

GUIDE TO COLOUR FILTERS

WEW EDITION 2010

As a producer of colour filters for the Performing Arts, Rosco has focused on the science of colour for nearly 100 years. But stage lighting is an art, not a science. The people who use Rosco filters are artists who qualify light and manipulate the spectrum to enhance stage pictures, dealing with colour, contrast, perception and the creation of an emotional climate. This guide was developed with two objectives, firstly to offer some recommendations for filter colour selection and secondly to provide some technical background of colour filter technology.

Most of the colours in the Rosco range have been created by and for designers over the years to achieve specific effects and the ranges are extensive. A virtually unlimited palette can be achieved by additive mixing using multiple sources and the new wider range of Rosco filters. Apart from the obvious "cooler" and "warmer" variation of colour through the dimmer setting, most filter colours have warmer and cooler filters of similar hue listed in the Application pages.

The range of colours from Rosco continue to evolve, designers will innovate and new artistic needs will emerge and be met.

USING THIS GUIDE

This guide was developed to provide designers with suggestions on how specific Rosco colours might be used for lighting the stage. We have grouped the colours to some commonly accepted categories.

Lighting the Acting Areas these are divided among Warm, Cool and Neutral groups for lighting acting areas. These colour distinctions help to establish the mood, emotion, time and place. The colours included are generally flattering to skin tones and enhance scenery and costumes.

Accent Lighting is also divided between Warm and Cool. These slightly more saturated colours may be used to shape and define an object or person. Typically, accent lighting is focused from side or back positions or, on occasion, as down light.

Natural Light on stage usually comes in one of four variants: warm sunlight, cool daylight, moonlight and cyclorama wash lighting used to create the illusion of a sky/horizon line. This section of the guide makes recommendations for choosing colours appropriate to each of these applications. Here you will find suggestions that render both true, natural lighting and strong, stylized sky lighting. Your design and the needs of the play will determine which is the right choice for you.

Special Effects lighting encompasses a broad category. Listed in this section are strong, stylized colours that can be used to create dramatic lighting effects from fire and rain to surreal, ominous atmospheres. Again, the choice of colour is purely personal and determined by the needs of the overall design.

Choices are not immutable. As Tharon Musser has said,

"If a colour doesn't look right on stage, just change it."

ROSCO FILTER RANGES FOR THIS GUIDE

Supergel: the premier colour range of high temperature resistant filters and diffusion

The range of colours evolved mostly by dialogue with designers world-wide, and offer fresh alternatives to the old world Cinemoid derived colours.

E-Colour+: a comprehensive range of filters in one swatchbook, with colour filters for the lighting designer with notation originated for Cinemoid. The correction filters, numbered 2 – 300 were primarily for photography film and television, but some are used by designers for the colour character, and are listed in the tables in the Guide.

*11 New E-Colour+ Colours now incorporated in the sections on applications in the new edition of the guide.

Roscolux: has been the colour of designer choice for 30 years in the U.S and is available in Europe and includes many new colours, including the Academy Award winning range of CalColor primaries, secondaries and diluted paler colours.

SOME CONTRIBUTORS TO THIS GUIDE

Richard Pilbrow

Widely regarded as the dean of lighting designers for both London and Broadway, he also headed Theatre Projects consultants. He has authored two much acclaimed books on stage lighting.

Jennifer Tipton

Jennifer Tipton's many awards for lighting in dance, theatre and opera include two Tonys, two Bessies, two American theatre Wing awards, two Obies and two Drama Desk Awards. A veteran teacher at the Yale University School of Drama, she has influenced a generation of lighting designers.

Ken Billington

He has designed the lighting for over 50 Broadway productions and garnered six Tony nominations in the process. The long term Principal Lighting Designer for New York's Radio City Music Hall, he has worked extensively in television and architectural design.

Donald Holder

Donald Holder's brilliant lighting design for the Broadway production of "The Lion King" earned him the triple crown of theatrical awards. The Tony Award, the Drama Desk Award and the Outer Critics Circle Award

Designers on Colour

Colour has been an important component of stage lighting since the days of candles and silk. We reproduce here comments on the subject from the published works of some leading lighting designers:

Gilbert V. Hemsley, Jr.

"I think one of the greatest joys of lighting design is communicating to an audience how you, as a designer, feel about and understand colour. Walking out from a darkened theatre on a sunny Spring afternoon and feeling my response to the warm sunshine, the Supergel 64 of the blue sky and the light green shadows of the new leaves makes my head spin with the realization that I can translate my colour excitement to a production of 'You Can't Take It With You'. I can make an audience see and feel the excitement of a beautiful Spring afternoon when the curtain goes up in a darkened theatre.

It may sound strange, but I carry a colour swatchbook around in my head. As I see, feel, and respond to colour and colour combinations in the real world, I make mental notes of the colours I see and my responses to them. I have a storehouse of emotional and rational responses and the colours that go with them.

In learning to be artists as lighting designers it is exhilarating to have a full personal response to color and color combinations in the real world and then communicate them to the real audiences of the theatre world."

Francis Reid

"My filter philosophy is simple. Colour can support and enhance the work of actors, their clothes and their scenic environment. When using filters, I may be removing some parts of the light but I am enhancing those that remain. I am aware that my audience, like myself, watch a lot of television so I must light to produce much more natural skin tones that I did thirty years ago. My colour ambience now has to surround the actor, tinting the environment, particularly the airspace that the light passes through and the floor that it hits, while leaving the face and the costume as naturally coloured as possible usually with Supergel 351. The practicalities of my approach are based simply upon the realisation that if I take the spectrum apart with filters, then I can put that spectrum together again by superimposing the filtered light beams. It is a gloriously unscientific process; not so much a rule-of-thumb as one of crossed fingers. And trusting my eyes."

Nigel Morgan

"Out of all the parameters that the lighting designer sets when composing a composition, colour is the one most likely to get an immediate reaction from other members of the team. Given the number of colour tones available, making the right choice isn't always easy. That is why it is so important to experiment with lighting models, colour and fabric samples - and to share the discoveries you make with the rest of the creative team. Where else can you 'rehearse' your lighting? In the model room you can find just the right tone, combined with the right intensity and source position, mix the right blend with other lights."

Richard Pilbrow

"Fractured white light reveals colour. Part of the magic of stage lighting is taking complex multi-directional palettes of colour and re-combining them into lucid, dramatic light for the stage.

When I began lighting, only about fifty shades of Cinemoid were available. I often used them two or three to a frame seeking new possibilities. Then I discovered the Rosco range and first brought this wonderful range to Britain. Now the possibilities are almost limitless.

Colour brings life, texture and vibrancy to the stage. I love it!"

Jennifer Tipton

"The use of colour is key to a lighting designer's craft. I am constantly reminded as I watch the light change from the brilliance of a sunny morning to the early dusk of a winter afternoon, how much colour there is in natural so-called 'white light' and how much variety in colour can be made by simply brightening and dimming a light. It is a wonderfully juicy thing to 'paint' with coloured light – to use light expressionistically – to make the audience feel the scream, live the blues or dance with danger. Or to paint with coloured light can simply be about the beauty of juxtaposing one colour next to another and being able to change it from one moment to the next for purely compositional reasons. But I am also madly in love with the ravishing light that can be made from the use of the very limited range of colours – lavender, blue and clear – that makes the skin glow no matter what colour the skin may be."

David Belasco

"The greatest part of my success in the theatre I attribute to my feeling for colours, translated into effects of light." (1919)

The late Gilbert V. Hemsley, Jr. said that

"I carry a colour swatchbook around in my head"

An example of his brilliant application of colour is shown in the photo on the left.

Understanding The Spectrum and SED Curves

Visible light is the small part of the spectrum of electromagnetic radiation between approximately 400 and 700 Nanometers. Each wavelength has a "spectral signature", or colour, ranging from violet at 400 through indigo, blue, green, yellow and orange to red at 700. The combination of these coloured wavelengths creates white light. Coloured light can be described as the presence of certain wavelengths and the absence of others.

A colour filter functions by selectively transmitting or blocking (absorbing) spectral elements of a beam of white light emanating from a light source. For example, a Supergel 27 Medium Red filter will allow red light frequencies to pass through and absorb blue and green. Of the radiant energy which is blocked, by far the largest part is absorbed by the filter as heat. This is why heat stability is a significant consideration in filter design. The heat created by the absorption of energy leads to degradation of the filter.

Lighting designers mix or blend colours through an additive or subtractive process. Blending light beams of different colours on a surface is an additive process. Creating a coloured beam by filtering white light is a subtractive process – the desired colour is transmitted while the other wavelengths are absorbed (or "subtracted").

