

Messrs. MARUBENI PLAX CORPORATION.

APPLICATION

PROPOSAL

## PRODUCT SPECIFICATION

Draft

|                                  |   |
|----------------------------------|---|
| Specification No.                | CD-260-****   |
| Application of the specification | KB Film 188 AFP5T   |
| Contents                         | 1. Specification<br>2. KIMOTO Testing Method<br>3. Packaging<br>4. Inspection Sheet |
| History of Revision              | February 25, 2014 : The first edition (Specification Draft)                         |

**PURCHASER:** GREDMANN TAIWAN LTD.

(Print Name)

(Title)

(Signature)

(Date)

**SUPPLIER:** MARUBENI PLAX CORPORATION.

(Print Name)

(Title)

(Signature)

(Date)

**MANUFACTURER:** KIMOTO CO., LTD. MIE PLANT

(Print Name)

(Title)

(Signature)

(Date)

## Revision History List (改廃履歴表)

Product Name : KB Film 188 AFP5T

| Number of the versions (版数) | Reorganization Date (改廃年月日) | Reorganization Contents (改廃内容)                                    | Reorganization Reason (備考) |
|-----------------------------|-----------------------------|---|----------------------------|
| 00                          | February 25, 2014           | Enactment of the first edition (Specification Draft)<br>(初版制定(案)) |                            |
|                             |                             |   |                            |
|                             |                             |   |                            |

1. Scope (適用範囲) This specifications applies for KB Film 188 AFP5T which is provided from kimoto Co., Ltd. to GREDMANN TAIWAN Ltd. through MARUBENI PLAX CORPORATION.  
(本仕様書は、株式会社きもとが、丸紅ブラックス株式会社 殿を経由し、GREDMANN台湾株式会社 殿に納入するKBフィルム188 AFP5Tに適用する。)
2. Product Name (製品名) KB Film 188 AFP5T  
(日本語名;KBフィルム 188 AFP5T)
3. Structure (構造) Appendix: Specifications of Quality  
(別紙「品質規格」参照)
4. Quality (品質) Appendix: Specifications of Quality  
(別紙「品質規格」参照)
5. Size and Product style (寸法・形態) Appendix: Size and Product style  
(別紙「寸法・製品形態」参照)
6. Packing form (納入形態) Appendix: Packing form and Packaging  
(別紙「梱包・形態」参照)
7. Packaging (梱包形態) Appendix: Packing form and Packaging  
(別紙「梱包・形態」参照)
8. The definition of lot number and its meaning (ロットの定義及び読み方)

○○ △△ □□ ☆☆ ◇◇ -\*

The Lot number of 10-digit number shows the production history as follows.  
Attaching branch numbers (:-1, -2・・・) at the end of the roll product lot number as necessary.  
(ロットNo.は、下記の通り製造履歴を示す10桁の数字、及び必要に応じ末尾に製品ロールNo.を意図する枝番(-1, -2・・・)を付与したもので構成する。)

- : Machine number (マシン番号) •△△: Manufacturing day (製造日)
- : Manufacturing month (製造月) •☆☆: Manufacturing year (Last two digits of the year) (製造年(西暦末尾2桁))
- ◇◇: Roll number (ロール番号) •-\* : Branch number (枝番)

## 9. Warranty (保証)

1) 6 months after date shipment under the following storage conditions

(製品納入後、6ヵ月とする。(但し、下記保管条件を満たす場合とする))

(1) Avoiding direct sunshine and water

(長時間による直射日光、及び水濡れを避けること。)

(2) Keep the film on the stable floor in the building at normal room temperature.

(recommended: 5°C - 35°C / 45% - 85%Rh)

(常温[参考5°C~35°C/45%~85%Rh]、常圧の庫内に静置すること。)

(3) Keep stable storage condition preventing condensation due to temperature or humidity change

(結露を生じさせるような温度差の激しい保管場所は避けること。)

10. Handling attention  
(取扱い上の注意)

- 1) There are cases where the edge and corners of the film is in sharp, be careful when handling.  
Because there is a risk of damaging the your hand etc..  
(フィルム端面や角は鋭利になっている場合がありますので、取り扱いには十分ご注意ください。  
手等を損傷する恐れがあります。)
- 2) Avoid direct sunlight, water and keep in cool dry place to maintain product quality.  
(劣化、変質の恐れがありますので、直射日光、水濡れ、及び、高温多湿下での保管は避けて下さい。)
- 3) We note impact (swipe), to rub from the outside. Keep in stable floor and avoid vibration.  
Do not stuck heavy object on the product.  
Because there is a risk of to the product damage or product deformation.  
(外部からの擦れ、衝撃(強打)に注意してください。安定した床面で振動を避けてください。  
製品に重い負荷をかけないでください。製品の破損や製品の変形の恐れあります。)

11. Quality problems (品質問題)

When product quality problem has occurred, three companies shall negotiate and make concerted efforts towards the solution of the problem swiftly in good faith.  
(品質上の問題が発生した場合は、三社にて協議を行い、その対応方法については誠意をもって迅速に対応する。)

