



Metal Detectable Cable Ties

Technical Specifications

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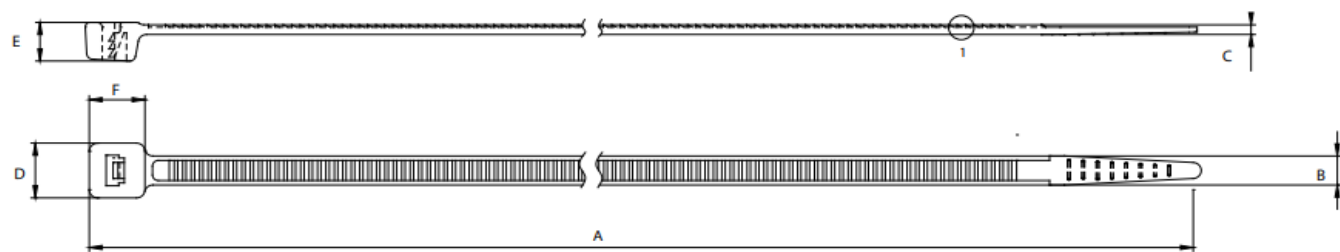
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Overview

Kable Kontrol Metal Detectable Cable Ties use **RADILON® A L1DM 766 BL**; a specialized polyamide nylon 6-6. It is particularly suitable for applications where contamination control is crucial, such as food processing and pharmaceuticals. This material has an operating temperature of -40°F to + 185°F. Additionally, it is notable for its mechanical strength, thermal resistance, and chemical resistance

Kable Kontrol Metal Detectable Cable Ties are impregnated with magnetite for metal detection. This specialized RadiciGroup material is used as a precaution. In the unlikely event these cable ties shed during use, a metal detector will be able to identify the issue, allowing the user to deal with the contamination. This product is for indoor use only.

Country of Origin: China



SKU	A	B	C	D	E	F	Bundle	Tensile
CTMD40-18-BLUE	100±3	2.5±0.2	1.05±0.1	4.55±0.3	4.15±0.3	4.70±0.3	3.0—20.5	8 kgs
CTMD800-50-BLUE	200±3	3.6±0.2	1.15±0.1	6.40±0.3	4.70±0.3	6.00±0.3	3.5—52.5	18 kgs
CTMD800-50-BLUE	200±3	4.8±0.2	1.20±0.1	8.20±0.3	5.70±0.3	7.80±0.3	3.5—49.5	23 kgs
CTMD1100-50-BLUE	300±3	4.8±0.2	1.25±0.1	8.20±0.3	5.70±0.3	7.80±0.3	3.5—81.0	23 kgs
CTMD1400-50-BLUE	370±5	4.8±0.2	1.25±0.1	8.20±0.3	5.70±0.3	7.80±0.3	3.5—103.5	23 kgs
CTMD1400-120-BLUE	370±5	7.6±0.2	1.55±0.15	11.8±0.3	7.30±0.3	11.0±0.3	3.5—103.5	54 kgs

[unspecified units are in mm]

		STANDARD	UNIT	DAM*	VALUE	Cond**
PHYSICAL PROPERTIES						
Density		ISO 1183	g/cm ³	1.32		
Moisture Absorption 23°C	0.0787in	ISO 62	%		1.7	
MECHANICAL PROPERTIES						
Tensile Modulus	1mm/min	ISO 527-2/1A	psi	435114		
Stress at Yield	50mm/min	ISO 527-2/1A	psi	9430		
Yield Strain	50mm/min	ISO 527-2/1A	%	10		
Nominal Strain at Break	50mm/min	ISO 527-2/1A	%	17		
Flexural Modulus	2mm/min	ISO 178	psi	464000		
Flexural Strength	2mm/min	ISO 178	psi	14800		
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	ftlb/in ²	2.14		
THERMAL PROPERTIES						
Melting Temperature	10°C/min	ISO 11357-1/ -3	°F		500	
FLAMMABILITY PROPERTIES						
Flammability	0.0315in	UL 94	class		HB	
Automotive Interior flammability	0.118in	ISO 3795	in/min		0	

*: DAM = Dry As Moulded state according to ISO 16396-2, **: Cond = Conditioned state similar to ISO 1110

Chemical Resistance

RADILON® A L1DM 766 BL exhibits good resistance to bases, oils, greases, and oil derivatives, making it suitable for applications exposed to these substances. However, its resistance to acids is limited, and it is not resistant to phenols. Therefore, while the material performs well in environments involving alkaline substances and lubricants, caution should be exercised when it comes into contact with acidic or phenolic compounds.

