## I'm not a robot



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Sublimation is the process of phase change from solid to gas, without going into liquid phase. Fastness to sublimation behavior and wet fastness of disperse dyes on polyester are closely involved with their response to heat treatments. Adequate
fastness to heat is essential so that the dyed material will withstand the conditions encountered in 1. Heat setting, 2. Durable pleating 3. Ironing or pressing of the goods during the making-up of garments. 4. Finishing processes where high temperature is involved. 5. Thermal fixation of prints. The poor sublimation fastness results into following
problems 1. Change in original shade 2. Staining on adjacent fibers in contrast dyed fabrics. 3. Poor color yield and fixation rate in thermal fixation of prints. 4. Staining of dyed polyester sewing threads after stitching and embroidery in contrast stitched and embroidery in contrast stitched and fixation of prints. 4. Staining of dyed polyester sewing threads after stitching and embroidery in contrast stitched and embro
sublimation fastness Since the problem of poor sublimation is concerned to polarity of substation groups in dye molecule, therefore following steps are suggested to avoid the problem, 1. Pre heat setting most of the fabrics before dyeing. 2. Carefully selecting the dyes so that all component yarns have satisfactory fastness in multicolored/contrast color
designs, where fabric is post heat set. 3. Selecting high sublimation dyes for dark shades, and medium /low sublimation fastness influenced by the dyeing cycle followed, therefore the dyeing cycles must be optimized for best sublimation fastness. How to test the sublimation fastness of
disperse dyes The sublimation fastness of disperse dyes is usually tested for staining and shade change, tested at 180 oC /210 oC for 30 seconds and rating is done on 1-5 grey scales. Standard Test Method for Sublimation fastness is to
determine the color of various types of clothing materials, the ability of high temperature resistance and the specified pressure. The Gray
sample card is used to evaluate the color of the specimen after testing. 2. Tidal pressure. After the test, the gray sample card was used to evaluate the discoloration of the specimen
and the stained color of the lining fabric. 3. Wet pressing: With a wet cotton-lined fabric covered, The wet specimen and the stained color of the
lining fabric. Sublimation fastness testing procedure: The sample size is 40mm×100mm. The size of the accompanying fabric is the same as the sample. The specimen should be put in the standard atmosphere, which is humidity (65±2)% and temperature (20±2)°C. Switch the button to ironing or sublimation. The lamp of ironing or the lamp of
sublimation flashes which mean the heater starts heating. Set the test temperature of the temperature of the blended fiber should be compatible with the least heat resistant fiber Set time in accordance
to the test requirement. Commonly, the specimen would be put under the pressure and specified temperature for 15s. When the temperature reaches the test requirements, open the heating box and put into the sample. If it is dry pressing, the specimen, which does not need to be accompanied with the lining fabric, can be heated directly. If it is
moisture pressing, the specimen and the lining fabric are soaked. Wheter the lower plate of the heating device is heated or not, it should always be covered with asbestos sheets, wool flannel and dry, dyed cotton. Put down the heating plate, and make the sample under the pressure of 4kPa, and press the Start button immediately, when the timer
began to slack. After 15s, lift the heating plate. Take out the specimen and immediately use the corresponding Grey sample card 250, and then put the specimen in the standard atmosphere. After 4h, make the evaluation again. 2. To
evaluate the staining of the lining fabric by gray sample card 251. To use the heavier staining side of the cotton-lined fabrics to evaluate. 2018-05-22 17:03 This sublimation tester can be used for fabric sublimation color fastness
test, reactive dyestuff water ironing fastness test, etc. There are generally three types of fabric sublimation color fastness machines. Also,
you can also know more about the sublimation tests. Features of Scorch Tester TF415D Accurate testing block are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating block are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good coupling between the heating blocks are made of aluminum alloy treated by grinding and sandblasting oxidation to ensure good and all the heating blocks are made of aluminum alloy treated by grinding and all the heating blocks
die-casting, which has good adiabatic property and ensures the uniformity of temperature of the upper and lower heating plates of each station is accurately controlled by independent controllers, and individual temperature and time
settings can be made. Easy to use, long life: industrial grade color touch screen display and control, friendly human-machine interface, solid-state relay control of the heater, no noise on and off, long life. Specifications of Scorch Tester TF415D Large LCD display, convenient setting, and operation. 3 pairs of heating plates, the heating temperature of
each upper and lower plate can be set individually. Timer: 0 ~ 240 s, automatically stops heating and alarms Temp. Range: R.T. ~ 230°C Temp. Accuracy: +/- 2°C Pressure: 4 kPa +/- 1 kPa 3 stations with heating plate dimensions 120 mm x 50 mm Accessories: Insulation cotton Optional Accessories: Heat-insulating asbestos
sheetWool faceclothCotton cloth DW multi-fiber clothAATCC NO.10A multi-fiber clothISO discoloration/staining gray cardAATCC discolored/stained gray card Weight Power 220 V50 Hz14 AOther voltages require an external transformer Dimensions Length: 460 mmWidth: 310 mm Height: 310 mm Standards
ISO 105 P01/X11AATCC 117/133GB/T 5718GB/T 6152 Test Procedure of Sublimation Color Fastness Test Before the experiment, the heat-treated or dried specimen material must be humidified (at a relative humidity of 65% ± 5% and a temperature of 21°C ± 2°C). The bottom plate of the heating device is covered by an asbestos sheet, wool
facecloth, and dry undyed cotton cloth in order. Dry pressing: Place the dry specimen on the cotton cloth covered with wool flannel liner, put down the upper plate of the heating device, and heat the specimen on the cotton cloth in order.