12. Pre-announcement of 4M Change (4M変更の事前報告)

When it is changed 4M(Equipment, production conditions, inspection methods and inspection standards, packaging specifications, materials, etc.)Have an impact on the quality of the product in definition of Kimoto 4M change, the processing change application is submitted and obtains the approval of it in advance  
(KIMOTO 4M変動通知基準に纏わる4M(設備、製造条件、検査方法及び検査基準、梱包仕様、材料等)の製品の品質に影響を及ぼす変更が生じた場合、事前連絡したうえ、変更内容を記載した書類を提出し、納入先の承認を得てから実施する。)

13. Poisonous substance environmental control(有害物質、環境規制)

Material that is not contained chemical of Kimoto Standards.  
(きもと自主基準に定める化学物質が納入する目的物に含まれていないこと。)

14. Attachment (添付資料)

- 1) INSPECTION SHEET (試験成績表(様式))  
The inspection sheet of each lot of the product is submitted at the delivery  
(納入時、製品各ロットの検査成績表を提出する。)

15. Additional rules (付則)

1) Validity (仕様書の有効性)

This specification becomes effective on the date of receipt by the parties concerned and will be valid unless any revision is made.

However, if the manufacturer does not receive any purchasing orders for one year, this specification will become ineffective.

It is based on the Japanese when expression of the Japanese and English translation differs.

(本仕様書は納入者の発行日を以て制定とし、以降特に変更がない限り有効とする。

ただし、購入者からの注文が1年間途絶えた場合にはこれを無効とする。

又、日本語と英訳の表現が異なる場合は日本語を基準とする。)

2) Revision (仕様書の改訂)

Revision of this specification can be made by the agreement of three companies

(本仕様書の改訂は三社の合意によって行う。)

3) Non-disclosure (仕様書の管理)

Each party has one copy of this specification sheet, and should not disclose to the third companies without an agreement of the other party.

(本仕様書は、各当事者で1部ずつ保管し、相手方の同意なく、第三者企業に開示してはならない。)

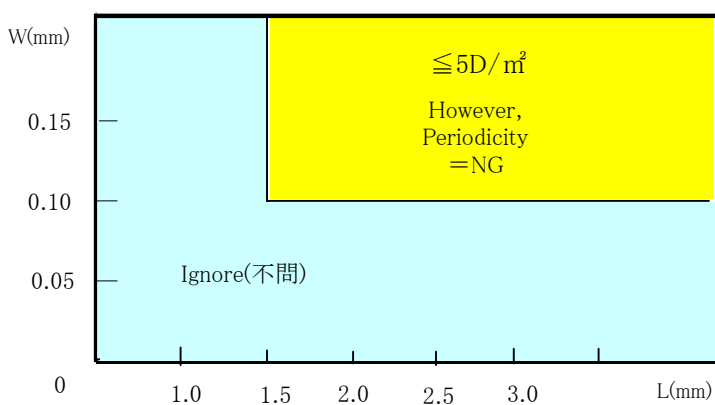
1. Product Name      KB Film 188 AFP5T  
(製品名)

2. Structure  
(構造)

|                             |                     |
|-----------------------------|---------------------|
| Protection PET Film         | ← PET保護 (25 μ m)    |
| Clear Hard Coat (AFP) Layer | ← Anti-fingerprint  |
| PET(188 μ mType)            | ← PET基材(188 μ mタイプ) |
| Clear Hard Coat Layer       | ← クリアハードコート層        |
| Protection PO Film          | ← PO保護 (30 μ m)     |

