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# Lumière

Translucent ceilings & walls •



# "Innovation at the Speed of Light"»

# Editorial



Light is the energy source that originates and sustains all life on the planet. In the French language, we associate light with innovation and new discoveries. Light allows all of us to reach our full potential at home, work and play.

Today, Barrisol offers a unique way to bring light into your designs in a more vivid way than ever before. Adjusting the light level or changing the light color can allow you to dramatically change the appearance and feel of any space with just the push of a button.

Although often overlooked, lighting systems often have a large impact on how a space feels to the occupant. Through the use of Barrisol, architects and interior designers can now use technology to improve the way they light interior spaces and help reinforce their design intent.

The ability to produce vivid, diffused, soft or changing light is the result of Barrisol's decades of R&D investment. Now you can truly have a unique lighting element or system for each unique space. No more standard solutions for custom spaces.

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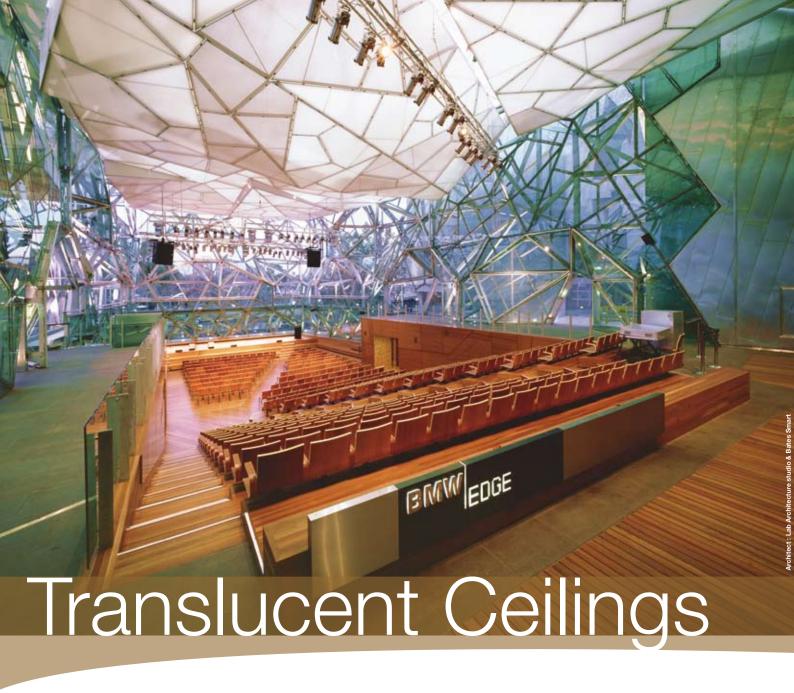
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o achieve a translucent ceiling, Barrisol rails (PCV or aluminium) are installed around the perimeter of the opening. The lighting system, either simple or complex, is then installed within the ceiling above the rails. The Barrisol's sheet is then installed. Thanks to the synergy between all of these components, the ideal lighting system for any space can now be designed quickly and easily.



#### Design

These translucent ceilings are a unique and innovative way to light and enhance any space. The fixture becomes an architectural focal point that helps say something unique about your space. Barrisol's translucent ceilings can be adapted to all types of places to create specific lighting effects that reinforce the overall design.

#### Utilization

Barrisol's translucent ceilings are ideal for traditional residential and commercial interior design applications. Translucent ceilings can also be used to provide crisp, clean light in manufacturing facilities, retail outlets or hospitals. Hospital applications could range from patient rooms and waiting areas to spaces used for chromotherapy or luminotherapy. The possible applications are limited only by your imagination.

#### Associations

Another unique feature of Barrisol is the ability to print on the sheet. Printing onto a translucent sheet and then lighting the image from behind can dramatically enhance the impact of the graphic image.

Translucent ceilings can also provide an acoustic solution if the translucent ceiling is used in conjunction with an acoustic Barrisol sheet.

When installed behind the Barrisol translucent ceiling sheet, the acoustic sheet helps absorb sound waves and greatly improves sound quality and intelligibility. These ceilings provide their spaces with significant aesthetic, lighting and acoustic benefits.