A Spectral Energy Distribution (SED) curve is a graph of the transmission of energy plotted by wavelength. These curves are included in the swatchbooks of Rosco filters. In Fig. 1, the curve for Supergel 27 shows that frequencies above 620 nM will pass through the filter at varying percentages, while the wavelengths below will not. With this information, you can predict what colour the filter will render.

As a reference, the peak intensity for violet is 440, blue 480, green 520, yellow 570 and red, 650.

Most Rosco colours are blends so the curve will have multiple peaks. The graph for Supergel 54 Lavender for example, shows a high component of both violet and red. (Fig. 2)

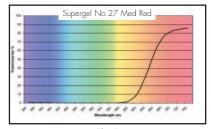


Fig. 1

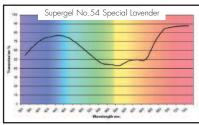


Fig.2

Designers on Colour

Traditionally, correcting the colour temperature of various lamps has been a chore left to architectural lighting designers or cinematographers, but the wide range of light sources used in modern theatrical lighting has changed this. Rosco offers filters for balancing different lamp types.

Lighting a scene with both a 4000°K Metal Halide lamp and also a 3200°K incandescent lamp will result in either the Metal Halide appearing very blue, or the incandescent very red, depending on the overall balance of light on stage. To correct for this, either raise the colour temperature of the incandescent to 4000°K using 202 (1/2 CT Blue) or lower the Metal Halide to 3200°K with 206 (1/4 CT Orange).

For more information on colour correction filters, see the Rosco publication "Filter Facts" or visit the website.

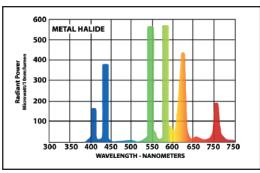


Fig.3

It is important to remember that filtration is a subtractive process filters can only transmit or block frequencies of light, not add them to a source. This is significant when using lamps that are deficient in particular wavelengths.

Although many lamp types seem attractive because they offer the economy of long life, they have a limited spectrum. A typical metal halide source, (Fig. 3) for example, has very little energy in the red end of the spectrum. Note that even the most common theatrical source, the tungsten-halogen or incandescent lamp (Fig. 4) although rich in red/yellow, is deficient in blue/green. These characteristics of sources and filters are most obvious when one becomes familiar with the relevant SED curves

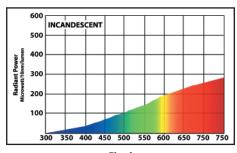


Fig.4

Manufacturing High Temperature Colour Filter

A colour filter combines light refracting elements, normally organic dyes, which are suspended in or coated on a transparent base. Rosco began producing gelatin filters in 1910, but since the 1950s, colour filters have been fabricated on plastic bases. Polycarbonate, the base used for the Supergel range, is the most durable of the polymers currently utilized.

There are three methods currently employed to integrate dyes with polymer bases in order to create colour filters. The products are described as:

- Surface Coated
- Deep Dyed
- Body Coloured

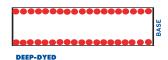
Surface Coated Polyester - (Rosco E-Colour+, Lee Filter)

Optically clear polyester film (PET) is coated with a flame retardant and dye solution on one or two sides to a precisely controlled thickness. The carrier solvent is baked off leaving a stable coating bonded to the substrate. Advanced dye technology gives good resistance to dye fade in hot lights.



Deep-Dyed Polyester - (Roscolux, Cinegel and GAM Filter)

Like surface coated PET, deep dyed film begins with a roll of clear polyester. The film is passed through a bath of heated solvent suffused with dye. The solvent causes the PET film to swell expanding the polymer structure of the film and allowing the dye molecules to penetrate the surface. The film is then washed and the polymer contracts to its normal form, trapping the dye molecules below the surface.

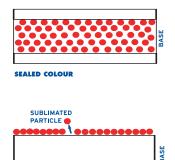


Deep-dyed filters tend to be slightly more resistant to fading than surface coated filters.

Body-Coloured Polycarbonate - (Supergel)

In a body-coloured colour filter like Supergel the colour is inherent within the plastic substrate. Powdered resin and dye is mixed under intense pressure and heat of over 300°C and the mixture is extruded through a die to form a coloured core of film. In Rosco's co-extrusion process further extruders seal this core in between two more layers of clear polycarbonate. This locked-in colour, combined with the high temperature resistant polycarbonate gives very high heat withstand to colour filter even in very hot lighting instruments.

It is possible to coat polycarbonate film, but the Rosco system eliminates 'stress' orientation which may occur in coated filter – which means in hot spotlights and scrollers if the filter buckles or shrinks there are serious problems; indeed scrollers should be fitted with Supergel colour, for safety's sake.



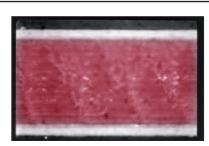
SURFACE COATED

Flame Retardance in Colour Filters

All Rosco colour filters comply with current regulations for flame retardance, in the UK, this is: BS3944 pt1: 1992.

Supergel, by virtue of the polycarbonate base and state-of-the-art technology, also is certificated:

France M1 Germany B1 (DIN 4102-01) Austria MA39 Italy C1 and Spain M2.



Shown here is a cross section of co-extruded Rosco Supergel filter photographed through an electron microscope. Note the discrete clear layers on the top and bottom sealing in the colour core.

Lighting the Acting Areas - *filters for warm acting areas*

Stage lighting is an art, not a science. We show here, as suggestions, some widely used applications for specific Rosco colours. Supergel and E-Colour+ and Roscolux numbers on the same line across the columns are close or similar colours. Your design and the needs of the production should determine the right colour choices for you.

Note: The colour bands are intended as a guide only as matching printed colours with filter colours is not possible. For a true representation please contact Rosco or your local dealer for a swatchbook.

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
		302 Pale Bastard Amber	Very pale warm white. Perfect for enhancing the HPL lamp in a Source 4.
01 Light Bastard Amber	176 Loving Amber		Enhances fair skin tones.
			Suggests strong sunlight.
02 Bastard Amber	162 Bastard Amber	02 Bastard Amber	Good where a tint of colour is needed.
			Excellent for natural skin tones.
03 Dark Bastard Amber	108 English Rose		Most saturated Bastard Amber.
303 Warm Peach	109 Light Salmon		Strong Amber with undertones of pink.
			Useful for warm sunrises and sunsets.
04 Medium Bastard Amber	004 Medium Bastard Amber		Especially useful when cross lit with a coo
			colour. Excellent for natural sunlight.
304 Pale Apricot	152 Pale Gold		A peach amber.
			More yellow than 305.
05 Rose Tint			A clean pale pink; useful as a "blush" for skir
0.5.0	754848		tones.
305 Rose Gold	154 Pale Rose		A pale blush amber for skin tones and backlight.
06 No Color Straw			Slightly off-white.
00110 0000 31100			Good for interiors.
07 Pale Yellow	007 Pale Yellow		Double saturation of 06.
		00.0.1.0.11	\A/, C.
		08 Pale Gold	Warmer Straw.
	223 Eighth CT Orange	2410 Passaur 1/9 CTO	Flattering to skintones. Nominal Daylight to 5200°K.
	223 Eighin CT Oldrige	3410 KOSCOSUII 1/6 CTO	Pale Amber.
	206 Quarter CT Orange	3409 Roscosun 1/4 CTO	Nominal Daylight
	200 Qualier of Orange	340 7 R03C03011 1/4 C10	to 4600°K
	205 Half CT Orange	3408 Roscosun 1/2 CTO	
			to 3800°K
	285 Threequarter CT Orange	3411 Roscosun 3/4 CTO	
		•	to 3500°K. Nice strong Amber.
	204 Full CT Orange	3407 Roscosun CTO	Nominal Daylight
	<u> </u>		to 3200°K. Dominant Amber.
	444 Eighth CT Straw	3444 Eighth Straw	Pale Sepia.
	443 Quarter CT Straw	3443 Quarter Straw	Light Sepia.
	442 Half CT Straw	3442 Half Straw	Medium Sepia.
	441 Full CT Straw	3441 Full Straw	Full Sepia.
		4515 CC15 Yellow	Very pale yellow. Interior lighting to crea
		4500 CC00 V II	industrial mood.
		4530 CC30 Yellow	Medium yellow with green tone: bright sunlight accents.
		4560 CC60 Yellow	Strong Yellow with green tone:
			deep sunlight.
		4590 CC90 Yellow	Very strong yellow with no red accents.
09 Pale Amber Gold	009 Pale Amber Gold		Deep straw. Good for late afternoon sun sets or firelight.
15 Deep Straw	015 Deep Straw		Warm golden amber with some green.
•			Useful for special effects - candlelight, firelight