3. Quality (品質)

| Items (項目) |  | Specification (規格)   | Method (方法)   |                             |   |
|------------|--|--|---|-----------------------------|---|
| 3-1.       | Total Thickness<br>(総厚)  | 194.0 μ m ± 10%      ※1※2  | • 1/10000mm Gauge   |                             |   |
| 3-2.       | Total Light Transmission<br>(全光線透過率)   | ≥ 90.0%      ※1※2  | • JIS K 7361<br>Incident side;HC(Clear)Layer                        |                             |   |
| 3-3.       | Haze (ヘーズ)   | ≤ 1.0%      ※1※2   | • JIS K 7136<br>Incident side;HC(Clear)Layer                        |                             |   |
| 3-4.       | Color Difference a*<br>(色差 a*)   | 0 ± 0.5      ※1※2  | • UV-2550[Shimadzu]<br>Integrating sphere is not used               |                             |   |
| 3-5.       | Color Difference b*<br>(色差 b*)   | ≤ 1.8      ※1※2  | • UV-2550[Shimadzu]<br>Integrating sphere is not used               |                             |   |
| 3-6.       | Pencil Hardness (鉛筆硬度)<br>Clear Hard Coat (AFP) Layer only                         | ≥ 3H      ※1※3   | • JIS K 5400<br>KIMOTO testing method                               |                             |   |
| 3-7.       | Steel-wool rubbing<br>(Steel-wool擦傷性)<br>Clear Hard Coat (AFP) Layer only          | No scratches<br>(キズ無きこと)      ※1※2   | #0000 steel-wool<br>10-cycle friction test<br>KIMOTO testing method |                             |   |
| 3-8.       | Adhesion (接着)<br>Clear Hard Coat (AFP) Layer                                       | 0% Peel (100/100)<br>(剥れ無きこと)      ※1※2  | Cross cut tape peeling test<br>KIMOTO testing method                |                             |   |
| 3-9.       | Adhesion (接着)<br>Clear Hard Coat Layer   | 0% Peel (100/100)<br>(剥れ無きこと)      ※1※2  | Cross cut tape peeling test<br>KIMOTO testing method                |                             |   |
| 3-10.      | Wetting tension test<br>(Surface Wettability) (ぬれ性)<br>Clear Hard Coat (AFP) Layer | ≥ 30mN/m      ※1※2   | • JIS K 6768<br>KIMOTO testing method                               |                             |   |
| 3-11.      | Wetting tension test<br>(Surface Wettability) (ぬれ性)<br>Clear Hard Coat Layer       | ≥ 30mN/m      ※1※2   | • JIS K 6768<br>KIMOTO testing method                               |                             |   |
| 3-12.      | PET Base material thickness<br>(PET基材厚み)   | 188.0 μ m ± 5.0 μ m      ※7  | Base material manufacturer design value (standard)<br>基材メーカー設計(規格)値 |                             |   |
| 3-13.      | Protective film (PO) thickness<br>(PO保護厚み)   | 30.0 μ m ± 2.5 μ m      ※7   |   |                             |   |
| 3-14.      | Appearance<br>(外観)<br>※1 ※6  | 3-14-1. Foreign Matter Contaminations<br>(異物)<br>※4<br><br>Diameter = Nuclear size of foreign body<br>(核サイズ) | Dia. < 0.20mm   | Ignore (不問)                 | Inspection of Representing Sample with Naked Eye (1m <sup>2</sup> )<br>magnifying glass with scale. (サンプルリングによる目視検査 (1m <sup>2</sup> ) スケール付きルーペ)<br><br>Diameter=(L+W)/2<br>L= Long side (長辺)<br>W=Short side (短辺) |
|            |  |  | 0.20mm ≤ Dia. < 0.60mm  | ≤ 5 defects /m <sup>2</sup> |   |
|            |  |  | 0.60mm ≤ Dia.   | none (無き事) /m <sup>2</sup>  |   |

| Items (項目)                                 |  |  | Specification (規格)  |                            | Method (方法)   |
|--|--|--|---|----------------------------|---|
| 3-14. Appearance (外観)<br>※1 ※6             | 3-14-2. Scratch (キズ)<br>※5   |  | 0.1mm ≤ W & 1.5mm ≤ L & Periodicity (周期)  | none (無き事) /m <sup>2</sup> | Inspection of Representing Sample with Naked Eye (1m <sup>2</sup> )<br>magnifying glass with scale. (サンプリングによる目視検査 (1m <sup>2</sup> )<br>スケール付きルーペ) |
|  |  |  | 0.1mm ≤ W & 1.5mm ≤ L   | ≤ 5defects /m <sup>2</sup> |   |
|  |  |  | Other than those above (上記以外)   | Ignore(不問)                 |   |
|  | 3-14-3. Other (その他)  |  | However, If there is a new defect other than the above standards ,or continuous defect Separately, the consultation at three companies.<br>(但し、上記の規格以外の新たな欠陥、または連続欠陥が確認された場合は、別途、三社で協議する。)  |                            |   |
| 3-15. Standard figure of scratches (キズ規格図) |  |  |  <p>The graph plots Width (W) in mm on the y-axis (0 to 0.15) against Length (L) in mm on the x-axis (0 to 3.0). A yellow region is defined for W ≥ 0.10 mm and L ≥ 1.5 mm, with the specification ≤ 5D/m<sup>2</sup>. Below this region, the text reads 'However, Periodicity = NG'. The area below W = 0.10 mm is labeled 'Ignore (不問)'.</p> |                            |   |
| 3-16. Notes (注意事項)                         | <p>※1: Total Thickness, Scratch resistance, Optical properties and Appearance is a standard in t Total Thickness, Scratch resistance, Optical properties, and Appearance is = 'a standard in the absence of protection film.<br/>(総 = Without protection films.<br/>(総厚、HC特性、光学特性と外観規格は保護フィルム無しでの規格値です。)</p> <p>※2; Has been measured for each production lot(製造ロット毎に測定)</p> <p>※3: Design assurance items (measure to case of manufacturing conditions and design changes)<br/>(設計保証項目 (製造条件や設計変更などの際に測定))</p> <p>※4: Measured in nuclear size of foreign body (Length (long side)+Width(short side)/2<br/>(核サイズで判定 (Diameter = (L+W) ÷ 2 ; L = 長さ, W = 幅))</p> <p>※5: Inspection standard of scratches on the surface of Clear Hard Coat Layer<br/>(クリアハードコート(層)表面キズの検査標準)<br/>Scratches, which become pass standard level above under three wave length light after taping together with specified adhesive tape, should be acceptable.<br/>(三波長で見えるクリアハードコート(層)面のキズは、指定のテープを貼付け、上記規格に入るレベルは合格とする)</p> <p>※6: However, if outside the spec, conduct additional tests, if you pass the spec.<br/>(但し、スペック外となった場合、追加試験を実施し、スペック内であれば合格とする)</p> <p>※7: Base material manufacturer design value (standard)(基材メーカー規格値)</p> |  |   |                            |   |