# Translucent Walls

arrisol translucent sheets can also be used for wall applications. The walls are composed of an aluminium structure, the lighting system and the sheet. This vertical use is an innovative and aesthetic lighting solution and a unique way to organize and design any space.



#### Design

These translucent walls help enhance the contents of any space. The objects in this space are enveloped in light and stand out distinctly in contrast to the translucent walls. Translucent walls can be designed and adapted to fit the unique requirements of any space.

#### Utilization

These translucent walls can be used in showrooms, trade show exhibits, shops, restaurants, casinos and even museums to enhance the contents of the space.

They also light and accentuate open spaces by drawing the occupant's eye and inviting them into the space.

#### **Associations**

It is possible to print on translucent walls. All types of pictures and images are printable. These images are enhanced by lighting them from behind.

As with the lighted ceilings, translucent walls are an effective tool to optimize the aesthetics and acoustics of any space.











arrisol allows designers to create customized, 3D lighting elements in every possible size and shape. Traditional or avant-guard shapes are achieved by designing an aluminium support structure over which the Barrisol sheet is stretched. The lights can be attached to the ceiling or integrated into the Barrisol frame assembly.



#### Design

As a complement to Barrisol's line of 2D lighting solutions, translucent 3D creations add to the design and aesthetics of any space. As both a source of light and element of decoration, these lights are perfectly integrated into the whole architectural structure. All types of shapes can be created in any possible color.



# Design: Miguel Martins and BPC

#### Utilization

Barrisol's translucent 3D forms are the ideal way to enhance public places such as restaurants, bars, shops, etc. Smaller and more intimate spaces can also benefit from using a Barrisol translucent 3D system.

#### **Associations**

These translucent 3D ceilings can benefit from integrating a variety of colors, finishes and printed solutions into the Barrisol application. Printing a logo or an image on the sheet can further enhance its impact on the space.









n addition to 3D translucent ceilings, Barrisol can also be used to create all types of decorative shapes and 3D architectural forms. These 3D forms become architectural focal points that help say something unique about the space.



#### Design

Almost any conceivable design is possible, from a long multicolor tube, to an exhibition structure or even a creation of a humanoid form several meters high.

#### Utilization

Barrisol translucent 3D forms are structures of imagination and creativity that are designed for either special events or as part of permanent structures.

#### Associations

Barrisol translucent 3D forms can be created in conjunction with Barrisol's acoustic sheets in order to optimize the acoustics of a space. Part of the sound waves will be absorbed by the acoustic sheet each time the sound wave passes through the acoustic sheeting. This phenomenon reduces the reverberation time within the space and facilitates better communication and intelligibility in crowed places.

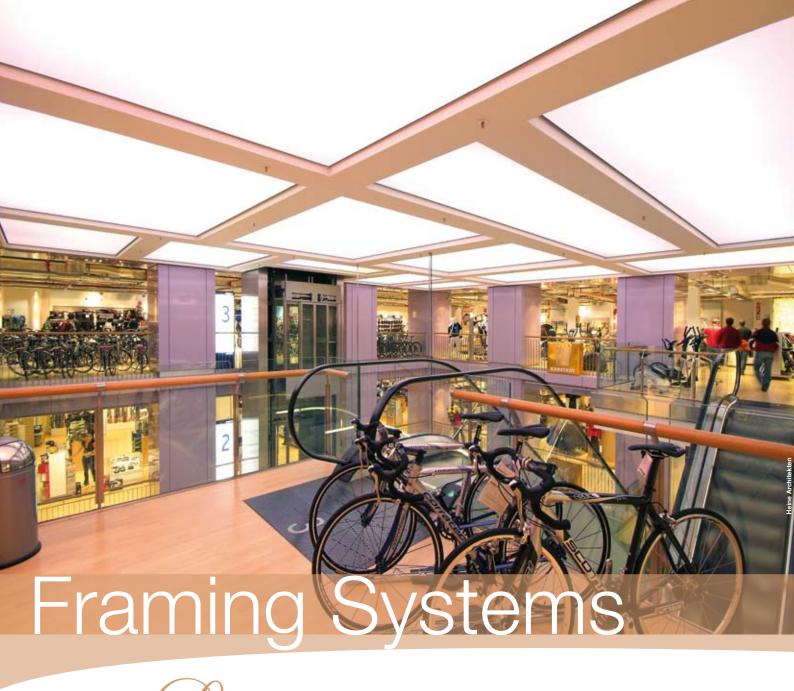












ighted cases or coffers are available in three primary versions: cases with LED lighting systems, cases with translucent and acoustical sheeting, and cases using one of Barrisol's latest innovations EasyAcess®.