^{*} New E-Colour+ Filter Colour 2009

Lighting the Acting Areas - *filters for warm acting areas*

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
		16 Light Amber	Excellent area light. Safe for most light skintones.
		316 Gallo Gold	Pale reddish gold. Good for sunrise or sunse Flattering naturalistic backlight colour.
	5017 Light Flame	17 Light Flame	Heavier pinkamber tint. Useful for dance. Especially useful when balanced with a cool colo
317 Apricot	147 Apricot		A rosy amber which produces a romantic sunset colour.
	134 Golden Amber		Glowing Amber. Late afternoon sunlight transition.
318 Mayan Sun	5318 Mayan Sun	318 Mayun Sun	A medium salmon colour which evokes feeli of a tropical island. A good sunset color
	5336 Aztec Gold*		A burnt amber with a honey-like quality. sunlight effects to richly dingy interiors.
		325 Henna Sky	Toasted red-amber colour, useful as a dramatic cyc.
		4615 CC15 Red	Very pale red. Subtle warming on skin tone Warmer than Sgel 05.
		4630 CC30 Red	Double 4615. Pale red with peach tones. Non skin when paired with a cooler cross light.
30 Light Salmon Pink			Excellent for general area washes. Give overall warming effect to skin tones.
	153 Pale Salmon		Good for flesh tones A pale pink.
	109 Light Salmon		General wash for warm acting areas, warmer than 107.
31 Salmon Pink	107 Light Rose		General wash. Good for follow spots.
	166 Pale Red		Deep salmon pink warm accents for LE a musicals.
331 Shell Pink	107 Light Rose		Beautiful blush pink, good on fair skinton
33 No Color Pink		33 No Color Pink	A pale almost colourless pink.
		333 Blush Pink	A tint excellent for most skin tones.
		34 Flesh Pink	Good for musicals: creates a happy atmosphere.
		4815 CC15 Pink	Excellent on all skin tones. Slightly cooler than 33.
		4830 CC 30 Pink	Double 4815. Pretty pink. Slightly less blue than 38. Nice for musicals and "happy" lighti
35 Light Pink			Slightly deeper than Sgel 33 but with les violet.
36 Medium Pink	192 Flesh Pink		Good for general washes and cross lighting.
336 Billington Pink			Similar uses to 337 but deeper saturation
337 True Pink			A cool pink excellent for washes and general illumination. A good follow spot colour.
		37 Pale Rose Pink	Blue pink: use in general washes and toning.
38 Light Rose	110 Middle Rose		Bluish pink for general washes and toning



"In A Streetcar Named Desire, Tennessee Williams describes the poker scene as having 'the lurid nocturnal brilliance' of Van Gogh's painting of a billiard-parlor at night. Supergel 11 in a soft down light, Supergel 09 from high backs, and Supergel 365 with templates helped me paint Van Gogh's work in light."

Kevin Rigdon

Lighting the Acting Areas - *filters for* <u>cool</u> acting areas

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
		3318 Tough 1/8 Minusgreen	Very light magenta correction. Removes slight green casts from HPL lamps.
	249 Quarter Minus Green		Pale magenta correction. Nice tone on ski without adding colour.
	248 Half Minus Green	3313 Tough 1/2 Minusgreen	Light magenta brightens blues and pinks: warmer than lavender.
	247 Minus Green	3308 Tough Minusgreen	Nice pale lavender: good as part of a coor warm crosslight.
		4715 CC 15 Magenta	Pale magenta, cooler than 3318: useful or many skintones.
		4730 CC 30 Magenta	Double 4715: medium cool magenta. Ni fill without adding colour.
		4215 CC 15 Blue	Very pale blue tint with a hint of red. Nice no-colour definition when crossed with 51.
		4230 CC 30 Blue	Double 4215. Pale blue with a reddish cast.
		4260 CC 60 Blue	Double 4230. Medium blue with red tone Nice cool crosslight on most skin tones.
	218 Eighth CT Blue	3216 Eighth Blue	Boosts tungsten 3200°K sources by 200°K.
	5211 Ice Blue*		A subtle theatrical colour corrector. Perfect to pull the red edge off of a tungsten source.
373 Theatre Booster 3	203 Quarter CT Blue	3208 Quarter Blue	Quarter blue for cooling incandescent light Cool crisp "white light".
372 Theatre Booster 2	202 Half CT Blue	3204 Half Blue	Half blue for cooling incandescent lights towards daylight. Clean with no red.
	5202 Max Blue		A half blue useful for cooling incandescent towards daylight. Clean with no red.
371 Theatre Booster 1	201 CT Blue	3202 Full Blue	Full blue for cooling incandescent lights to daylight. Clean with no red.
	200 Double CT Blue	3220 Double Blue	Double 201, boosts tungsten 3200°K sources to north sky daylight.
		60 No Color Blue	Helps maintain white light are low on dimmer. Good for cool area light.
		360 Clearwater	Slightest blue tint. Excellent for eliminating amber shift when lights are low on dimmer
61 Mist Blue	061 Mist Blue		Excellent for general area washes. Very light cool tint of blue.
62 Booster Blue			Helps maintain white light when dimmer is at low intensity.
63 Pale Blue	063 Pale Blue		Good for creating an overcast look and feeling.
66 Cool Blue	117 Steel Blue		A pale green shade of blue; good for area of general washes. Creates an icy feeling on stag
363 Aquamarine			A pale blue-green colour. Can be used for area lighting. A soft backlight colour.
361 Hemsley Blue			A sharp cold Blue that stays clean when dimmed, a good wash colour.
		362 Tipton Blue	Soft green blue: good for cool area lighting and for shift the amber of lights low on dimme
64 Light Steel Blue	174 Dark Steel Blue		Useful for beams of realistic moonlight.
		364 Blue Bell	Clean light red blue. Creates naturalistic daylight fill colour.
65 Daylight Blue	196 True Blue		Useful for achieving depressed moods and dull skies.
		365 Tharon Delft Blue	Clean blue but with more red than 364: good for area light.
67 Light Sky Blue	352 Glacier Blue		Excellent sky colour. Useful for cyc and border lights.

^{*} New E-Colour+ Filter Colour 2009

Lighting the Acting Areas - *filters for <u>cool</u> acting areas*

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
	118 Light Blue		Skylight, and cool for accents and acting
			areas.
368 Winkler Blue			A silvery blue, used for front light and
			moonlight.
70 Nile Blue	140 Summer Blue		Useful for very light midday skies.
71 Sea Blue	172 Lagoon Blue		Occasionally used for general cool tint and non-realistic washes.
72 Azure blue	144 No Color Blue		A clean slightly green blue. Good moonlight fill.
	5376 Bermuda Blue	376 Bermuda Blue	Good moonlight, soothing green blue, good tropical sky.



I Promessi Spossi. " In this scene of the musical the boat was in constant motion on a revolve. I had to maintain visibility while sustaining the illuson of distance on Lake Como. The sun, a light box which eventually sets and gives way to a romantic evening, was a combination of 134 and 147 E-Colour+. I love 147 because it doesn't distort the colours of costumes. Since the show had 26 scenes, I used scrollers for everything front, side and backlighting. The lake is a combination of 132, 141 and the new 5436 E-Colour+ and the rising fog helped sustain the impression of water. Since I was a painter I am fascinated by colour and always experiment with new colours in scrollers. Even if I don't use them, I have to know what they do."