4. Size and Product style (寸法・形態)

| Items (項目) |                         |        | Specification (規格)   | Method (方法)                    |
|------------|-------------------------|--------|--|--------------------------------|
| 4-1.       | Product style<br>(製品形態) | 4-1-1. | Style<br>(形態)<br>Roll<br>(ロール)   | •Visual<br>(目視)                |
|            |                         | 4-1-2. | Width<br>(幅)<br>500mm ± 1mm<br>However, in the case of width change is required consultation.<br>(但し、対応寸法変更の場合は協議が必要)                                    | •Scale<br>(スケール)               |
|            |                         | 4-1-3. | Effective width<br>(有効幅)<br>500mm ± 1mm  | •Scale<br>(スケール)               |
|            |                         | 4-1-4. | Length<br>(長さ)<br>100m<br>However, in the case of length change is required consultation.<br>(但し、対応長さ変更の場合は協議が必要)  | •Counter & Visual<br>(検尺計及び目視) |
|            |                         | 4-1-5. | Extra Length<br>(余長)<br>Kimoto offers extra length of 3% of product roll lengths material<br>(製品ロール長に対し、余長3%を提供します。)                                     | •Counter & Visual<br>(検尺計及び目視) |
|            |                         | 4-1-5. | Core<br>(巻き芯)<br>6" ID ABS Core 560mm<br>(内径 6" ID ABSコア 560mm)<br>However, in the case of Core change is required consultation.<br>(但し、対応コア変更の場合は協議が必要) | •Visual<br>(目視)                |
|            |                         | 4-1-6. | Winding Direction<br>(巻方向)<br>Protection PET Film outside<br>(PET保護外側)   | •Visual<br>(目視)                |
|            |                         | 4-1-7. | Splice<br>(繋ぎ)<br>No splice allowed<br>(繋ぎなし)  | •Visual<br>(目視)                |

5. Packing form and Packaging (梱包・形態)

| Items (項目) |                             |   | Specification (規格)   | Method (方法)                          |
|------------|-----------------------------|---|--|--------------------------------------|
| 5-1.       | Packaging material<br>(材料)  | 5-1-1.  | Inner packaging<br>(内装)<br>Aluminum-Laminated PE<br>(セラニウム包装)          | •Visual<br>(目視)                      |
|            |                             | 5-1-2.  | Outer packaging<br>(外装)<br>Cardboard box (carton box.)<br>(段ボール箱(梱装箱)) | •Visual<br>(目視)                      |
| 5-2.       | Packaging style (形態, 方法)    | <p>As illustrated in the Packaging, the product film roll is packed in the carton box with the both core ends fit into each hole of the both End Plates, which keeps the product roll hanging - no contact with the walls of the carton box.<br/>(梱包図のように包装後、側板(両端部)を利用して、宙吊りの状態で外装箱内に格納する。)</p> <p>Please watch an illustration of attached packing<br/>(付属の梱包図参照)</p> |  | •Visual<br>(目視)                      |
| 5-3.       | Label Indication<br>(ラベル表示) | <ul style="list-style-type: none"> <li>•Product Name/Type (製品名/タイプ)</li> <li>•Thickness (#) × Width(mm) × Effective Length(m)<br/>(厚み×幅寸法×長さ寸法)</li> <li>•Lot No (製造ロット)</li> <li>•Manufacture (製造会社名)</li> </ul>   |  | •Visual<br>(目視)<br><br>•KIMOTO Label |



1. Pencil Hardness(鉛筆硬度判定方法)

The way to make sample and number of sample are along with JIS-K-5400

The way to determine the pencil hardness is as below.

Scratch film surface with pencils of several hardness under 1000g weight load.

Observing the scratched surface with microscope,

and indicate the maximum hardness of acceptable criterion as "pencil hardness."

\* Observe 2-10mm inside from the start point, in order to neglect initial damage of pencil setting.

\* Ignoring the dent of the film [Refer to Fig.1], and check whether crack of coated layer [Refer to Fig.2] is observed.

There found crack of coated layer, it should be rejected.