Using LED lighting allows for the creation of lighted cases using only a very shallow recess. In addition to the functional benefit of the lighting, an acoustic sheet can be used with the lighted Barrisol sheet for greater sound attenuation.

EasyAcess® provides a fast and convenient way to gain access to the area above the lighted case. The system is electrically operated via remote control and provides access to mechanical or electrical equipment above the lighted case. Manual EasyAccess® systems are also available. Barrisol's EasyAccess® system helps adress maintenance concerns such as cleaning and light bulb replacement.



#### Design

The framing systems provide spaces with pleasant, crisp and diffused light. Designs can come in any possible shape to help match and enhance the design of the ceiling.

The ability to dim or increase the lighting allows the occupant to change the look and feel of the space at any time.

The ability to alter the feel of the space is dramatically increased by the ability to change the color of the ceiling with the dimmer. The ability to change the ceiling from red to green to violet and black is something that no standard finish material can provide you and ensures the creation of a one-of-a-kind space.



#### Utilization

Lighted cases are ideal for any place you want to fill with even, diffused light. Lighted cases with acoustic sheeting are ideal for high occupancy spaces such as retail stores, shopping centres, atriums and meeting rooms.

Any space that can benefit from pleasant, even light and excellent acoustics would be an ideal application for acoustic lighted cases.



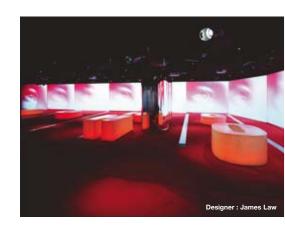
#### Associations

The lighted frames can incorporate Barrisol acoustic sheets. It will enhance the acoustics of the place by absorbing part of the sound waves of each reflexion. This phenomenon reduces the reverberation time within the space and facilitates better communication and speech intelligibility in crowed places.





arrisol sheets can also be used as a front or rear projection screen. Stretched on structures designed in any shape or size, Barrisol sheets can incorporate constantly changing video images rather than just a single, static, printed image. In a projection screen application, any kind of light, image, picture, text or movie can be projected onto the sheet. Translucent or opaque sheets can instantly be transformed into a bold, vivid array of colors by simply turning on a projector.



#### Design

Projecting an image onto a Barrisol sheet can also allow the sheet to constantly change color. The light, as it constantly changes color and moves across the sheet, gives any space a vivid and dynamic atmosphere. It is also possible to add sound to the color effect to enhance the visual and sound impact of the Barrisol application.



Projecting onto a Barrisol sheet can be useful in applications such as art galleries, corporate headquarters, advertising displays at a trade show exhibit, restaurants, cafés, etc. Any place where you want the ability to regularly change the image or information you want to convey to your guests or customers is an ideal location for a Barrisol projection surface.











arrisol light creations can be a great tool to optimize the acoustics of any space by using a Barrisol acoustic sheet in conjuction with a Barrisol translucent sheet.

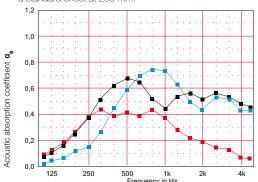
When installed in an active acoustic environment, such as cinema, meeting room, lobby, dining room, home cinema room, etc., the acoustic sheet absorbs part of the sound waves that pass through it. This action decreases sound reverberation and greatly improves acoustic comfort and intelligibility.

#### Principle of acoustic absorption

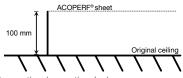
Acoustic absorption reduces the intensity of sound waves as they reflect within a room. The air movement created by a sound source is partially absorbed by the sheet which reflects only a small portion of the sound wave. While a Barrisol acoustic sheet decreases sound reverberation within a room, it does not impact acoustic isolation which is the amount of sound that is transferred from one room to another.