Patrick Latronica

Lighting the Acting Areas - *filters for* <u>neutral</u> acting areas

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
			Very light magenta correction. Removes slight green casts from HPL lamps.
	249 Quarter Minus Green	3314 Tough1/4 Minusgreen	Pale magenta correction. Nice tone on skin without adding colour.
	248 Half Minus Green	3313 Tough1/2 Minusgreen	Light magenta brightens blues and pinks: warmer than lavender.
	247 Minus Green	3308 Tough Minusgreen	Nice pale lavender: good as part of a cool or warm crosslight.
	341 Plum		A soft red and muted blue combination for period sets.
		4730 CC 30 Magenta	Double 4715. Medium cool magenta. Nice fill light without adding warmth.
		51 Surprise Pink	Touch of colour when white light is undesirable.
351 Lavender Mist	003 Lavender Tint		Pale, no-colour lavender. Nice cool white light.
52 Light Lavender	052 Light Lavender		Excellent for general area or border light washes. It is a basic followspot colour.
53 Pale Lavender	053 Pale Lavender		Use when a touch of colour is needed.
353 Lilly Lavender	137 Special Lavender		Nice cool lavender. Slightly warmer than Supergel 55.
54 Special Lavender			Same as 53, but warmer.
		4915 CC 15 Lavender	Pale no colour lavender. Slightly cooler than 351. Tones without adding colour.
		4930 CC 30 Lavender	Double 4915. Excellent cool on skin tones. Nice warm tones during night-time.
		4960 CC 60 Lavender	Double 4930. Rich comfortable lavender. Complements darker skin tones.
55 Lilac		137 Special Lavender	Same as 53, but cooler.
355 Pale Violet	142 Pale Violet		Cool lavender - acts as a neutral in a three colour area lighting system.
56 Gypsy Lavender	180 Dark Lavender		Highly saturated, good for side and backlighting a non-realistic effect.
356 Middle Lavender			A lavender halfway between 52 and 57 in hue and value. Useful for side-lighting.
	170 Deep Lavender		Night scene lighting a hint more pink than 356.
57 Lavender	194 Surprise Pink		Gives good visibility without destroying nigh illusions.
357 Royal Lavender	180 Dark Lavender		A rich lavender which will enhance blue and red costumes and scenic pieces.
58 Deep Lavender	058 Deep Lavender		Excellent back light. Enhances dimensionality.
359 Medium Violet			A lavender with a strong blue component, ideal for backlighting.
377 Iris Purple			Deep Blue with red accents, dark night-time
	156 Chocolate	99 Chocolate	atmosphere. Warms light and reduces intensity, good for darker skin tones.
	184 Cosmetic Peach 185 Cosmetic burgundy		asilor distriction.
	186 Cosmetic Silver Rose		A series of
	187 Cosmetic Rouge		slightly diffuse pale tints that
	188 Cosmetic Highlight		complement skin tones
	189 Cosmetic Silver Moss		or key lighting.
	190 Cosmetic Emerald		, , ,
	191 Cosmetic Aqua Blue		
	191 Cosmetic Aqua Blue 5404 Wisteria*		Soft, pale lavender. Excellent area wash. Good

^{*} New E-Colour+ Filter Colour 2009

Using Sidelights, Downlights & Backlights for Accents - *filters for warm accents*

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
		310 Daffodil	A soft medium yellow: can be used for creating effects like early morning sunlight.
		4590 CC 90 Yellow	Saturated pure yellow. Enhances greens in sets and costumes.
10 Medium Yellow	010 Medium Yellow		Clean bright yellow. Good for special effects and accents. Unflattering in acting areas.
	100 Spring Yellow		Sunlight wash with green component, unflattering for skin tones.
		12 Straw	Good for special effects accents. Use with caution on skin tones.
11 Light Straw	102 Light Amber		Warm pale yellow. Useful for fire effects. Can be used for area lighting.
312 Canary	01 Yellow		Warmer than 10. A bright, vibrant yellow that evokes "exotic" sunlight. Use with caution on skin
313 Light Relief Yellow			Vibrant warm Yellow, More red than 312 without the green cast.
14 Medium Straw	104 Deep Amber		Pale amber, useful for sunlight and firelight accents.
15 Deep Straw	015 Deep Straw		Warm amber, good for special effects, as 14. Tends to depress colour pigment values.
		316 Gallo Gold	Pale reddish gold. Good for sunrise or sunset, flattering backlight colour.
	5018 Flame	18 Flame	Pinkish amber. Creates afternoon sunset or sunrise.
318 Mayan Sun	5318 Mayan Sun	318 Mayan Sun	A medium salmon colour which evokes feelings of a tropical island. A good sunset colour.
20 Medium Amber	020 Medium Amber		Afternoon sunlight, evokes feelings of autumn, lamplight and candlelight.
	017 Surprise Peach		Warm skin tones and mood light.
21 Golden Amber	021 Gold Amber		Useful as amber cyc light, late sunsets, and firelight.
	5321 Soft Golden Amber	321 Soft Golden Amber	Good autumn colour, good sun transition colour through white and yellow to amber.
		2002 Storaro Orange	Flattering firelight.
23 Orange			Provides a romantic sunlight through windows for evening effects.
		4815 CC 15 Pink	A very pale pink.
		4830 CC 30 Pink	Medium pink makes a nice side light accen Adds a splash of pink without being too obvious.
		4860 CC 60 Pink	Double 4830. Rich pink accent. Excellent in follow-spots.
		4890 CC 90 Pink	4830 + 4860. Deep rich pink. Lighter than 332. Romantic backlight or accent colour.
331 Shell Pink	107 Light Rose		Beautiful blush pink, good on fair skin tones
32 Medium Salmon Pink			Deepest of the salmon pinks.
332 Cherry Rose			A tropical pink that is good for musicals or concert lighting. A good back light colour.
		4660 CC 60 Red	Double 4630. Medium red with pale salmor accents. Romantic subtle back or side lighting
			accomo, nomarine sobile back of side lighting
		4690 CC 90 Red	4660 + 4630. Strong salmon red. Deeper and more orange than 32. Beautiful backlight.

Using Sidelights, Downlights & Backlights for Accents - filters for warm accents

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
339 Broadway Pink	128 Bright Pink		A deep, saturated pink created for musicals and
,	Ü		"specials". Excellent for down and backlighting.
39 Skelton Exotic Sangri	a		A sultry, deep purple. Good for musicals or
			concert lighting. Excellent special effects colour.
40 Light Salmon	008 Dark Salmon		Similar uses to 23 but a bluer colour.
344 Follies Pink			Vibrant, almost fluorescent pink with a cool componer
			Special effects colour in Broadway musicals.
47 Light Rose Purple	345 Fuchsia Pink		Good for eerie or dramatic effects.
			Beautiful backlight colour.
347 Belladonna Rose			Saturated deep Magenta with hint of purple
			Good effects filter for dance.
48 Rose Purple			Pale evening colour. Excellent for backlight
348 Purple Jazz	345 Fuchsia Pink		A dusky Purple. Good for simulating purple
•			neon or old night club atmosphere.
49 Medium Purple	126 Mauve		Darkest of the magenta purple range.
349 Fisher Fuchsia			A medium fuchsia good for special effects.
			An interesting backlight or accent colour.
50 Mauve	127 Smokey Pink		Subdued sunset effect. Useful in backlights.
			To create seedy atmosphere.
358 Rose Indigo			A warm, red purple good for accents,
			specials, and backlight.
	5084 Damson Violet*		A deep rosy violet. A chameleon-like colour
			varying from warm to cool.
	5085 French Lilac*		An intense, warm lilac for romantic and non
			realistic accents.
96 Lime			To simulate "unnatural" sunlight before and
			after a rainstorm or tornado.



" Colour brings life, texture and vibrancy to the stage " - the Award winning design for the Broadway revival of Showboat illustrates this vividly.

Richard Pilbrow



"In this production of Richard III, the court of King Edward stands above Richard, backlit from below with Supergel 11 Light Straw. The court is silhouetted against a fiery, bloody sky, created using a mixture of Supergel 21 Golden Amber and Supergel 24 Scarlet."

Donald Holder

^{*} New E-Colour+ Filter Colour 2009

Using Sidelights, Downlights & Backlights for Accents - filters for cool accents

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
	247 Minus Green	3308 Tough Minusgreen	Cool pale lavender for beautiful, subtle backlighting.
		4930 CC 30 Lavender	Double 4915. Clean medium lavender. Soft accent lighting.
	5499 Hyacinth	4990 CC 90 Lavender	4960 + 4930. Dynamic, lush backlight. More red than 357.
	5426 Blueberry Blue	4260 CC 60 Blue	Double 4230. Good for accents and back
367 Slate Blue	161 Slate Blue		lighting, especially dance. Slightly red. Clean medium blue. Good for sky colour or
	5287 Fuji Blue*		moonlight. A neutral medium blue. A nice intermediate hue
68 Parry Sky Blue	O68 Sky Blue		for transition from afternoon into evening light. Excellent for early morning sky tones.
69 Brilliant Blue	183 Moonlight Blue		Popular among designers for cyc and borders. Used for dramatic moonlight effects.
73 Peacock blue	354 Special Steel Blue		Good for fantasy, moonlight and water effects.
74 Night Blue	363 Special Medium Blue		Popular as a backlight or sidelight in contras to area light.
	5376 Bermuda Blue	376 Bermuda Blue	Good moonlight, soothing green blue, good tropical sky. More blue than 76.
		77 Green Blue	Useful for romantic moonlight.
		2007 Storaro Blue	Rich deep indigo blue, slightly redder than 81.
80 Primary Blue	119 Dark Blue		Primary blue. For use with three colour light primary system in cyc lighting.
81 Urban Blue	075 Evening Blue		Very cold brittle feeling.
82 Surprise Blue			Deep rich blue with slight amount of red.
382 Congo Blue	181 Congo Blue		The most saturated blue. Good for dark night skies. Great colour for rock and roll concert lighting.
84 Zephyr Blue			Lovely contrast to pale blues; adds coldness to shadows.
85 Deep Blue	085 Deeper Blue		Deeply saturated blue with a hint of red.
385 Royal Blue			A very low transmission deeply saturated blue that shifts towards purple when dimmed.
76 Light Green Blue			Distinctive greenish blue.
86 Pea Green	121 Leaf Green		Good for dense foliage and woodland effects.
89 Moss Green	122 Fern Green		Useful for mood, mystery and toning.
389 Chroma Green			A brilliant cyc lighting colour, good for chroma-keying effects in television production.
395 Teal Green	325 Mallard Green		Good as a mystical special effects colour. Interesting side or backlight colour in concert lighting