standard. ②Tide pressure: Place the dry specimen on the cotton cloth covered with wool facecloth liner, soak a 12cm×4cm undyed cotton liner in distilled water, squeeze or shake the water to make it contain its own weight of water, and place the wet cotton liner on the dry specimen, put down the upper plate of the heating device, and heat the
specimen for 15s or 30s under the specified heat pressure temperature. Wet pressing: Soak the dyed specimen and a 12cm×4cm piece of undyed cotton cloth in distilled water, then squeeze them so that their water content is equal to their own weight. Place the wet specimen on the cotton lining covered with wool facecloth liner and place the
undyed wet cotton lining on the specimen, put down the upper plate of the heating device, and heat the specimen for 15s or 30s under the specimen with the corresponding color change gray card, and then the specimen is humidified in the
standard atmosphere for 4h before evaluation. [Staining] Immediately assess the staining of the cotton lining fabric with the staining fabric 
retardant of the clothing material under heat pressure or heat drum process. Methodology Dry pressing: The dry specimen is subjected to a certain time in the pressure device with the specified temperature and the specified pressure. The Gray sample card is used to evaluate the color of the specimen after testing. Tidal pressing: With a wet cotton-
lined fabric covered, The dry specimen is subjected to a certain time in the pressure device with the specified temperature and the stained color of the lining fabric. Wet pressing: With a wet cotton-lined fabric covered, The wet
specimen is subjected to a certain time in the pressure device with the specified temperature and the specimen and the stained color of the lining fabric. Sublimation fastness testing procedure The sample size is 40mm×100mm. The size of the
accompanying fabric is the same as the sample. The specimen should be put in the standard atmosphere, which is humidity (65±2)% and temperature (20±2)°C. Turn on the power. Switch the button to ironing or sublimation. The lamp of ironing or sublimation flashes which mean the heater starts heating. Set the test temperature. The
pressure of the temperature depends on the type of the fiber, the material of clothing or the structure of the blended fiber should be compatible with the least heat resistant fiber Set time in accordance to the test requirement. Commonly, the specimen would be put under the pressure and
specified temperature for 15s. When the temperature reaches the test requirements, open the heating box and put into the sample. If it is moisture pressing, the specimen and the lining fabric are soaked. Wheter the lower plate of
the heating device is heated or not, it should always be covered with asbestos sheets, wool flannel and dry, dyed cotton. Put down the heating plate, and make the sample under the pressure of 4kPa, and press the Start button immediately, when the timer began to slack. After 15s, lift the heating plate. Take out the specimen and immediately use the
corresponding Grey sample card to evaluate the color change of the specimen. Results To evaluate the discoloration of the specimen by gray sample card 250, and then put the staining of the lining fabric by gray sample card 251. To use the heavier staining
side of the cotton-lined fabrics to evaluate. [contact-form-7 id="16355" title="Inquiry"] I. Instrument introduction The heat and sublimation fastness: tester is a professional equipment used to determine the color stability of textiles under high temperature conditions. It mainly evaluates two properties: 1. Heat fastness: color change when the
material contacts a high temperature surface 2. Sublimation fastness: color migration caused by the dye directly changing from solid to gas at high temperature II. Preparation before testing 1. Sample preparation Cut a sample with a size of 40mm×100mm The sample needs to be balanced under standard atmospheric conditions (20±2°C, 65±2%RH)
Operation steps Heat fastness test 1. Turn on the power and preheat the equipment to the set temperature (usually 180-210°C) 2. Lay the sample flat on the heating plate 3. Lower the pressure device after the time is
up and remove the sample 6. Cool the sample under standard atmospheric conditions 7. Use a gray sample card to assess the discoloration level Sublimation fastness test 1. Overlap the sample with the front of the adjacent fabric 2. Place in a tester that has been preheated to the set temperature (temperature is selected according to the material
Other synthetic fibers: adjusted according to the fiber melting point Natural fibers: usually 150-180°C V. Result evaluation 1. Use a standard gray sample card to assess: Discoloration level (1-5, 5 is the best) Staining level (1-5, 5 is the best) Staining level (1-5, 5 is the best) 2. Record the test conditions (temperature, time, pressure) 3. Take photos before and after the test Related
interaction as to acquire the assortment of shading the textures. Material materials are shaded, when color atoms enters the formless district of the polymer framework. Color atoms which are approximately held by fiber or bond by frail power, for example, hydrogen bonds, the blurring or draining of color happen during washing. Factors considered
essential to and impacting wrinkle edge scraped spot and shading speed may incorporate short fiber content of the cotton. Common testing convention ordinarily endeavors to foresee shading speed execution to five home washing cycles. Which have driven clothing makers and retailers as of late, request worthy execution levels for twenty, and
sometimes, thirty home washing cycles. Dyeing may also called as finishing process as to bring the variety of color in the fabrics. Textile materials are colored, when dye molecules enters the amorphous region of the polymer system. Dye molecules which are loosely held by fiber or bond by weak force such as hydrogen bonds, the fading or bleeding of
dye occur during laundering.[3]Different Types of Color Fastness Methods Various color fastness Methods Various color fastness Methods Various color fastness methods are given below: Washing fastness Methods Various color fastness Methods Various color fastness methods are given below: Washing fastness Methods Various color fastness Methods Various color fastness methods are given below: Washing fastness Methods Various color fastness methods are given below: Washing fastness methods various color fastness methods various color fastness methods various color fastness.