BARRISOL ACOPERF® at 100 mm, 200 mm and associated with a standard sheet at 200 mm.



- BARRISOL ACOPERF® 100 mm sheet
- BARRISOL ACOPERF® 200 mm sheet
- BARRISOL ACOPERF<sup>®</sup> 200 mm if non-perforated sheet



Acoustic absorption Indexes

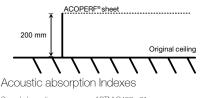
Sound absorption average per ASTM C423 - 01

NRC=0,50

Acoustic absorption coefficient mesured per DIN EN 11654

Acoustic absorption class per DIN EN 11654

D



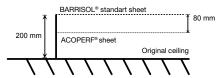
Sound absorption average per ASTM C423 - 01

Noise reduction coefficient per ASTM C423 - 01

Acoustic absorption coefficient mesured per DIN EN 11654

Acoustic absorption class per DIN EN 11654

D



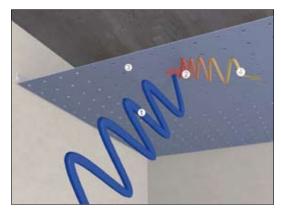
#### Acoustic absorption Indexes

 Sound absorption average per ASTM C423 - 01
 SAA = 0,32

 Noise reduction coefficient per ASTM C423 - 01
 NRC=0,35

 Acoustic absorption coefficient mesured per DIN EN 11654
 a w=0,25(L)

 Acoustic absorption class per DIN EN 11654
 E



- 1 Initial sound
- 2 Sound transformed into thermal energy
- 3 Barrisol Acoustics®
- 4 Reduced sound

#### Barrisol Acoustics®

Barrisol Acoustics® is a diverse line of perforated, sound absorbing sheets that provide specific sound absorbing options for specific spaces.

The effectiveness of Barrisol Acoustics® is based on the physics associated with the interaction between the sheet, the micro-perforations and the sound waves. The micro-perforations transform the acoustic energy of the sound waves into thermal energy. After the sound wave passes through the sheet it is reflected off the ceiling above and passes back through the micro-perforations. This further decreases the energy of the sound waves.

The Barrisol Acoustics® line offers four types of acoustic sheets: Miniperf®, Microacoustic®, Acoperf® and Microperf®. Each sheet is uniquely designed with differing perforation density and perforation diameters and responds to the specific acoustical needs of each space. Barrisol Acoustics® technology helps to obtain spectacular acoustical and aesthetic results.





ombined with an integrated lighting solution, printed Barrisol sheets allow for a whole new level of creativity. Enhanced by the light from TLs, LED's or fiber optics, the printed images on walls, ceilings or 3D shapes push back the limits of interior design. Printed Barrisol sheets that are lighted from behind offer an intriguing combination of aesthetics, elegance and functionality.



#### Design

The light added to printed Barrisol sheets used on walls, 3D shapes, fixtures or ceilings, helps dramatically enhance each image. The ability to change the color of the lighting allows you to change the look and feel of the image and set an entirely different tone for the room.













arrisol translucent ceilings, walls, case ceilings, 3D lights and 3D forms can be animated by changing color.

The light systems used to do this help give the space a rhythm, brighten the atmosphere, attract attention, highlight objects or places and can completely change the ambiance of any space.

Unlike static design elements, Barrisol translucent creation can change their own color and the color of any object around them by simply pushing a button.



Barrisol creations that incorporate changing color can also be used in chromotherapy and luminotherapy.

Chromotherapy helps patients to resynchronise their individual biorhythms. This harmonisation utilizes colors and lights to bring a sensation of well-being and relaxation.

As with plants, humans are organisms that need light to energize them.

Luminotherapy helps promote well-being by countering the effects of a lack of light. Jet lag, weariness, anxiety, depression and insomnia can all be signs that your body needs more light.

Barrisol Translucent and Barrisol Colored Light can help recharge you to get the most out of life.



