Gli Olimpiadi " This Pergolesi opera was given an abstract setting with only the presence of specific props and set pieces, a volleyball net, bicycle etc. to suggest a modern gymnasium. Since none of the electric pipes were masked and many of them moved I treated the lights as gym apparatus. I based the lighting on the cold, detached but sensual television commercials that I had seen in India with a lot of green. Green is a colour that I love and try to use in almost every production. In this scene the set becomes a prison with an ominous shadow on the large net. The visible low side-lighting is a mixture of 213 and 245, corrections and cosmetic colors 190 and 191 were used for the back-lighting. The cyc was 219 and 174. The front light was open white and 187, cosmetic rouge which did not distort the 17th century costumes and maintained the formalism of the rest of the lighting."



Patrick Latronica

Simulating Natural Light - filters to re-create sunlight

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
01 Light Bastard Amber	176 Loving Amber		Enhances fair skin tones. Suggests strong
20214/ D	1001: 1: 0 1		sunlight.
303 Warm Peach	109 Light Salmon		Strong Amber with undertones of pink. Useful for warm sunrise and sunsets.
04 Medium Bastard Amber	004 Medium Bastard Amber		Especially useful when cross lit with a cool
			colour. Excellent for natural sunlight.
	285 Three Quarter Orange	3411 Roscosun 3/4 CTO	Rich amber, good for strong morning sunlight.
		4530 CC 30 Yellow	Double 4515. Medium yellow with green tor Bright sunlight accents. Not flattering on skin.
		4560 CC 60 Yellow	Double 4530. Strong yellow with green tone
			Deep sunlight rays.
		4590 CC 90 Yellow	4530 + 4560. Very strong sunlight with n
00.0.1.4.1.0.11	000 0 1 4 1 0 11		red accents.
09 Pale Amber Gold	009 Pale Amber Gold		Deep straw. Good for late afternoon sunsets.
10 Medium Yellow	010 Medium Yellow		
10 Meaium Yellow	UTU /Viedium Yellow		Yellow with green. Good for special effect Unflattering in acting areas.
		310 Daffodil	A soft medium yellow. Can be used for
		· · ·	creating early morning sunlight.
11 Light Straw	102 Light Amber		Pale yellow with slight red content. Useful for
-	-		candle effects. Can be used for area lighting.
		12 Straw	Greener yellow than 10. Special effects and
			accents. Use with caution on skin tones.
		2003 Storaro Yellow	Deep yellow with amber tones. Strong late
			day sunlight, flattering on skin.
	103 Straw		Flatters flesh tones, warm winter effect and
13 Straw Tint	013 Straw Tint		area lighting. Much less green than in other straws. Warm sunli
10 SIIUW IIIII	OTS SHOW THE		glow when contrasted with ambers and blues.
313 Light Relief Yellow			Vibrant warm yellow. More red than 312
313 Light Refier Tellow			without the green cast.
14 Medium Straw	104 Deep Amber		Pale amber, higher red content than 312.
14 Mediani diaw	TO T Deep Timber		Sunlight, accents, caution to skin tones.
317 Apricot			A rosy amber. Produces romantic sunlight
			effects. Useful as sidelight or back light colour
		316 Gallo Gold	Pale reddish gold, good for sunrise and
			sunset. A flattering backlight colour.
		18 Flame	Warm pinkish amber. Afternoon sunset, a
	5010.5		good sidelight.
	5018 Flame		Warm pinkish amber. Afternoon sunset. Good sidelight.
318 Mayan Sun	5318 Mayan Sun	318 Mayun Sun	A medium salmon colour which evokes feeling of a tropical island. A good sunset colour.
20 Medium Amber	020 Medium Amber		Afternoon sunlight. Lamplight and candlelight.
			Tends to depress colour pigment values.
21 Golden Amber	021 Gold Amber		Useful for amber cyc light and late sunsets
	5321 Soft Golden Amber	321 Soft Golder Amber	Amber with some green content. A good sunlig
			transition colour for progression to amber.
		2002 Storaro Orange	Rich amber with pink tones. Afternoon
			sunlight into sunset.
23 Orange	158 Deep Orange		Provides a romantic sunlight through windows for evening effects.
25 Orange Red	025 Sunrise Red		Good for firelight or special effects.
		325 Honna Clar	Toasted red amber colour. Useful in creating
		325 Henna Sky	setting sun or as a dramatic cyc.

Simulating Natural Light - filters to re-create sunlight

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
		4630 CC 30 Red	Double 4615. Warm sunlight at dusk.
331 Shell Pink	107 Light Rose		Beautiful blush pink, good on fair skin tones.
332 Cherry Rose	148 Bright Rose		A tropical pink that is good for musicals or concert lighting. A good backlight colour.
337 True Pink	039 Pink Carnation		A component of early morning sunrise.
96 Lime			To simulate "unnatural" sunlight before and after a rainstorm or tornado.



"Here's a hot morning on Catfish Row. I wanted the lighting to almost make you see the sweat! I used Supergel 23 and 00 clear on the cyc; it mixed well with the colours used in painting the drop. The backlight is E-Colour+ 5017, used here on 5K fresnels, for directional colour on a large wash. Area lights were Supergel 60."

