalignment on shaft | → re-align ribbon |
| ✚ Ribbon feed incorrect | → re-feed ribbon correctly |
| ✚ Print head misalignment | → re-align print head |
| ✚ Print head pressure uneven | → re-align print head |
| ✚ Print head pressure too high | → reduce pressure |
| ✚ Print temperature too high | → reduce print energy |
| ✚ Wrong rewind tension | → adjust rewind tension |
| ✚ Residue on print head | → clean print head carefully with IPA solution |

Poor Edge Definition



Possible Reason and Corrective Action

- | | |
|-------------------------------------|---------------------------------|
| ✚ Print speed too high | → reduce print speed |
| ✚ Ribbon and Media are incompatible | → contact us for further advice |

Leading Or Trailing Ends



Possible Reason and Corrective Action

- | | |
|--|--------------------------------------|
| ✚ Ratio slew rate to print rate too high | → reduce slew rate and/or print rate |
| ✚ Print temperature too low | → increase print energy |

Repetitive Dots and Blind Spots



Possible Reason and Corrective Action

- | | |
|----------------------------------|--|
| ✚ Print head dirty | → clean print head carefully with IPA solution |
| ✚ Print head pressure too high | → reduce pressure |
| ✚ Dust or residue on media | → clean media with a lint-free cloth |
| ✚ Platen roller dirty | → clean roller |
| ✚ Print head elements burned out | → replace print head |

Common Printing Problems - FAQ

Variable Dots and Blind Spots



Possible Reason and Corrective Action

- | | |
|-------------------------------------|--|
| ✚ High dust on media roll | → clean media with a lint-free cloth |
| ✚ Ribbon wrinkling | → straighten / align ribbon feed |
| ✚ Media feeding uneven | → straighten / align media feed |
| ✚ Ribbon and Media are incompatible | → please contact us for further advice |

Vertical lines



Possible Reason and Corrective Action

- | | |
|---------------------------------|--|
| ✚ Residue on print head | → clean print head carefully with IPA solution |
| ✚ Print head elements defective | → replace print head |

Snapping Ribbon



Possible Reason and Corrective Action

- | | |
|-----------------------------------|--|
| ✚ Printer in direct thermal mode | → change to thermal transfer mode |
| ✚ Ribbon damaged | → forward to undamaged ribbon |
| ✚ Ribbon misalignment on shaft | → re-align ribbon |
| ✚ Ribbon feed incorrect | → re-feed ribbon correctly |
| ✚ Ribbon feed obstructed | → clear ribbon path from obstruction+ |
| ✚ Winding tension too high | → reduce tension |
| ✚ Wrong rewind tension | → adjust rewind tension |
| ✚ Print on one side of the ribbon | → choose ribbon size to suit media width |
| ✚ Print head misalignment | → re-align print head |
| ✚ Print head pressure uneven | → re-align print head |
| ✚ Print head pressure too high | → reduce pressure |
| ✚ Residue on print head | → clean print head carefully with IPA solution |
| ✚ Dry or high static environment | → increase humidity with damp lint- free cloth |
| ✚ Incompatible media topcoat | → please contact us for further advice |

Common Printing Problems - FAQ

Other Common Problems

Ribbon Out Sensor Does Not Stop the Printer

Possible Reason and Corrective Action

- ✚ Sensor dirty → clean with compressed air or IPA solution

Printer Does Not Calibrate Die Cut Media

Possible Reason and Corrective Action

- ✚ Printer set for continuous mode → set printer to die cast mode
- ✚ Sensor out of alignment → re-align sensor
- ✚ media shorter than printer range → try double format or use larger media

General Recommendations

Choosing The Ribbon Size

The ribbon should be slightly wider than the media, choose about + 5mm wider on each side to avoid direct contact between the edge of the ribbon and the heating elements of the print head which could burn and weaken the used ribbon leading to uneven winding and / or snapping.

Cleaning Routine

Frequent and thoroughly cleaning of the printer is necessary to protect the print head. It is recommended by the printer manufacturer to clean the print head gently with IPA cleaning solution on a lint- free cloth.

If printing high volumes of continuous media, make sure a consistent cleaning routine is in place to ensure a smooth printing process in the long term.

Inspections And Maintenance

Frequent and thoroughly inspection also contributes to an uninterrupted printing process. Turning the attention to residue build ups on the print head and heating elements as well as the ribbon path and shafts pays off quickly when kept as clean as possible.

The residue can cause

- ✚ friction leading to snapping ribbons or
- ✚ electrostatic discharging which could damage the print head by creating
- ✚ pinhole(s) in the protective coating which may then lead to
- ✚ one or more elements burning out.

Support and Further Advice

For any further questions or advise please contact Samuel Ban at the Technical Support or a member of our Customer Service Team – always here for you and happy to help!

Although the utmost care has been taken to avoid typing errors, we cannot guarantee that the brochure is free from errors. Always assess the suitability of the products for the intended use. Please accept our apologies for any inconvenience.