may be exposed during the manufacturing and their subsequent use. This method of color fastness to washing is designed to determine the effect of washing only on the color fastness of textile. It is not intended to reflect the result of the comprehensive laundering procedure. Figure 1: SampleA specimen of the textile is contact with one or two
specified adjacent fabrics is mechanically agitated under specific condition of time and temperature in a soap solution, then rinsed and dried. The change in color of the specimen and staining of the adjacent fabrics is assessed with the grey scale or computer color matching system (ISO105C08/C08/C09 and AATCC61).1.1 Apparatus and materials:
 Wash wheel, standard reference detergents, multiple fabric, stainless steel balls, bleach and bleach activators, grade water, assessment facilities. 1.2 Procedure: Specimen are cut in 5×10 cm for AATCC. To wash liquor is prepared using grade 3 water the appropriate detergents and additives are added. The composite specimen + multifibre is placed in
assessed in 3 waysChange in shade: -Loss of color or tone as compared to the original unwashed sample as given above (Figure 2) are used for assessment where grade between 1 and 5 are given in half steps. Assessment need to be done with clean grey
scale and under standardized lightning conditions in dark room. Figure 2: Grey scale 2. Rubbing fastness: Rubbing fastness: Rubbing by dry and wet methods in wet rubbing we wet the rubbing to test method and give rating by comparing the staining with
cloth is 65%.2.1 Apparatus and materials: Crock meter (Figure 3), standard bleached sample, and 5X5 cm gray scale (Figure 3), dyed sample. Figure 3: Crock meter 2.2 Procedure: Piece of fabric to be tested was taken and 2 pairs of pieces were prepared (14X5 cm) for dry and wet rubbing test. Dry rubbing: Test piece was taken and fixed in the
rubbing device. A piece of bleached undyed cloth (5X5 cm) was mounted over end of the fig. of rubbing device. Bleached piece was rubbed along the track of 10 cm long piece with downward force. 10 cycles in 10 sec were completed in warp and weft separately. Cotton cloth mounted over finger was removed and dried at less than 60oC. Staining over
rubbing cloth was evaluated using gray scale.B) Wet rubbing: Test piece was taken and fixed in the rubbing device. Bleached undyed cloth (5X5 cm) was mounted over end of the fig. of rubbing device. Bleached piece was rubbed along the track of 10 cm long piece with downward force. 10 cycles in 10 sec were completed in warp and weft
separately. Cotton cloth mounted over finger was removed and dried at less than 60oC. Staining over rubbing cloth was evaluated using gray scale (Figure 2) are used for assessment where grade between 1 and 5 are given in half steps. Assessment need to be done with clean grey scale and under
standardized lightning conditions in dark room. Figure 4: Result of rubbing samples3. Sublimation fastness also called as heat color fastness refers to the ability to keep original color of a dyed fabric under conditions of different heat. Sublimation fastness test can be done in dry tied wet environment and at different
temperatures which depends on the use of textile fastness to sublimation is probably the most important requirement of dyed polyester. The poor fastness results into following problems.[1], [3]Change in original shadeStaining in contrast dyed fabricPoor color yield and fixation rateGross staining during storage. Sublimation fastness of disperse dyes fabricPoor color yield and fixation rateGross staining in contrast dyed fabricPoor color yield and fixation rateGross staining in contrast dyed fabricPoor color yield and fixation rateGross staining in contrast dyed fabricPoor color yield and fixation rateGross staining during storage.
