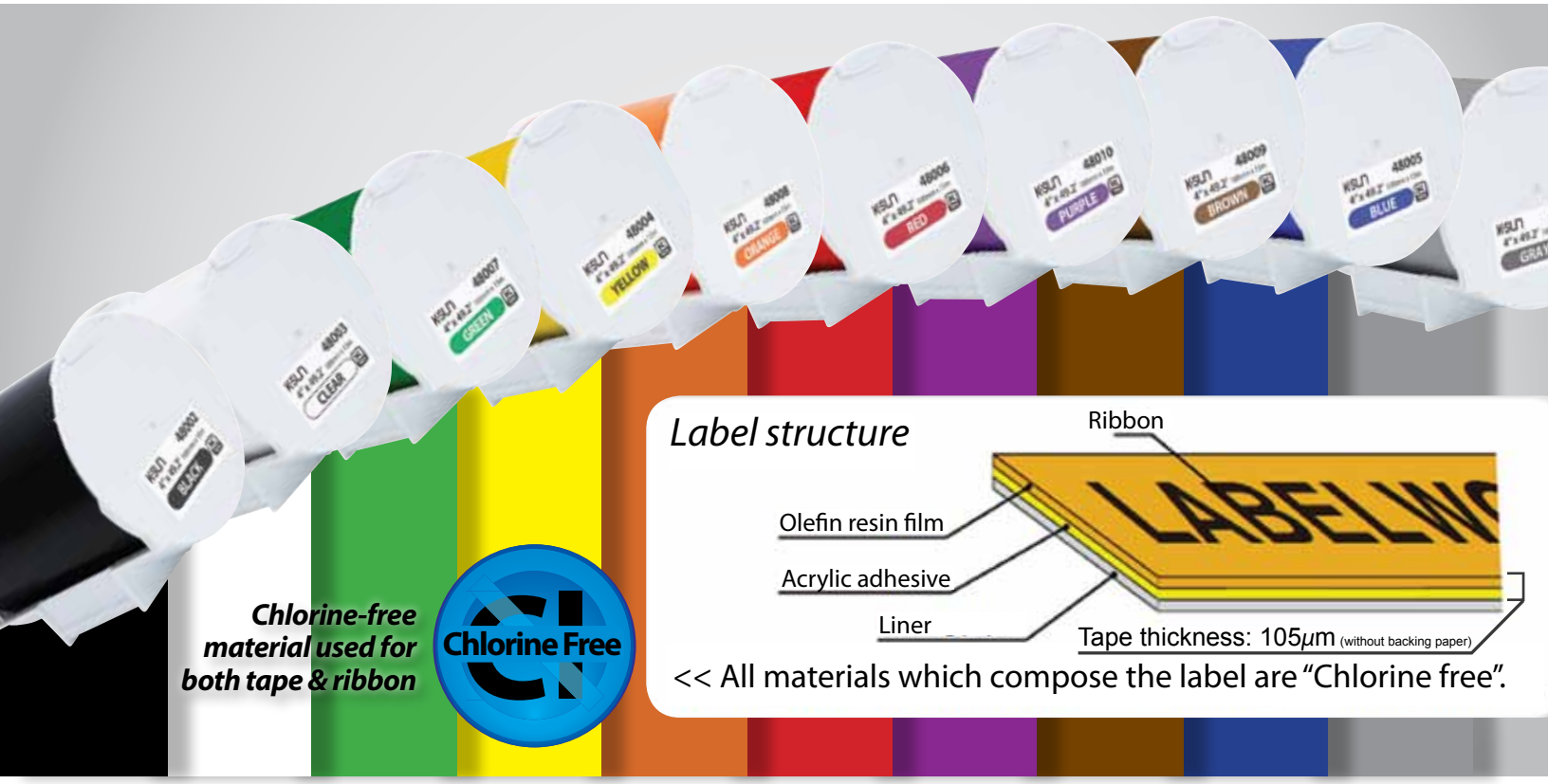
400iXL K-Tape Specifications



Advantage of K-Tape and Ribbon

- Flexible, agile and tough
- Free of toxic chemical
- Resistant to moisture, oil and chemicals
- Vibrant colors
- Superior cold resistance
- Less adhesive residue
- Mark labels with pen
- Use Indoors/Outdoors with confidence.