# Barrisol, Ecology and Su

In 2007, Barrisol Normalu SAS celebrated its 40th year. Over the years, Barrisol, the creator of the stretch ceiling industry, has placed innovation at the center of everything it does.

#### The experience of a leader

The first stretch ceiling was manufactured by Normalu in 1969. The Barrisol brand was created in 1975. Today, the entire collection of Barrisol sheets composes over 20 unique systems of stretch ceilings.

#### Strength of innovation

For Barrisol, utilizing technology to constantly improve its products and processes has allowed it to stay far ahead of the competition.

By helping to establish new industry standards and procedures, Barrisol Normalu continues to reinforce its position as the worldwide leader in the stretch ceiling industry.

#### Design & interior decoration

Ceilings and walls are as important in helping to set the tone for a space as is the layout of the space itself. The potential for ceilings or walls to serve as integral design elements is too often underestimated. Barrisol offers a diverse palette of more than 130 unique colors.

Choose a texture, finish, printed image, lighting element and your Barrisol ceiling can provide you with almost any look or feel you desire.

#### A team approach to innovation

At Barrisol Normalu, creativity is not the work of only one person. The innovative solutions of the Barrisol Normalu SAS group are the result of a collaborative approach. This collaboration allows our R&D technicians to come up with product innovations and applications that constantly keep Barrisol Normalu at the forefront of the industry.

#### We are never very far away

The Barrisol network contains 1,200 partners on 5 continents, in more than 110 countries.

# "In order to make the you first need to

This interactive network provides you with creative and technological support of a vast global enterprise combined with the attention and service of a local representative.

Barrisol Normalu SAS considers the impact on the environment in all the decisions it makes. Respect for the environment is one of Barrisol Normalu's core values. An example of Barrisol Normalu's commitment to the environment can be seen in its development of recycled and recyclable products and its corporate culture.

# Recycling and environmental preservation

Barrisol sheets are 100% recyclable. After their useful life, Barrisol sheets can be recycled into others products of Barrisol Normalu such as the Thermalu radiant heating system or Barrisol's Recyclable line of sheeting. These products are ideal for any projects attempting to reflect "green design". The perimeter rails and support elements are also 100% recyclable. This effort to protect the environment is critically important when you consider that more than 1 million square meters of stretch ceilings are installed throughout the world each year.



# stainable Development

# world of tomorrow more beautiful, work to preserve the world today. \*\*

Barrisol Normalu's manufacturing process does not require the use of water, which allows it to help conserve this vital, natural resource. In the production of sheets, no CFC's or HCHC's are emitted and no cadmium is used in the manufacturing process.

#### Intrinsic qualities

Thanks to the quality and variety of the finishes, Barrisol's stretch ceilings do not need to be painted. This helps to reduce the number of chemicals and solvents used on most construction projects. Barrisol sheets that provide a high degree of reflection, such as Lacquers, can even reduce the number of lights in a space and therefore reduce electrical consumption.

Barrisol can be removed and reinstalled whenever access to the area above the ceiling is required. Removal and reinstallation of Barrisol can be done with very little disruption to the owner.

Barrisol stretch ceilings are lightweight 1000 square meters (10, 260 square feet) of Barrisol weighs around 500 kilos (1, 102 pounds) including the perimeter rail. Because it is so lightweight, Barrisol also takes far less energy to transport to the jobsite.

Lastly, because each individual Barrisol sheet is custom made for each application Barrisol generates approximately 20 times less waste than conventional ceiling materials.

# Social Responsability & Sustainable Development

In order to limit the amount of waste it produces, Normalu will take back and recycle all Barrisol sheets at the end of their useful life.

The offices of Normalu are equipped with the Thermalu radiant floor heating system to provide its employees a more comfortable working environment. Thermalu, a product of Normalu, was selected over other suppliers because its products contain over 50% recycled content. Normalu also provides car pool vehicles to its employees to help reduce traffic congestion and reduce the emissions of CO<sup>2</sup>.

Normalu's offices are also equipped with photovoltaic and motion sensors that ensure that the lights come on only when needed during daylight hours and turn off automatically at night if no movement is detected in the office.

\* See our general terms