in usually tested at for staining and shade change tested at 150oC, 180oC and 210oC for 30 seconds and rating is done at on 1-5 grey scale standard test method for sublimation color fastness tester, polyester sample, gray scale.3.2
Procedure:a) Sample preparation: Dyed simple was cut in size (4X10 cm) and white bleached polyester sample is a placed over the fabric to be tested.b) Testing:Sample was laid between two metal plates on fastness tester controlled preciously by heating system heated under moderate temperature and pressure. Heating plates was put down to hot
press it for 15-30 sec at 150oC temperature. Tested samples were taken out and gray scale was used to evaluate discoloration of original sample and staining degree of white cloth. Followed above procedure at 180oC and 210oC rating was given sample. 3.3 Assessment and result: A standard grey scale (Figure 2) are used for assessment where grade
between 1 and 5 are given in half steps. Assessment need to be done with clean grey scale and under standardized lightning conditions in dark room. Figure 5: Sublimation fastness result4. Perspiration Fastness: Sweat consists of complicate composition and its main composition is salt. It is divided into acidity and basicity due to difference of people
textiles contact along with sweat impact on same days. Perspiration fasteners test is used artificial perspiration with acid and alkalis. To imitate the sweat situation when human where textile then test the textiles the machine to test perspiration person is the perspiration person is tester the color fastness to perspiration (acid and alkali) be at least
level 3-4 (color change and staining). This fastness is very important in case of sportswear and heavy dresses which is used specially. The method is used to determine the resistance of the color of textile all kinds and in all homes to perspiration.[1], [3]4.1 Apparatus and materials: Dyed fabric, acrylic plates, acid alkali solution, grey scale, oven
perspiration tester, bleached sample.4.2 Procedure:Part 1- Preparation of reagentsAcidic test- 2.65 gm NaCl and 0.75 gm Urea per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working procedure:Part 1- Preparation of reagentsAcidic test- 3 gm NaCl per liter by adjusting pH 8 with addition 0.1 N NaOH.Part 2-Working pH 8 with addition 0.1 N NaOH
and it was allowed to remain in solution at room temperature for 30 minutes After that solution was placed between two acrylic plates measuring 7.5X6.5 cm under of force of 4.5 kg. Other sample was placed in oven for 4 hours at
3712oCSample was separated from White cloth and dried apart in air at the temperature 60oC. Change in color of sample and the sustaining of White cloth was assessment where grade between 1 and 5 are given in half steps. Assessment need to
be done with clean grey scale and under standardized lightning conditions in dark room. Figure 6: Perspiration fastness: Textiles are usually exposed to light when it is used, the light energy extinguishes the dye and leads to the familiar "fading" of colored textiles, which generally becomes lighter and darker, and some of them
will also appear the color light change. If you want to know more about the light fastness test, you can check out Light Weather Fastness Tester.5.1 Common method of light fastness test: ISO 105 test methodAATCC 16 - Test Method by Light Source Type.A. ISO 105 Test Method 1: Control the exposure period by checking the blue wool
reference, each sample shall be equipped with a set of blue wool reference, which is generally used in the case of a dispute. Method 2: Control the exposure period by inspection of the blue wool reference, which is generally used in the case of a dispute. Method 2: Control the exposure period by inspection of the blue wool reference, which is generally used in the case of a dispute. Method 2: Control the exposure period by inspection of the blue wool reference, which is generally used in the case of a dispute. Method 2: Control the exposure period by inspection of the blue wool reference, which is generally used in the case of a dispute.
check whether the sample is consistent with a known performance specification. The sample only needs to be equipped with two pieces of blue wool references. Method 4: This method used to check whether one or more samples
conformity with an agreed-upon reference sample. It is permissible to exposure period by inspection of the exposure period by inspection of the agreed-upon reference sample. It is permissible to expose the specimens with the reference sample. It is permissible to expose the specimens with the reference sample.
radiant energy levels. It is allowed to expose the samples alone or with blue wool references. The specimens should be exposed until the specified amount of radiant energy is reached. B. AATCC 16 - Test Method by Light Source TypeMethod 1: Xenon arc lamp, alternate light, and dark. Method 2: Xenon arc lamp, continuous light, a black-standard
thermometer. Method 3: Xenon arc lamp, continuous light, a black-panel thermometer [2]5.2 Assessment and result: Evaluation is made numerically by European/American blue scale (1-8). Figure 7: Light fastness resultConclusion: It can be concluded for the above study of fastness suitable for dyeing for cotton. By above color fastness methods
natural dye extracted from tissue flower (Butea mongsperma). J. Colourage, XXXVIII(3):50-53. [5] Durga Deulkar (1984). House hold textiles and Laundry Work. Published, New Delhi 1:212-213. You may also like: Founder & Editor of Textile Learner. He is a Textile Consultant, Blogger & Entrepreneur. Mr. Kiron is working as a textile consultant in
several local and international companies. He is also a contributor of Wikipedia. The AATCC 117 test standard evaluates the colorfastness of fabric to dry heat is applied without pressing the specimen. The AATCC 133 test standard measures a fabric's colorfastness when subjected to intensive heat with
pressing. Colorfastness in Textile Colorfastness in Textile Colorfastness (CF) means how well a fabric keeps its colour without fading or bleeding when washed, exposed to light, rubbed, scorched, dry heat or sweat. It's essential for clothes and fabrics because it ensures the colours stay bright and don't change over time. Colour fastness properties are the main parameter in
the textile market, used to sell products and ensure customer satisfaction. Two main organizations, ISO and AATCC, provide guidance for standard testing procedures to determine fabric CF properties. Factors affecting Colorfastness What makes some fabrics keep their colour well while others can ruin a whole load of laundry? CF depends on the
following things. Different fibers have different qualities. For example, polyester usually holds colour better than nylon. Dye Fastness and Application to the fabric can affect how long the colour lasts. Some dyes stick better to
certain fabrics than others. The fabric's properties are also important. Some materials naturally hold dye better. Also, if the fabric or any added finishes can also affect the colour. For example, if the fabric's surface is worn out, the
colour might also not last. Finally, the dyeing process itself matters. If the fabric is washed (a step called "soaping") after dyeing also affects colorfastness properties. These factors determine whether a fabric will keep its colour or bleed in the wash. What is the Difference in
                                               Scorching is damage when fabric or other materials are exposed to high heat. This can cause the fabric, leaving marks or discoloration. In textile testing, there is something called a scorch test. This test
checks how well a fabric can handle heat without getting damaged or changing colour. It helps to see if the fabric can look good even when pressed with a hot iron or exposed to dry heat. Scorch tests are essential because they show how colorfast a fabric is under heat. This helps manufacturers and users understand whether the fabric will hold well
during ironing or other heat-related processes. Sublimation is a process where material transforms from a solid state to a gaseous state without converting into a liquid. A typical example is dry ice, which is solid carbon dioxide. Dry ice turns straight into a gas at room temperature, skipping the liquid stage. In heat transfer printing,
sublimation is used to print designs on materials like polyester. Special sublimation ink is heated; instead of turning into a liquid, it turns into a gas. This gas bonds with the fabric's colour holds up under heat under pressing and
whether the fabric stays the same size and shape when exposed to heat. These tests help ensure the fabric can handle heat without losing colour or getting damaged. AATCC 117/AATCC 133 to Scorch and Sublimation. We will conduct this test on the YG (B)
605G tester built by Darong. Turn on the power switch, set the parameter, and then set the test temperature according to the standard. The upper temperature is 150 degrees Celsius, and the lower temperature is 150 degrees Celsius. Set the time and temperature is 150 degrees Celsius.