	Indoors				Outdoors*			
	Flat Surface		Curved Surface		Flat Surface		Curved Surface	
	Smooth	Textured	Smooth	Textured	Smooth	Textured	Smooth	Textured
Olefin Tape	Recommend	Recommend	Recommend	Recommend	Acceptable	Acceptable	Acceptable	Acceptable
					*See Weather Resistance			

3+yr outdoor life

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Water Resistance

Oil, Water, Chemical resistant

Labels can be used where water is circulated without problems. This includes salt water or high-humidity environments. The labels will not peel and edges will not lift.

Chemical Resistance Solvent Resistance

Oil, Water, Chemical resistant

Label adhesion after being immersed in a chemical or solvent.

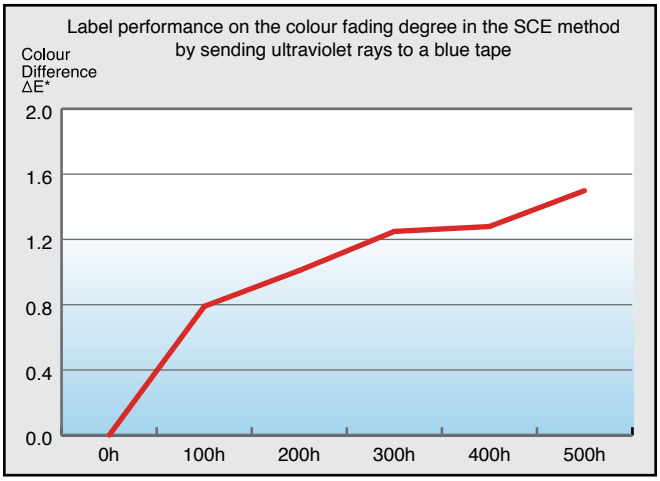
✔ No problems were found after two hours immersion in chemical or solvent. However, rubbing the label hard after the immersion may erase the printed text.

	Peeling, shrinking or stretching	Erasure of Printed Text
Toluene	✔	✔
Hexane	✔	✔
Ethanol	✔	✔
Ethyl Acetate	✔	✔
Acetone	✔	✔
Mineral Spirits	✔	✔
0.1 N Hydrochloric Acid	✔	✔
0.1 N Sodium Hydroxide	✔	✔
Paraffin Oil	✔	✔
Petrol	✔	✔
Light Oil	✔	✔

Weather Resistance

UV resistant

Labels created by K-Sun 400iXL have excellent weather resistance. After 500-hour irradiation test (2 ½ years) shows little fading.



*For the energy, 200 hour irradiation of ultraviolet rays is equivalent to 1 year sunlight.

Reference: The following shows the degree of color variation corresponding to the color difference ΔE*. ΔE*<1.6: Level with which a little color difference is recognized when compared side-by-side ΔE*<3.2: Level with which the color is recognized as the same.

Rubbing Resistance

Scratch Smear resistant

Under normal use the labels are not erased by rubbing.
Test: Text is rubbed back and forth 40 times with a coin and load of approximately 500 g.
Note: Labels applied on floor or where constantly touched will lead to text wearing.

Adhesive Durability and Resistance

K-Tape offers strong adhesion regardless of surface. K-Tapes were evaluated for adhesion durability and resistance by applying them to several different materials.

Adhesive power when peeling off 25mm width tapes at an angle of 180 degrees 96 hours after applying them to each material (Unit: N)

Stainless	Polypropylene	Acrylic	Glass	Vinyl Chloride	Wood decorative laminate surface: PET process
12.65	4.72	10.01	9.64	12.29	1.57

Reference: The power to peel off the general cellophane tape attached on stainless plate for approximately 25mm is 9.83 N

Curved Surface Adhesion Characteristics

Labels created using the tape can be attached to a curved surface and rarely come off.