Ken Billington

Simulating Natural Light - filters to re-create skylight

57 Lavender 58 Deep Lavender 361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue 366 Jordon Blue 67 Light Sky Blue	194 Surprise Pink 058 Lavender 5423 Barely Blue 200 Double CT Blue	4730 CC 30 Magenta 4760 CC 60 Magenta 4230 CC 30 Blue 3220 Daffodil Blue	settings. Mystical moonlight. Excellent backlight. Gives good visibility without destroying night illusions. Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight.
58 Deep Lavender 361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	058 Lavender 5423 Barely Blue 200 Double CT Blue	4230 CC 30 Blue 3220 Daffodil Blue	Double 4730. Excellent for use in night-time settings. Mystical moonlight. Excellent backlight. Gives good visibility without destroying night illusions. Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
58 Deep Lavender 361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	058 Lavender 5423 Barely Blue 200 Double CT Blue	4230 CC 30 Blue 3220 Daffodil Blue	settings. Mystical moonlight. Excellent backlight. Gives good visibility without destroying night illusions. Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonligh A sharp cold blue that stays clean when dimmed.
58 Deep Lavender 361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	058 Lavender 5423 Barely Blue 200 Double CT Blue	3220 Daffodil Blue	Excellent backlight. Gives good visibility without destroying night illusions. Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonligh A sharp cold blue that stays clean when dimmed.
58 Deep Lavender 361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	058 Lavender 5423 Barely Blue 200 Double CT Blue	3220 Daffodil Blue	without destroying night illusions. Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	5423 Barely Blue 200 Double CT Blue 174 Dark Steel Blue	3220 Daffodil Blue	Enhances dimensionality. Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
361 Hemsley Blue 64 Light Steel Blue 65 Daylight Blue	5423 Barely Blue 200 Double CT Blue 174 Dark Steel Blue	3220 Daffodil Blue	Double 4215. Interesting industrial sky. Overcast, slightly grey daylight. Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
64 Light Steel Blue 65 Daylight Blue 366 Jordon Blue	200 Double CT Blue 174 Dark Steel Blue	3220 Daffodil Blue	Overcast, slightly grey daylight. Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
64 Light Steel Blue 65 Daylight Blue 366 Jordon Blue	174 Dark Steel Blue		Bright night-time area light. Crisp moonlight A sharp cold blue that stays clean when dimmed.
64 Light Steel Blue 65 Daylight Blue 366 Jordon Blue	174 Dark Steel Blue		A sharp cold blue that stays clean when dimmed.
64 Light Steel Blue 65 Daylight Blue 366 Jordon Blue		0/571 0 16 01	dimmed.
65 Daylight Blue 366 Jordon Blue		2/5 Tl D 16 D	
65 Daylight Blue 366 Jordon Blue		0/5 T	Useful for beams of realistic moonlight.
366 Jordon Blue		0/57 5 16.51	
366 Jordon Blue		365 Tharon Delft Blue	Clean blue with some red, good for area
366 Jordon Blue			lighting.
·	196 True Blue		Useful for achieving depressed mood and
·			dull skies.
67 Light Sky Blue			A crisp light blue with a hint of green.
6/ Light Sky Blue			Flattering on dark skin tones.
o, 1.g on, 2.00	165 Daylight Blue		Excellent sky colour.
/ O D O D	0.4.0.01		Useful for cyc and border
68 Parry Sky Blue	068 Sky Blue		Excellent for early morning sky tones.
0/0/4/11 DI			Popular among designers for cyc and borders.
368 Winkler Blue			A silvery blue, used for front light and moonligh
69 Brilliant Blue	183 Moonlight Blue		Used for dramatic moonlight effects.
70) 11 01			
70 Nile Blue			Used for very light midday skies.
370 Italian Blue	131 Marine Blue		Occasionally used for general cool tint. Good to create eerie and mysterious effects
o/ O lialian blue	131 Marine blue		Good for night-time water effects.
71 Sea Blue	172 Lagoon Blue		Occasionally used for cool tints and
7 1 00d 2100	17 Z Łagoon Bloo		non-realistic area lighting.
72 Azure Blue	144 No Colour Blue		A clean slightly green blue. Good moonligh
, 2 , 25.6 5.66			fill.
	5264 Venetian Blue*		A pale steel blue useful in cool washes.
			Create subtle shadows or hazy blue skies.
	5211 Ice Blue*		A subtle theatrical colour corrector. Perfect to
			pull the red edge off of a tungsten source.
	5431 White Cap	4315 CC 15 Cyan	Very pale blue green. Interesting industrial
			daytime skies. Use with caution on skin tones.
	5433 Surf Blue	4330 CC 30 Cyan	Double 4315. Slightly greener than
	5.407 C + D	40/0.00 /0.0	"normal" daylight. Uncomfortable skylight.
	5436 Capri Blue	4360 CC 60 Cyan	Double 4330. Strong eerie daylight.
70 D	115 D D		Simulates fluorescent and industrial light sources
73 Peacock Blue	115 Peacock Blue		Good for fantasy, moonlight and water effects.
74 Night Blue	363 Special Medium Blue		Fantasy moonlight. Crisp and beautiful.
	507/ 0	070 0	
	5376 Bermuda Blue	379 Bermuda Blue	Good moonlight, soothing green blue, good tropical sky.
78 Trudy blue	366 Cornflower		A rich clean red blue that warms to lavende
, o mody bloc	JOO COMMOWER		when dimmed.
	5378 Twilight Blue	378 Alice Blue	Moody, cloudy blue with lavender undertones.
	JON J THINGIN DIOC	0, 0 , tilee 5100	viiii lavollaci ullaciiules.

^{*} New E-Colour+ Filter Colour 2009

Simulating Natural Light - filters to re-create skylight

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
81 Urban Blue	075 Evening Blue		Very cold brittle feeling.
		381 Baldassari Blue	A great "dark steel" on triple daylight.
82 Surprise Blue			Deep rich blue with slight amount of red.
383 Sapphire blue	120 Deep Blue		A deep romantic blue on the red side.
84 Zephyr Blue			A true blue with excellent punch or bright skies.
385 Royal Blue			Excellent for non-realistic backgrounds, buvery low transmission.



"It's evening on Catfish Row and I wanted a clear, clean light, but one that said 'night' and illuminated the gamblers. I used Supergel 83 to make the people and the scenery pop. It mixes well with the other colors I used, including Supergel 33 (at 75%) for that warm, sunset glow and Supergel 372 in the area lights on the faces."

Ken Billington

Simulating Natural Light - filters to re-create cyc/sky

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
	002 Rose Pink		A good colour for side-lighting, or as a component of a cyc sunrise.
21 Golden Amber	021 Gold Amber		Useful as amber cyc light and late sunsets.
22 Deep Amber	022 Dark Amber		Very useful as a backlight. Dramatic specials and firelight.
26 Light Red	026 Bright Red		Vibrant red. Good alternative primary.
27 Medium Red	027 Medium Red		Good red primary for use with three-colour light primary systems in cyclorama lighting.
359 Medium Violet			Midnight and moonlight illusions. Good for evening cyc wash accents, good in backgrounds
357 Royal Lavender	343 Special Medium Lave	ender	Excellent for night-time scenes. Rich and vivid saturated lavender.
		2008 Storaro Indigo	Cold blue cyc colour with strong lavender cast.
	5429 Lapis Blue	4290 CC 90 Blue	4260 + 4230. Deep red blue. Enhances deep blues in costumes and scenery. Vibrant backlight
361 Hemsley Blue			A sharp cold blue that stays clean when dimmed.
377 Iris Purple			Deep Blue with red accents. Dark night-time atmosphere.
64 Light Steel Blue	174 Dark Steel Blue		Useful for beams of realistic moonlight.
65 Daylight Blue	196 True Blue		Useful for achieving depressed moods and dull skies.
366 Jordan Blue			A crisp light Blue with hint of green. Flattering on skin tones.
67 Light Steel blue	352 Glacier Blue		Excellent sky colour. Useful for cyc and border.
367 Slate Blue	161 Slate Blue		Clean medium blue. Good for sky colour or moonlight.
	143 Pale Navy Blue		Romantic moonlight and cool "specials".
68 Parry Sky Blue	068 Sky Blue		Excellent for early morning sky tones. Popular among designers for cyc and borders.
368 Winkler Blue			A silvery blue, used for front light and moonlight.
69 Brilliant Blue	183 Moonlight Blue		Useful for dramatic moonlight effects.
369 Tahitian Blue	118 Light Blue		Medium bright blue with some green. Cool water effects colour.
73 Peacock Blue	115 Peacock Blue		Good for fantasy, moonlight and water effects.
374 Sea Green	115 Peacock Blue		Teal BlueGreen. Great for enhancing water scenes or deep sea environments. Greener than S73.
75 Twilight Blue			Rich Blue with slight green accent. Dramatic, mystical night-times.
		375 Cerulean Blue	A crisp clean blue-green. Useful as a water effect or a sidelight for dance.
76 Light Green Blue			Distinctive greenish blue. Useful for romantic moonlight.
	5376 Bermuda Blue	376 Bermuda Blue	Good moonlight, soothing green blue, good tropical sky.
	5077 Green Blue	77 Green Blue	Deep rich blue moonlight. Won't shift red when taken down on dimmer. Nice for colour mixing.
		2007 Storaro Blue	Deep blue, fantasy moonlight or cyc colour.

Simulating Natural Light - filters to re-create cyc/sky

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
80 Primary Blue	119 Dark Blue		Primary blue. For use with three colour light
			primary system in cyc lighting.
	5207 Lyric Blue		Deep blue, fantasy moonlight or cyc colour.
81 Urban Blue	075 Evening Blue		Very cold, hard, brittle feeling.
382 Congo Blue	181 Congo Blue		The most saturated blue. Good for dark night skies.
			Great colour for rock and roll concert lighting.
385 Royal Blue			Excellent for non-realistic backgrounds, but
			very low transmission.
89 Moss Green	122 Fern Green		Useful for mood and mystery lighting and
			efficient cyc component.
	124 Dark Green		Useful for backlighting and a darker green
			cyc component.



"Shabatai, an original rock musical in New York shimmered in a world of mysticism and divinity. Low scrollers on ACL's gave broad walls of deeply coloured light in glossy blues and intense lavenders. The gel strings included Supergel 74, 56 and 70 which painted the actors and costumes with deep, rich bases against which the crisp practicals and keylights set off their faces and hands."

David Taylor.