the upper heating block and start the timer. Remove the sample when the timer is over. The sample was placed in a standard evaluates the colorfastness of fabric to dry heat. In this test procedure, dry heat is
applied without pressing the specimen. The AATCC 133 test standard measures a fabric's colorfastness when subjected to intensive heat with pressing the specimen. The AATCC 117? The AATCC
The AATCC 133 test standard measures a fabric's colorfastness when subjected to intensive heat with pressing. Why is colorfastness important in textile market, and they are used to sell products and ensure customer satisfaction. What is the Difference in Scorching and Sublimation?
Scorching is damage when fabric or other materials are exposed to high heat, and sublimation tests are used to check how well the fabric's colour holds up heat under pressing. What is the time and temperature for AATCC 117/AATCC 133 Color
 Fastness Tester to Scorch and Sublimation YG(B)605-3AATCC 117/AATCC 133 Scorch Tester/Sublimation Fastness to ironing refers to the degree to which a dyed fabric changes color or fades when pressed. The degree of discoloration is determined by the staining of other fabrics with the iron. Scorch fastness is graded
from 1 to 5, with 5 being the best and 1 the worst. When testing the scorch fastness of different fabrics, the test iron temperature and pressure for a specified time. Damp pressing A dry specimen is covered with a wet cotton adjacent fabric and
pressed with a heating device at a specified time. Wet pressing The upper surface of a wet specified time. Sublimation fastness (color fastness to dry heat) Sublimation color
fastness refers to the degree to which the sublimation of dyed fabric occurs in storage. Sublimation fastness The degree of discoloration, fading and stain of white cloth after hot pressing treatment is evaluated by grey grading sample card, which is divided into 5 levels, with 1 being the worst and 5 being the best. The dyeing fastness of normal fabrics
is generally required to reach level 3 ~ 4 in order to meet the needs of wearing. Principle Specimen of the textile in contact with a medium which is heated to the required temperature. The change in colour of the specimen, and the staining of the adjacent fabric are assessed
with the grey scales. The influencing factors of sublimation fastness It is related to the dye itself: low temperature of dyeing: the temperature of setting after baking should be mastered well. Too high or too low temperature will affect the fastness to
sublimation. What is color fastness to sublimation test? Colour fastness to hot pressing method Specimens If the textile to be tested is fabric, use a specimen 40 mm × 100 mm or wind it closely round a piece of thin inert material measuring 40 mm × 100 mm to form
a layer having only the thickness of the yarn. If the textile to be tested is loose fibre, comb and compress enough of it to form a sheet 40 mm × 100 mm and sew the sheet onto a piece of cotton adjacent fabric to support the fibre. Procedure 1. The choice of pressing temperature used depends to a large extent on the type of fibre and on the type of fibre.
construction of the fabric or garment. In the case of blends it is further suggested to use the temperatures may be used, provided that they are
specially noted in the test report. 1.2 Specimens of materials that have been subjected to any heat or drying treatment shall be conditioned in the standard temperature of 20°C±2°C, before they are tested. 1.3 The bottom plate of the heating
device is covered with the heat resistant sheet.wool flannel padding and dry. undyed cotton cloth covering the wool flannel padding. Lower the top plate of the heating device and leave the specimen for 15 s at the specimen for 15 s at the specimen on top of the cotton cloth covering the wool flannel padding. Lower the top plate is heated or not. 2.Dry pressing Place the dry specimen on top of the cotton cloth covering the wool flannel padding.