(サンプルの作成方法、試験数はJIS-K-5400に準ずる。但し判定方法は以下の通りとする。)

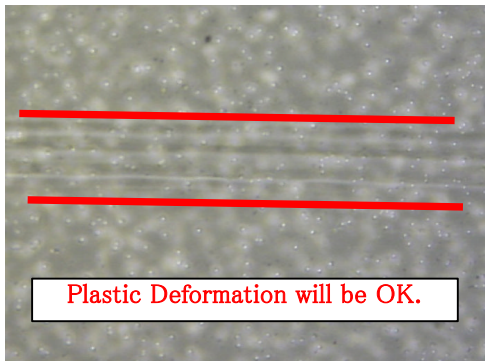
(JIS-K-5400準拠の鉛筆硬度試験)

(「様々な硬度の鉛筆で1000gの荷重をかけて表面を引っ掻き、引っ掻き跡を顕微鏡にて観察する。

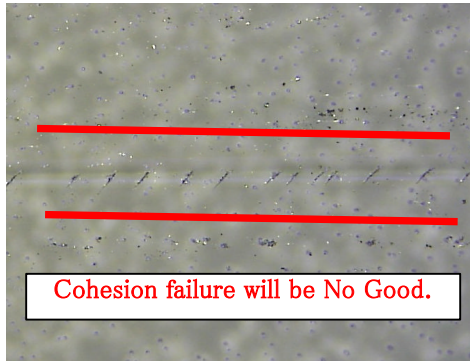
合格となるうちの最も硬い鉛筆の硬度を『鉛筆硬度』として表記する)

(尚、鉛筆設置時の圧力を無視するため、移動後、約2~10mmのサンプルを確認(目視)する。)

(判定は塗膜の凹み[図1参照]は合格として、引っ掻き跡のクラック[図2参照]があった場合を不合格とする。)



[Fig. 1]



[Fig. 2]

2. Steel-wool rubbing(SW耐擦傷性)

①Sliding fixture 200 strokes on glass plate in same direction to glass wool texture line.

Weight 200g/7cm<sup>2</sup> (diameter 3.1cm). Sliding distance is approx. 8cm.

(クリアガラス上で測定治具をスチールウールの目と平行に、200g/7cm<sup>2</sup>荷重(直径約3.1cm)の分銅で200往復して、スチールウールの慣らしを行う。この時、片道約8cmを摺動距離とする。)

②Set Steel-Wool #0000 to 200g/7cm<sup>2</sup> weight (attach to flat round surface). (Refer to Fig. 3)

(#0000スチールウールを200g/7cm<sup>2</sup>荷重の分銅(平らな丸面に取付)にセットする。)(図3参照)

③Set sample piece with adhesive tape at marked position on a glass plate. Ten times stroke (approx. speed 1 sec/one way).

Sliding distance is approx. 8cm (beyond judgment area 2cm both ends) in order to get stable condition.(Refer to Fig. 4)

(試験片を、摺動箇所を明確に判断できるように1.5cm×4cmのキズ判定枠を記載したクリアガラスにテープで固定し、試験面を1秒/片道のスピードで10往復させる。キズ判定枠を前後2cmはみ出し往復させるため、片道約8cmを摺動距離とする。)(図4参照)

④Observe test piece under white fluorescent light

(Light come through 45° angle, 1.5-2.0m distance. Simulate normal office environment.)

Exclude 2cm both end to make sure stable condition.

(白色蛍光灯透過(光源に対して角度約45°、距離1.5~2.0m:天井の白色蛍光灯使用した一般環境を想定)にて傷を確認する。このとき、安定して摺動されている部分を判定箇所とするため、前後2cmは判定外とする。)



Fig. 3 Weight (200g) Hardness Test  
(図3 硬度測定分銅(200g荷重))



Fig. 4 Steel Wool Sliding Distance  
(図4 スチールウール摺動距離)

### 3. Cross cut tape peeling test(基盤目テープ剥離試験)

Cut coating layer of film surface with utility knife horizontally and vertically 11 lines each to make 100 cells of 1mm X 1mm  
Put Nichiban Cellophane Tape more than 20mm long (Nichiban No. 405) on the cut surface.

Press the tape with finger, then pick up the tape end and peel off at 60° angle/0.5 - 1.0mm.

Observe if there is any coating layer peeling off.

\* Count 1 (one) if you see more than 25% area of 1mm square. comes off.

(カッターナイフ等で塗膜に1mm間隔の基盤目状の切り傷を縦横11本ずつつけ、計100個のマスを作る。

その基盤目の上にニチバン製セロテープ(品番No.405、長さ20mm以上)を貼り付け、指で馴染ませる。

その後テープの端をつかみ60° 方向へ0.5~1.0秒のスピードで引き剥がし、基盤目の塗膜剥離状態を目視確認する。  
尚、カウント対象となるのは、マス目の1/4以上が剥がれている場合とする。)

### 4. Surface Wettability (ぬれ性)

The way to make testing sample and testing method are compliant with JIS-K-6768

Applying testing liquid on the surface of testing sample with cotton swab [Fig. 1]

Observing the condition of testing liquid whether liquid keep the layer more than 2 sec. [Fig. 2]

Identifying the maximum wettability level in a repetitive manner

Testing liquid: Mixed testing liquid of surface wettability manufactured by WAKO, or equivalent liquid

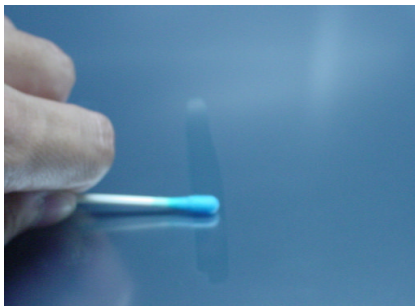
(サンプル作成方法、試験方法はJIS-K-6768に準拠する。

綿棒等を使用して試験用混合液をサンプルに塗布する。[図1]