Flame Resistance

RADILON® A L1DM 766 BL has a flammability rating of UL 94 - V2, meaning it is slowly self-extinguishing but may still drip flaming particles. It is not highly flame-resistant, making it unsuitable for applications requiring high fire safety standards.

Polyamide-based materials such as **RADILON®** can generate moderate smoke and toxic fumes when burned, depending on the specific combustion conditions. Proper ventilation and fire precautions are recommended when processing or using the material in high-temperature environments.

Effects of Radiation

RADILON® A L1DM 766 BL has moderate resistance to radiation (such as gamma and X-rays). It can withstand low to moderate doses of ionizing radiation without significant degradation. However, prolonged or high-dose exposure may cause embrittlement, discoloration, and a reduction in mechanical properties over time.

Hydrolytic Stability and Water Absorption

Being a polyamide 6.6 material, **RADILON® A L1DM 766 BL** has moderate hydrolytic stability but is not highly resistant to prolonged exposure to hot water or steam. Over time, exposure to high humidity or boiling water can lead to hydrolysis, causing a reduction in mechanical strength.

This material absorbs moisture from the environment. At 73°F and 50% relative humidity, its equilibrium moisture absorption is around 2.7% to 2.8%. This absorption can affect mechanical properties, increasing flexibility while slightly reducing stiffness. Proper drying before processing is essential to maintain optimal material performance.

Effects of Heat Aging

RADILON® A L1DM 766 BL is expected to exhibit typical thermal aging characteristics of this polymer class. Generally, PA 66 materials maintain their mechanical properties at elevated temperatures but may experience degradation over extended periods of heat exposure.

Loss of Weight with Aging

RADILON® A L1DM 766 BL, like other PA 66 materials, may experience slight weight loss over time due to thermal aging, hydrolysis, and UV or radiation exposure. Prolonged heat exposure can cause oxidation and volatilization of low-molecular-weight components, while high humidity or hot water can lead to hydrolytic degradation, weakening the material without significant weight loss. UV and radiation exposure may result in surface chalking or embrittlement.

Kable Kontrol Metal Detectable Cable Ties comply with FDA 21 CFR 117.1500 (b)

The U.S. Food and Drug Administration (FDA) is a federal agency responsible for protecting public health by regulating food, drugs, medical devices, cosmetics, and other consumer products. It ensures safety, efficacy, and proper labeling through scientific research and enforcement of laws.

This regulation sets requirements for polyamide resins that are intended to be used in food-contact materials, such as food packaging, conveyor belts, and food processing equipment. Approved materials can be used for direct or indirect food contact under specified conditions.

Kable Kontrol Metal Detectable Cable Ties comply with REACH regulations.

REACH is a European Union Regulation designed to ensure the safe use of chemical to protect human health and the environment. This regulation is managed by the European Chemicals Agency (ECHA). REACH requires manufacturers, importers, and users of chemicals to register, assess, and manage risks associated with substances produced or imported in quantities over one ton per year.

Kable Kontrol Metal Detectable Cable Ties comply with RoHS regulations.

RoHS is a European Union Regulation that restricts the use of 10 hazardous substances in electrical and electronic equipment. It aims to reduce environmental pollution and protect human health by limiting toxic materials.

Kable Kontrol Metal Detectable Cable Ties comply with PAHs regulations.

Polycyclic Aromatic Hydrocarbons (PAHs) are toxic compounds formed from incomplete combustion, posing health risks such as cancer. Regulations like the EU REACH set strict limits on PAH content in consumer goods, and compliance is crucial for ensuring safety and protecting public health.

UL Standards & Engagement

UL Standards & Engagement UL standard is a published set of best practices for manufacturing and testing the safety, security, and sustainability of a product or system, developed and voted on by experts across industries and interests.

RADILON® A L1DM 766 BL possesses a flammability rating of UL 94-V2

UL 94-V2 is a flammability rating under the UL 94 standard, developed by Underwriters Laboratories, that evaluates the flammability of plastic materials used in devices and appliances. A material with a V-2 rating must self-extinguish within 30 seconds after being exposed to a flame for 10 seconds and may not ignite a cotton substrate if it drips molten particles during the test. This rating indicates moderate flammability resistance, making it suitable for use in electrical and electronic devices where safety is a concern.





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