3.Damp pressing Place the dry specimen on top of the cotton cloth covering the wool flannel padding. Soak a piece of cotton adjacent fabric measuring 40 mm × 100 mm in grade 3 water, and squeeze or extract it to contain its own mass of water. Place the wet fabric on top of the dry specimen. Lower the top plate of the heating device and leave the
specimen for 15 s at the specimen and a piece of cotton adjacent fabric 40 mm × 100 mm in grade 3 water and squeeze or extract them to contain their own mass of water. Place the wet adjacent fabric
on the specimen. Lower the top plate of the heating device and leave the specimen for 15 s at th
one of the shorter sides, with the multifibre fabric next to the face of the specimen; or attach a specimen of a size matching that of the heating device between the two single-fibre adjacent fabrics of the same size by sewing along one of the shorter sides. Where yarn or loose fibre is to be tested, take a mass of the yarn or loose fibre approximately
that of the heating device and sew along all four sides. Procedure Place the composite specimen in the heating device and leave it there for 30 s at one of the following temperatures: 150°C±2°C 180°C±2°C When desired, other temperatures may be used, provided that they are specially noted in the test report. The pressure on the
specimen shall be 4 kPa±1 kPa. Remove the composite specimen and leave it for 4 h in air in the standard temperature of 20°C±2°C and relative humidity of (65±2) %. In tropical countries, the standard tropical atmosphere for testing as defined in ISO 139 may be used. i.e. a temperature of
dyes and subjected to dry heat treatment above 130°C, such as hot stretching after dyeing, resin baking, etc., which usually changes in varying degrees in the following three aspects. For example, the dyeing fastness (soap washing, friction, sun exposure) is significantly reduced, and the medium dark color is generally reduced by 0.5 ~ 1.5 degrees
The color light of cloth surface changes in different degrees; The pollution of the cotton viscose component of the interwoven fabric or blended fabric will increase. Sublimation Tester are used to determine the color fastness to hot pressing and dry heat and also to conduct
sublimation tests. Providing controlled conditions of dry heat and pressure with top and bottom heated surfaces, advanced temperature controller and carefully controlled top plate weight. This machine complies with the following standards: ISO 105-P01, 105-X11, GB/T 5718, 6152, JIS L0850, L0879. Specifications are provided as a guideline only
and are subject to change. Dimensions (With lid open) Height 436mm Width 360mm Depth 436mm Weight 15.9kg Electricity 230V 50/60Hz Single Phase Watts: 890 Amps: 5A 110V 50/60Hz Single Phase Watts: 890 Amps: 10A Sublimation
 fastness is commonly associated with the dyeing of polyester disperse dyes. When the temperature rises above a certain point (setting above 180°C, ironing above 200°C), the disperse dyes in the polyester disperse dyes in the polyester disperse dyes in the polyester disperse dyes. When the brightened and liberated dye cools, it
desublimates and solidifies, and it sticks to the equipment or the surface of the polyester fibers differs from that of
other dyes, sublimation fastness may directly reflect the heat resistance of dispersion colors. For other dyes, testing the ironing fastness is poor. The dye is the same as testing the dry heat state.
In this manner, dye sublimation fastness can also indirectly reflect fabric ironing fastness. The dyes with good sublimation fastness have large particles, and the sublimation fastness will have little fading
and little discoloration. Goal and range This test method is a test method for determining the color resistance of various textiles and textiles to heat pressing and heat roller processing. Textiles can be hot pressed in dry, damp, or wet conditions, usually determined by the end use of the textile. Test standard AATCC 133-2009 GB/T 6152-1997
ISO 105-X11:1996 JIS L 0850-1994A Preparation AATCC 133-2009:40*120mm Other methods: 40*100mm Sublimation fastness tester Providing controlled top plate weight. Consisting of a pair of smooth parallel plates,
equipped with a precisely controlled electric heating system, the pressure on the sample is 4±1kpa, and the heat should only be transferred from the upper parallel plate to the sample is 4±1kpa, and the heat should only be transferred from the upper parallel plate is heated or not. Smooth asbestos board thickness 3mm~6mm The asbestos board used for thermal insulation should be
smooth and not bent, preferably assembled with the asbestos board before placing the sample in the sublimation fastness tester. During the two layers of wool flannel to make a pad about 3mm thick.
A similar smooth wool fabric or felt can also be used to make a pad about 3mm thick. The weight per unit area of undved and unmercerized bleached cotton cloth is 100g/m2~130g/m2, and the surface is smooth. Experimental procedure Dry pressing; the dry sample is pressed for a certain period of time for 15 seconds in a heating device with a
specified temperature and specified pressure. After the dry sample is covered with a piece of wet cotton lining fabric, it is pressure for 15 seconds. Wet pressure: After the wet sample is covered with a piece of wet cotton lining fabric, it is
pressed for a certain period of time in a heating device at a specified temperature and pressure for 15 seconds. Hot pressing temperature is determined according to the type of fiber and the structure of the
fabric. If it is a blended product, it is recommended to use the most heat-resistant fiber to adapt. Rating Immediately after the test, use the gray scale to evaluate the discoloration of the sample and the staining of the adjacent fabric. After adjusting the humidity for 4 hours in the standard atmosphere, make an evaluation again. How to improve
sublimation fastness In order to improve the sublimation fastness of dyes, the following aspects must be started: Dyes selection The relative molecular weight is relatively large, and the basic structure of the dye is similar or similar to the fiber structure, which can improve the sublimation fastness of the textile. Improve the dyeing and finishing