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
00 Clear	130 Clear	00 Clear	A durable, heat resistant polycarbonate film (00) used in the preparation of colour scrollers.
10 Medium Yellow	010 Medium Yellow		Yellow with green. Good for special effects.
			Unflattering in acting areas.
11 Light Straw	102 Light Amber		Pale yellow with slight red content. Useful for
			candle effects. Can be used for area lighting.
		2003 Storaro Yellow	Rich saturated yellow/amber: good for
			sculpting and defining shapes.
13 Straw Tint	013 Straw Tint		Suggests warm glow of candlelight, sunset
			or interior lighting.
19 Fire	019 Fire		Strong red amber. Excellent for fire effects.
21 Golden Amber	021 Gold Amber		Useful as amber cyc light and late sunsets.
22 Deep Amber	135 Deep Golden Amber or		Very useful as a backlight.
	022 Dark Amber		Dramatic specials.
24 Scarlet	024 Scarlet		Very deep amber. Red with a touch of blue.
324 Gypsy Red	024 Scarlet		Pretty soft red. Flattering orange-red effects
,, ,			colour.
25 Orange Red	025 Sunset Red		Use when red with higher yellow content is needed.
		4690 CC 90 Red	4660 + 4630. Excellent for fire effects.
26 Light Red	026 Bright Red		Vibrant, red. Good alternate primary.
27 Medium Red	027 Medium Red		
Z/ /Vleaium Kea	UZ/ /Viedium Ked		Good red primary for use with three-colour
	5201 New Schubert Pink	4700 CC 00 M	light primary systems in cyclorama. 4760 + 4730. Good choice for CYM
	3201 New Schubert Pink	4790 CC 90 Magenta	
20 01 11			colour mixing created for colour spots.
39 Skelton Exotic Sangria			A sultry, deep purple. Good for musicals or concert lighting. Excellent special effects colour.
339 Broadway Pink	128 Bright Pink		A deep, saturated pink created for musicals
339 bloadway Fllik	120 blight tillk		and "specials". Excellent for backlighting.
	5041 Salmon	41 Salmon	Light orange with high blue content.
	50.40 D	40.0	
	5042 Deep Salmon	42 Deep Salmon	More red than 342.
342 Rose Pink	332 Special Rose Pink		Extremely intense, hot pink. Produces strong
	·		washes of colour for concert and dance.
43 Deep Pink	328 Follies Pink		Rich, hot pink. "Electric" in effect with rich saturation.
343 Neon Pink			A bright, dark pink excellent for musicals or
343 I NEOIT I IIIK			rock and roll concert lighting.
344 Follies Pink			Vibrant, almost fluorescent pink with a cool component.
344 Follies Filik			Special effects colour in Broadway musicals.
45 Rose			Use of scenery and background effects.
45 Rose			
	112 //		Adds tone and modelling to scenery.
	113 Magenta		Intense pink, with hint of blue – strong
47.84	04/ D AA		washes for concert and dance.
46 Magenta	046 Dark Magenta		Similar uses as 45 where more saturation is needed.
	148 Bright Rose		Strong wash for dance and musicals, strong
			hot pink.
346 Tropical Magenta			Deep saturated magenta. Good for concert
· -			lighting and wherever strong colour is desired.
347 Belladonna Rose			Saturated deep Magenta with hint of purple.
			Good effects filter for dance.

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
48 Rose Purple			Pale evening colour. Excellent for backlight
348 Purple Jazz	345 Fuchsia Pink		A dusky Purple. Good for simulating purple
1 •			neon or old night club atmosphere.
49 Medium Purple	126 Mauve		Darkest of magenta purple range.
349 Fisher Fuchsia			A medium fuchsia good for special effects.
			An interesting backlight or accent colour.
		4990 CC 90 Lavender	4960 + 4930. Dynamic, lush accents.
			Creates rich deep colour effects.
358 Rose Indigo			Warm, saturated red purple which recalls
			"Jazz Age" and for "blues" and musicals.
	5209 Dewberry	2009 Storaro Violet	Deep reddish purple. Good as a saturated special accent.
		2008 Storaro Indigo	Deep icy blue with violet undertones.
		3	Moonlight illusions
59 Indigo	5059 Indigo	59 Indigo	A highly saturated purple-blue – the original Congo Blue.
359 Medium Violet			Good for midnight and moonlight illusions
OO / MICCHOILL MOIGI			Useful for evening cyc wash.
377 Iris Purple			Deep Blue with red accents.
ı			Dark night-time atmosphere.
361 Hemsley Blue			A sharp cold blue that stays clean when dimmed.
	071 Tokyo Blue		Cyc work, deep hue with a hint of green.
368 Winker Blue			A silvery blue, used for front light and
			moonlight.
370 Italian Blue	131 Marine Blue		Good to create eerie, mysterious effects.
		4330 CC 30 Cyan	Double 4315. Excellent as light reflected off water
		,	Slight green is useful for neutralizing red in blue tor
		4360 CC 60 Cyan	Double 4330. Greenish daylight. Good f
			simulating the glow of television screens.
	5439 Riviera Blue	4390 CC 90 Cyan	4360 + 4330. Strong cyan.
	1150		Fantasy water scenes.
374 Sea Green	115 Peacock Blue		Teal bluegreen. Great for enhancing water sce
		375 Cerulean Blue	or deep sea environments. Greener than S73. Distinctive greenish blue. Useful as a water
		3/3 Cerulean blue	effect or sidelight for dance.
76 Light Green blue			Distinctive greenish blue. Useful for roman
			moonlight.
	5077 Green Blue	77 Green Blue	Rich blue, good for creating "fictional"
			night-time lighting, film-noir moonlight.
	5205 Turquoise	92 Turquoise	Will produce an "after image" of its
	070 / 51		complementary colour red.
79 Bright Blue	079 Just Blue		Cool clear bright blue.
80 Primary Blue	132 Medium blue		Primary blue. For use with three colour ligh
83 Medium Blue			primary system in cyc lighting. Good for non-realistic night skies.
	198 Palace Blue		<u> </u>
	1 Ao Lalace Plne		Romantic evening with hint of red, low transmission.
384 Midnight Blue	120 Deep Blue		Clean intense Red-Blue. Deeper than
	·		Sgel 83 with a little more red.
86 Pea Green	088 Lime Green		Good for dense foliage and woodland
			effects.

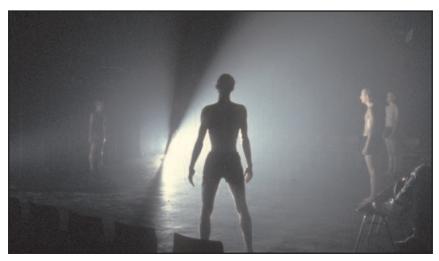
SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
386 Leaf Green		87 Pale Yellow Green	Sunny spring mornings.
		4490 CC 90 Green	4460 + 4430. Bright saturated clean green.
		4460 CC 60 Green	Clean green, rich foliage and woodlands.
		4430 CC 30 Green	Double 4415. Golden green wash. Good for exterior landscaping.
		4415 CC 15 Green	Pale balanced green without yellow tones.
		3317 Tough 1/8 Plusgreen	Very pale green correction, neutralises magenta.
		88 Light Green	Very pale green, good combined with 89 leaf breakups.
	246 Quarter Plus Green	3316 Tough 1/4 Plusgreen	Pale green correction. Helps incandescent source simulate the green cast of fluorescent lamps.
	245 Half Plus Green	3315 Tough 1/2 Plusgreen	Pale green correction. Unnatural sunlight. Bright and uncomfortable.
	244 Plus Green	3304 Tough Plusgreen	Correction to balance daylight sources with fluorescents. Sickly on skin tones.
388 Gaslight Green	138 Pale Green		A yellowgreen to reproduce colour of gas lightin Good for period pieces, e.g. La Boheme.
	5455 Tarragon*		A true pale green neither too blue nor yellow. Useful for foliage shadows in gobos.
89 Moss Green	089 Moss Green		Useful for mood, mystery and toning.
389 Chroma Green		2004 Storaro Green	A brilliant cyc lighting colour, good for chroma-keying effects in television production. Strong dominant green, less yellow than 90 "Christmas tree" green.
90 Dark Yellow Green	090 Dark Yellow Green		Alternative primary where higher transmissi is desired.
91 Primary Green			Primary green for three colour primary system.
		92 Turquoise	Good for creating a mood of mystery and toning scenery spattered in blues.
392 Pacific Green			Nice medium blue green. Pretty aquamarir on HMI and discharge sources.
	5461 Grotto Green*		An exotic turquoise green. A great modellin colour in musical performances or dance.
	5454 Olympia Green*		A strong green-blue. Good for water effects or to create a mysterious, spooky atmospher
93 Blue Green	322 Soft Green		A strong cyan, lighter than 95. Beautiful when contrasted with lavenders and purples.
393 Emerald Green	323 Jade		Perfect Rich Green without yellow or blue undertones. Flattering and pretty.
94 Kelly Green			Fantasy and unrealistic effects. Unflattering on skin tones.
	5077 Green Blue	77 Green Blue	Striking with complementary pinks as a modelling colour.
	5463 Prussian Green*		A rich bluegreen useful for pantomimes and melodramas. Wonderful contrast to golden ambe
95 Medium Blue Green	116 Medium Blue Green		Used on foliage in moonlight areas of for creating a mood of mystery. Good for toning scenery.
395 Teal Green	325 Mallard Green		Good as a mystical special effects colour. Interesting side or backlight colour in concert lighting.
		397 Pale Grey	The lightest grey to reduce intensity without colour change.
	209 .3 Neutral Density	97 Light Grey	Neutral grey to reduce intensity without

^{*} New E-Colour+ Filter Colour 2009

SUPERGEL	E-COLOUR+	ROSCOLUX	APPLICATIONS
398 Neutral Grey		98 Medium Grey	The densest of the neutral greys with no colour change.
	156 Chocolate	99 Chocolate	Warms light and reduces intensity.
	207 CTO + .3ND	3405 Roscosun 85N.3	Light chocalate, reducing intensity.
	208 CTO + .6ND	3406 Roscosun 85N.6	A darker still chocolate.