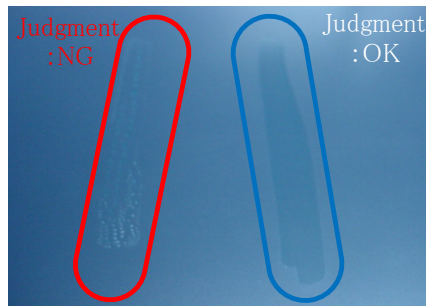
液膜の状態を観察し、2秒間以上液膜の状態を維持しているものをOKとする。[図2]

この操作を繰り返し、最大の濡れ張力を示す値を記載する。

試験用混合液はWako製 濡れ張力試験用混合液(あるいは同等のもの)を使用する。)



[Fig. 1]



[Fig. 2]

### 5-1. Cosmetic Inspection(外観検査条件)

(Transparent Inspection)

① Light Source: Fluorescent Lamp Tri-Wave Length (Illuminance range ; 1000Lx ± 200Lx)

② Inspection position : Samples from 600 - 1000mm distance between the light source  
Distance 250mm +/-100mm of eyes from a sample

③ Examination environment : Dark room of the brightness of the 50Lx degree

(Examination environment of a black background shown in the picture)

(透過検査)

①使用光源: 3波長蛍光灯(照度範囲;1000Lx±200Lx)

②検査位置: 光源からサンプルまでの距離 600~1000mm  
サンプルから目の距離 250mm ±100mm

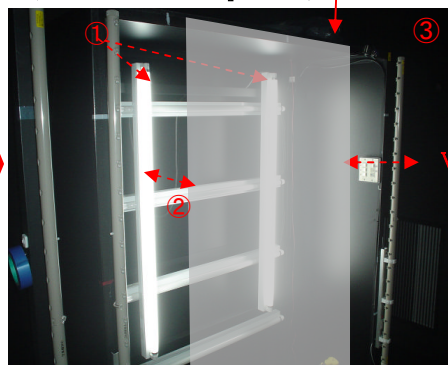
③検査環境: 50Lx程度の明るさの暗室(写真のように黒い背景の検査環境)

#### 【Figure of image】

(Before inspection)



(At the time of inspection)