process Fully reduce the crystallinity of the crystallinity of the macromolecular structure of the fiber, increase the crystallinity of the non-crystallinity of the non-crystallinity of the non-crystallinity of the macromolecular structure of the fiber is more effective uniform. This can not only
improve the level dyeing degree, but also improve the sublimation fastness of dyeing. If the crystallinity of each part inside the fiber is not balanced enough, most of the dyestuff stays in the non-crystalline area with relatively loose structure, then after the extreme state of external conditions, the dye is also easier to detach from the non-crystalline
area inside the fiber and sublimate to the surface of the fabrics, the pre-shrinking and presetting of cotton fabrics, the pre-shrinking and presetting of polyester fabrics are all processing steps to balance the crystallinity inside the fibers. The dyeing depth and color fastness of the scoured and
mercerized cotton fabric and the pre-shrunk and pre-set polyester fabric can be obviously improved. Strengthening post-treatment and washing to remove more floating color on the surface can also significantly improve the sublimation fastness of the fabric. Properly lowering the setting temperature during the setting process can significantly
improve the sublimation fastness of the fabric. The decrease of fabric dimensional stability due to temperature drop can be compensated by appropriately reducing the speed of setting machine. In the selection of finishing agents, we should also pay attention to the influence of additives on color fastness. For example, after using a cationic softener in
the softening of polyester fabrics, it is possible that the sublimation fastness of disperse dyes may fail due to thermal migration of disperse dye is better. Heat color fastness refers to the ability to keep original color
of dyed fabrics under conditions of different heat. Heat color fastness test is Ironing Sublimation Color Fastness Tester. When testing, dyed sample pasting with one or two prescribed adjacent fabric contact closely with
heating device, heated in a certain time under specified temperature and pressure in a certain time after it is covered by a wet
cotton adjacent fabric; wet pressing means wet sample is pressed in heating device with prescribed temperature and pressure in a certain time after it is covered by a wet cotton adjacent fabric. Discoloration of sample and staining of adjacent fabric are measured by gray cards. Preparatus and Materials Ironing Sublimation Color
Fastness Tester (Figure 4), Multi-fiber Adjacent Fiber or Standard Single Fiber Adjacent Fabric, Sample to be Tested. Figure 4 Ironing Sublimation Color Fastness Tester 1-Top plate 2-Bottom plate 3-Power switch 5-LCD 6-Right Key 9-Down Key 10-Start 11-OK 12-Stop a) Sample Preparation If tested sample is
fabric, take a sample of 40mm*100mm. If tested sample is yarn, weave it as a fabric and take a sample of 40mm*100mm to form a thin layer of 40mm*100mm, then sewing
on a cotton adjacent fabric. b) Operating Procedure Combined sample is laid between two metal heating plates controlled precisely by heating system, heated under moderate temperature and pressure. The press temperature:
110°C±2°C, 150°C±2°C, 200°C±2°C. If necessary, you can adopt other temperature. If sample is blended fabric, the used temperature should conform to least heat-resistant fibers. The tested sample which has been made heating and dry treatment must adjust its moisture in standard atmosphere before testing. Asbestos board, wool Flannel, dry
unstained cotton should be covered all the time, no matter whether the down heating plate of heating device is heating liner; put the up heating plate down, to hot pressing as required. Dry pressing as required. Dry pressing as required. Dry pressing as required to hot pressing as required.
dry sample is placed on the cotton cloth covered by wool flannel liner; Take a cotton adjacent fabric of 40mm*100mm, soak it in water, and make its water content equal to its quality through squeezing or throwing, then put the wet fabric on the dry sample; put the up heating plate down, to hot press it for 15s in specified temperature. Wet pressing:
the tested sample is soaked together with a cotton adjacent fabric of 40mm*100mm in water, and make its water content equal to its quality through squeezing or throwing, then put it on the cotton cloth covered by wool flannel liner; put the up heating plate down, to hot press it for 15s in specified temperature. Take the tested sample out, use gray
cards to evaluate discoloration of original sample and staining degree of white cloth. Then put it in standard atmosphere (means temperature is 20°C±2°C, relative humidity is 65%±2%) for 4 hours, then evaluate it again. Definition and Measurement of Light Fastness Light fastness, also called sunburnt fastness, refers to the ability to keep original
color of dyed fabrics when illuminating. Light fastness divide into 8 grades, among which grade 8 is the best and grade 1 is the worst. Light fastness tester is usually used in light fastness test. When testing, tested sample and blue wool standard sample are illuminated at the same time, and the grade of light fastness depends on degree of
discoloration of tested sample. Blue wool standard sample is made from wool fabric which is dyed by 8 dyes of prescribed in 1994. You can also adopt American blue wool standard sample
L2~L9 when doing light fastness test, besides blue wool standard sample 1~8. Sample L2~L9 is used two dyed fibers in different proportions, applying to ISO 105 B02: America exposure conditions prescribed in 1994, AATCC TM 16. Sample 1~8 cannot be mix used with Sample L2~L9, and their test result can't
be swapped. Table 5 Dyes and Types of Structure of Blue 4Acid Brilliant Blue FFRC.I. Acid Blue 104Triphenylmethane Grade 3Acid Pure Blue 6BC.I. Acid Blue 83Triphenylmethane Grade 4Acid Brilliant Blue FFRC.I.