Label flexibility on curved surfaces. ✔ No problem

	PP cylinder (75mm diameter)	Stainless pipe (90 mm diameter)	Hard PVC pipe (90mm diameter)	Pipe + aluminum glass cross tape (90 mm diameter)
Room Temperature/240h	✔	✔	✔	✔
0° C/ 240h	✔	✔	✔	✔
50° C/ 240h	✔	✔	✔	✔
-30° C /3h, +60° C/3h as 1 cycle, for 20 cycles	✔	✔	✔	✔
-30° C/240h	✔	✔	✔	✔

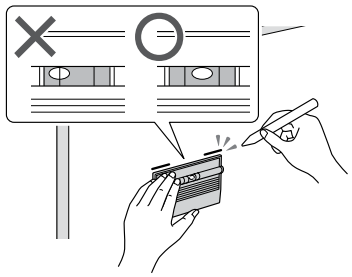
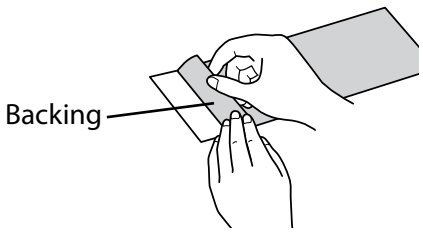
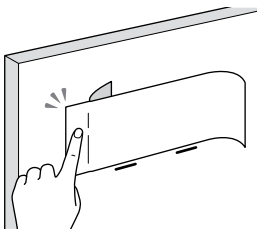
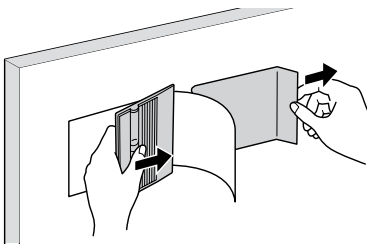
Environmental Temperature Resistance

Labels can be used in different temperatures in many environments. The heat-resistant olefin minimizes peeling of the label, shrinking of the tape and visible changing of the printed text.

Label performance after being exposed to various temperatures. ✔ No problem

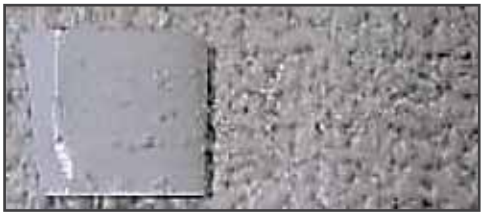
	Peeling	Discoloration	Stretching	Tape Image
-30° C/72h	✔	✔	✔	
100° C/240h	✔	✔	✔	
150° C/2h	✔	✔	✔	
200° C/2h	✔	✔	✔	
-30° C/3h, + 60° C/3h as 1 cycle, for 20 cycles	✔	✔	✔	

Easy to Apply-
Use the Label Application Tool

1	Set the label application tool against the surface you plan to label. The level shows a rough guide.	
2	When the guide shows level draw lines on the surface for either top or bottom.	
3	Peel off some of the liner and fold back the peeled section.	
4	Now place the small peeled off section onto surface being careful to line up with draw line.	
5	Apply the label using the label application tool as illustrated.	

Easy to Remove

While strong adhesive is important, K-Tape also provides another important benefit – easy to remove. K-Tape leaves very little adhesive residue when peeled off. Easily attach or remove the tapes without worry about tape residue.



K-Tape applied to wall which is concavo-convex.
The label applied securely and when removed only a small amount of adhesive remains.

The following chemicals are not included in K-Tape:

Antimony trichloride
Cadmium chloride
Mercury(II) chloride
Chlorinated paraffins
Polychlorinated biphenyls
Polychlorinated terphenyls
Polychlorinated Naphthalenes (with more than 3 chlorine atoms)
Poly vinyl chloride (PVC)
Carbon tetrachloride
Silver chloride
Barium chloride
Barium chloride dihydrate
Manganese(2) chloride dihydrate
Manganese chloride, anhydrous
Zinc chloride
Ethyl mercury chloride
Methylmercuric chloride
1,1-dichloroethylene; vinylydene dichloride
Vinyl chloride

Note: The information about the characteristics, such as numeric values, described in this document are the evaluation results for information only, not for guarantee. K-Sun recommends users test their specific application since it is not possible to test all label uses and conditions.

RoHS compliant

Store tape and ribbons avoiding high temperature and high humidity.
Recommended storing environment:
Temperature -10°C to 40°C
Humidity: 80% RH or less

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