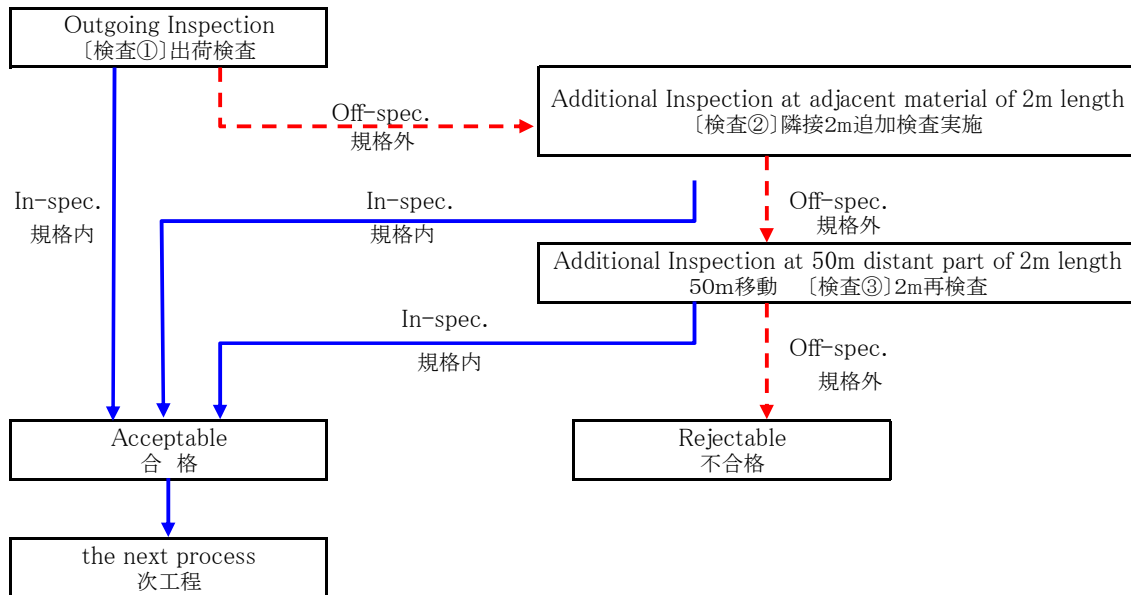
Sample installation

Viewing

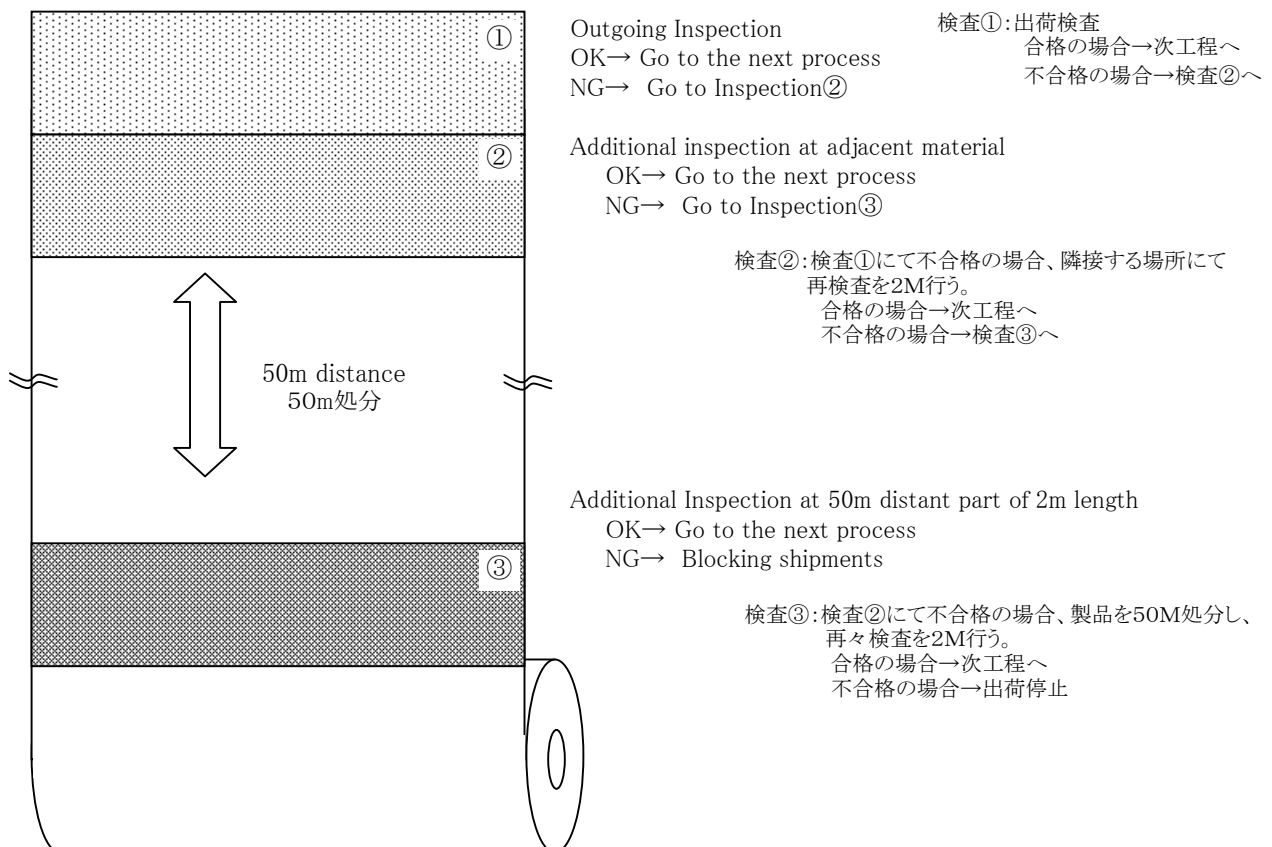
5-2. Cosmetic Inspection(外観検査条件)  
For additional testing(追加検査について)

For visual inspection, if you deviate from the specifications and additional inspection. If further testing at the specs, and Industry. In addition, the flow of additional tests are shown below.

(外観検査について、スペックを逸脱する場合、追加検査を実施。追加検査にてスペック内であれば、合格とする。)  
(尚、追加検査のフローは下記に示す。)

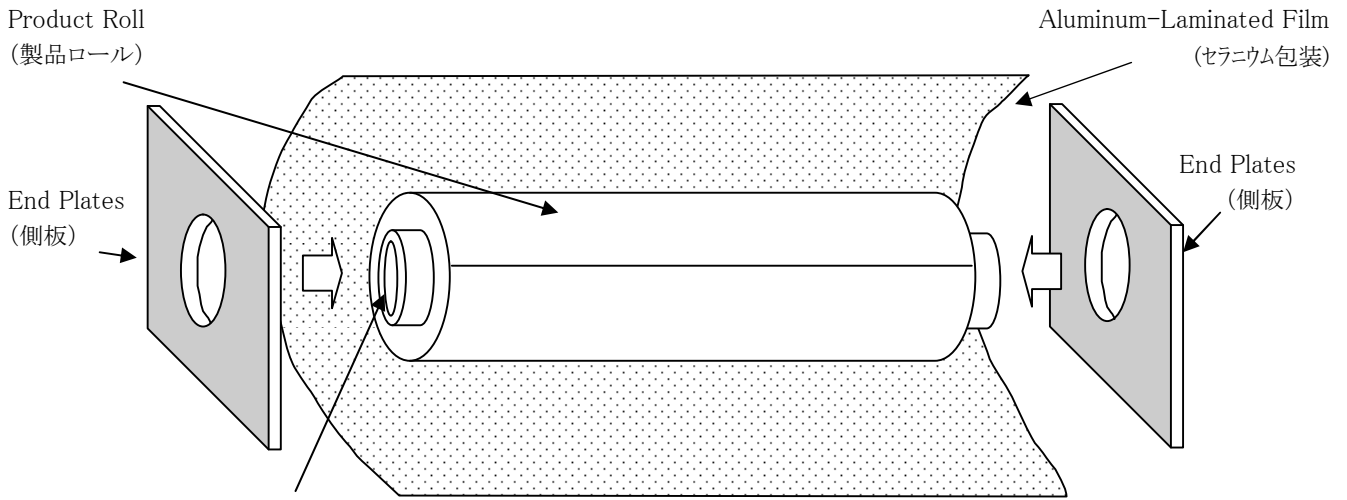


5-3. Cosmetic Inspection(外観検査条件)  
For additional testing ; Material Map (追加検査;イメージ図)