Pure Blue EGC.I. Acid Blue 21Azine Grade 5Acid Blue 47Anthraquinone Grade 6Acid Light Blue 47Anthraquinone Grade 5Acid Blue 23Anthraquinone Grade 5Acid Blue 47Anthraquinone Grade 5Acid Blue 47Anthraquinone Grade 5Acid Blue 47Anthraquinone Grade 5Acid Blue 47Anthraquinone Grade 5Acid Blue 5Acid Bl
Materials Light Fastness Tester (Xenon Arc Lamp), Light Source Rating Box, Gray Cards Evaluating Discoloration, Blue Wool Standard Sample, Tested Samples and be determined by amount of
samples and shape and size of sample holder of Equipment. If adopt air-cooled equipment, the sample should be exposed to sun section by section in different periods. The size of sample is attached to hard card. If tested sample is yarn, yarn
should be winded on the hard card or arranged parallel and fixed on the hard card. If it is disperse fiber, disperse fiber should be arranged together with blue wool sample with same size according to Installation
Chart 1 or Installation Chart 2, fixing on one or more hard cards. Figure 5 Installation Chart 1 AB- First Covering (X-X can be folded, so that it can be lifted and reset from tested sample and blue wool sample in original place.)
from tested sample and blue wool sample in original place.) CD- Second Covering EF- Third Covering If adopt water-cooled device, sample clip is suitable for sample clip is suitable for sample with about 70mm*120mm. Sample clip is suitable for sample with about 70mm*120mm.
exposed to sun on a white card with a backing. Cover board should be contact closely with tested sample and the side of blue wool standard sample, to avoid
errors that evaluation is high, when larger tested sample is compared to smaller blue wool standard sample and unexposed side and unexposed side and unexposed side and unexposed side is evaluated by eyes. When testing velvet fabric, you can pad hard card under blue wool standard sample, so that the distance from the light source to the specimen and to surface of velvet fabric is
same, but you must pay attention to avoid the covering flattening unexposed area of velvet fabric is no less than 50mm*40mm, or bigger. b) Operation Procedure Sample holders of tester, arranged vertically. All empties on sample holders should be filled with sample clips
with hard cards. Turn on xenon lamp, and under pre-set conditions, tested sample are exposed to light at the same time. The methods and time depend on whether each sample can be completely measured the light fastness comparing with blue wool standard samples. 1. Method 1: This is the most accurate method, adopting
when evaluation is controversial. The basic characteristic is to control exposure period by checking tested samples and blue wool samples are arranged according to Installation Chart 1. The Covering AB is place on the 1/3 area of tested samples and blue wool samples are arranged according to Installation Chart 1. The Covering AB is place on the 1/3 area of tested samples and blue wool samples are arranged according to Installation Chart 1.
samples. It is exposed under prescribed conditions, and taking the covering up from time to time to check lighting effect of tested sample until the color difference between exposed part and unexposed pa
sample, continuing to expose until the color difference between exposed part and unexposed part and unexposed part and unexposed in a long time until it is
up to grade 3 of gray cards when its light fastness is equal or high to grade 7. What's more, color difference can't be measured when its light fastness is grade 8. Therefore, when the color difference of blue wool samples. 2. Method 2: This method is
suitable for a large amount of samples tested at the same time. The basic characteristic is to control exposure period by checking blue wool samples and tests a batch of tested samples with various light fastness which saves materials of blue wool samples and blue wool samples and blue wool samples.
are arranged according to Installation Chart 2. Using the Covering AB to cover 1/5 of total length of tested samples and blue wool samples, and exposed under prescribed conditions, taking Covering AB up from time to check light effect of blue wool samples. When the discoloration of blue wool sample 2 is up to grade 3 of gray cards,
evaluation initially light fastness of tested sample comparing to the discoloration of blue wool sample 4 is same as grade 4 of gray cards. Then, the Covering CD is placed on the area as Figure 6 shows, overlapping on
the Covering AB and continuing to expose until the discoloration of blue wool sample 6 is up to grade 4 of gray cards. Next, the Covering EF is placed on the area as Figure 6 shows, and the other coverings are kept, then continuing to expose until any following situations occur: first, the discoloration of blue wool sample 7 is up to grade 4 of gray
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cards; second, the color difference of tested sample with the strongest light fastness is up to grade 3 of gray cards. 3.Method 3: This method is suitable for checking whether the tested samples are consistent with some performance and specifications, allowing tested sample to expose together with two blue wool samples, and one blue wool sample of minimum allowable fastness and another of lower fastness. Continuing to expose until the color difference of the segmented part of blue wool sample with minimum allowable fastness is up to grade 4 of gray cards (first stage) and grade 3 (second stage). 4.Method 4: This method is suitable for measuring whether the tested samples comply with an agreed reference sample, allowing tested sample to expose only together with the agreed reference sample. Exposing continually until it achieves to the specified amount of radiation, and evaluating after taking out together with blue wool sample. Stop the test and evaluate light fastness when the color difference of exposed part and unexposed part of tested sample is up to grade 3 of gray cards. Move all coverings, and tested samples and blue wool samples are evaluated their discoloration in standard light box. The light fastness of tested samples is number of blue wool samples, judge it as middle grade, such as grade 4~5. If discoloration of tested sample is easier to fade than blue wool sample 1, it should be judged as grade 1. What is sublimation fastness tester? Scorch Tester Sublimation Fastness Tester apply to textile assist color change or transfer capacity under heating condition, simulate textile being ironing and under high temperature & humidity dyeing color fastness to sublimation degree in daily life. Features of Sublimation Fastness Tester How Sublimation Fastness Tester Works?1. A dyed cloth piece is sandwiched between two undyed pieces and placed to cover the heat pads and the test goes onfor a pre-set time period.2. The fabric pieces should be picked up immediately. The undyed fabric pieces will be stained by the dyes.3. This gives the sublimation fastness properties for the range of temperature 130°C to 250°C in one test.4. A ready comparison of sublimation fastness properties at various temperatures is hence available.

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