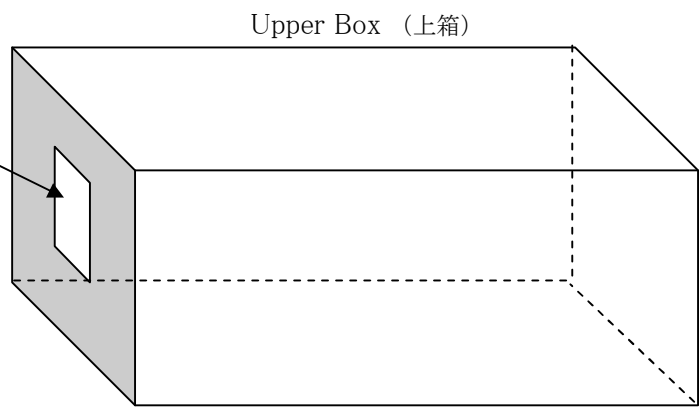
# PACKAGING

(Image)

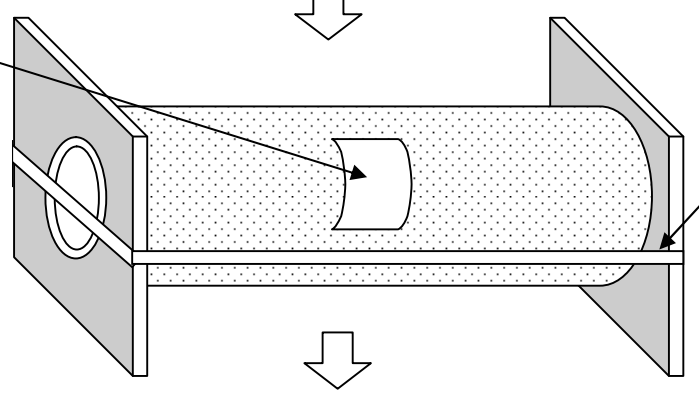


Label (small)  
(Inside of the core)  
(コアの内側に製品ラベル(小))

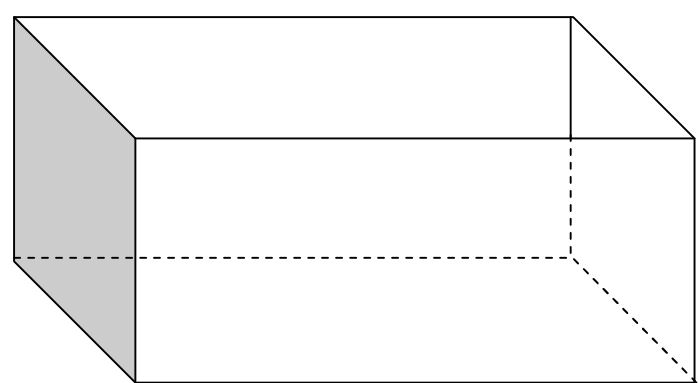
Product Label  
(製品ラベル)



Product Label  
(製品ラベル)



Lower Box (下箱)



## KB FILM INSPECTION SHEET

KIMOTO CO., LTD MIE PLANT

Inspected by : \_\_\_\_\_

Approved by : \_\_\_\_\_

Date : \_\_\_\_\_

|        |            |
|--------|------------|
| Type   | #188 AFP5T |
| Lot No |            |

| Property                                      | Specification   | Value inspected | Method                                 |
|---|---|-----------------|--|
| Total thickness                               | 194.0 $\mu$ m $\pm$ 10%                                 |                 | 1/10000mm gauge                        |
| Total light transmittance                     | $\geq$ 90. 0%   |                 | JIS K 7361                             |
| Haze  | $\leq$ 1. 0%  |                 | JIS K 7136                             |
| Steel-wool abrasion                           | No scratches<br>Clear Hard Coat<br>(AFP) Layer only     |                 | Friction test with<br>steel-wool #0000 |
| Adhesion                                      | No peel off (0% Peel)<br>Clear Hard Coat<br>(AFP) Layer |                 | Cross cut tape test                    |
|   | No peel off (0% Peel)<br>Clear Hard Coat Layer          |                 |  |
| Wetting tension test<br>(Surface Wettability) | $\geq$ 30mN/m<br>Clear Hard Coat<br>(AFP) Layer         |                 | JIS K 6768                             |
|   | $\geq$ 30mN/m<br>Clear Hard Coat Layer                  |                 |  |
| ( Remark )                                    |   |                 |  |