Supergel Diffusion

SUPERGEL	APPLICATIONS
100 Frost	Medium diffusion, a matte frost effect.
101 Light Frost	Similar to above, but lighter diffusion and lower
	light loss.
104 Tough Silk	Spreads the light in one direction only and can be rotated in the colour frame to shape the beam.
160 Light Tough Silk	Retains the spreading quality of 104, but with less light loss.
113 Matte Tough Silk	Combines the frost effect of 100 and 104 in one filter.
114 Hamburg Frost	A very slight diffusion with high transmission. Ideal for softening hard edged spots, minimising edge colour fringing and eliminating a centre hotspot.
119 Light Hamburg Frost	A lighter version of 114, higher transmission and less effect on the edge.
132 Quarter Hamburg Frost	This holds focus while fractionally softening the beam with the mearest hint of diffusion.
140 Subtle Hamburg Frost	Light edge-softening high transmission diffusion. Between S119 and 132 in density.
120 Red Diffusion	A family of 3 diffusers that combine
121 Blue Diffusion	100 Frost with primaries 26, 79 and 90
122 Green Diffusion	respectively.
124 Red Cyc Silk	A family of four diffusers that combine a primary
125 Blue Cyce Silk	and an Amber 21 and 104 Tough Silk. They
126 Green Cyc Silk	permit orientation in cycs to reduce scalloping
127 Amber Cyc Silk	effect on a high cyc and improve coverage on a 4 circuit cyclight.



David Taylor's lighting design shows Supergel Diffusion in use. Seen here in conjunction with Rosco fog to define light. The Hamburg Frost series of 114, 119 and 132 have become the industry standard for improving luminaire beam quality and controlling edge definition.



Undiffused Beam Pattern.



100 Frost - Medium Diffusion.



101 Light Frost - lighter than 100.



104 Tough Silk - spreads the light.

The Supergel Diffusion
range breaks new creative
ground for designers: it
qualifies light from luminaires,
in combination with
Supergel colours or alone.

There is no colour shift from any of the diffusers, and they are all Flame Retardant.

Permacolor™ Dichroics and How They Work

In a conventional colour filter, white light is passed through the medium, which absorbs certain wavelengths of light, filtering them out of the composite white light. The rest of the spectrum passes through the filter, thus creating the desired colour.

A dichroic colour filter works differently. Instead of absorbing the unwanted portions of the spectrum, dichroic filters reflect them, acting as a very specialized mirror, but still passing the appropriate coloured light.

The technology behind dichroic filters was developed well over a hundred years ago. Using vacuum deposition, thin layers of transparent dielectric materials (typically titanium dioxide and silicon dioxide) are deposited onto a low expansion glass substrate (typically borosilicate). As light crosses the boundary from one layer of one of these materials to another, a little bit of light is reflected. Dichroic filters are made of many layers – a green filter can have more than 50 – so there is a lot of light reflected back and forth between the boundaries of the layers, which sets up patterns of constructive and destructive interference. That is, if light of a particular wavelength is reflected back over itself so that the peaks of the waves line up with the troughs, the waves cancel each other. On the other hand, if the peaks line up with the peaks, the waves reinforce each other. By carefully designing combinations of different thicknesses of layers and thus manipulating the path lengths that the internally reflected light must travel, it is possible to create a filter that lets certain portions of the spectrum pass through and that reflects other parts of the spectrum.

The effect of a dichroic filter is highly dependent on the angle at which the light strikes the filter. One result of this multi-layer filtering method is that the filtering action is dependent on the length of the path the light takes through the filter. If the light strikes the filter straight on, which is the way most dichroic filters are designed to be used, the light that passes through is the intended colour. However, if the light strikes the filter at an angle, the path length is changed, and the colour of the light transmitted is different. Light passing through the filter greater than 20° off normal incidence will be shifted away from the desired colour noticeably. This produces a coloured fringe or halo at the edge of the beam when used on lights with a beam spread greater than 40°. The wider the spread, the more obvious this colour shift. While not possible in all instruments, the solution is

to filter the light while the rays are essentially parallel, before they pass through any type of spread lens. In the case of an ellipsoidal reflection spotlight, this can be accomplished by placing the filter in the

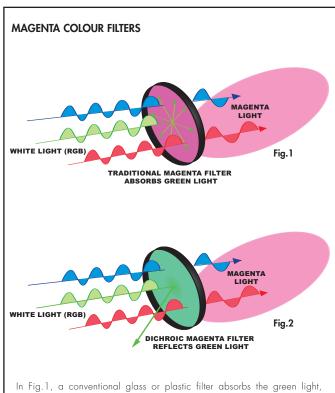
gate of the instrument. In a PAR with interchangeable lenses, the filter should be located inside of the spread lens. Instruments using reflectors to create a wide spread are not

a wide spread are not appropriate for use with dichroic filters unless a rainbow effect is desired.

Dichroic filters offer several benefits over plastic filters. Most obviously, a dichroic filter can withstand continuous exposure to high temperature lighting instruments without fading or degrading. Borosilicate glass is rated for peak temperatures as high as 450° C. The coating itself can withstand continuous temperatures as high 225° C.

An additional benefit of filters that use selective reflection of specific wavelengths of light is very pure and saturated colours. A dichroic filter in a deep saturated blue may transmit as much as 40% more blue light than an absorptive filter of a comparable colour. This increased output may mean fewer luminaires are required in certain situations

Dichroic filters offer lighting designers an excellent solution to many design problems. They offer higher colour transmission, can withstand extremely high temperatures and can preserve the integrity of a design over a long run with little maintenance. However, they require more planning during the specification process. Using the resources of both the luminaire manufacturer and the filter suppliers, these minor hurdles can be overcome and the full benefits of this filter technology can be realized.



In Fig.1, a conventional glass or plastic filter absorbs the green light, allowing the red and blue (magenta) light to pass through.

Fig.2 shows how a dichroic filter reflects the green light rather than absorbing it while transmitting the red and blue light.

Permacolor™ Dichroics Filters



Gallegos Lighting added magic to this Legoland theme park with Permacolor dichroics. Photo by Gallegos Lighting.

Dichroic filters are durable glass colour filters that transmit only certain wavelengths of light, reflecting the rest of the spectrum, rather than absorbing it. Since virtually no energy is absorbed by the filter, light transmission is significantly higher than traditional plastic gels and will never burn out or fade.

Rosco Permacolor™ filters are made with the highest quality coatings, designed not to fade or shift colour. In addition, Rosco's sophisticated manufacturing process allows for precise colour consistency batch to batch to a degree that is unprecedented in other dichroic coatings.

USING DICHROIC FILTERS

Given these unique characteristics, the specification and installation of dichroic filters requires some special care and attention.

- Ensure that the lighting instrument in question does not have a beam spread wider than 40° or colour fringing may result.
- Determine whether the maximum temperature of the lighting instrument exceeds the rating on the coating or the glass. Does the instrument create hot spots? Borosilicate glass has excellent thermal properties, but is rated for maximum hot spotting of 90° C/sq. cm.
- How will the filter install in the luminaire? While traditional the atrical instruments have built-in accommodations for colour filters,
 many architectural lights do not. If the luminaire has a wide beam spread, can the filter be installed before the spread lens to
 avoid fringing? Is there a layer of safety glass installed by the luminaire manufacturer? Dichroic filters should never be used to
 replace the safety glass.
- Install the filter with the coated side towards the lamp. Since dichroic coatings reflect unwanted wavelengths, the only energy that actually passes through the glass is the desired portion of the spectrum. Therefore very little energy is absorbed as heat. However, if the filter is installed with the coated side away from the lamp, the entire light output of the lamp must pass through the glass before the unwanted energy is reflected back. The glass then absorbs a great deal of heat energy, since light is actually passing through the glass twice.
- While dichroic filters can be used in wet environments, the coatings are porous and will absorb moisture. When this occurs, the film swells and causes a colour shift. As the coating heats up and the moisture evaporates out of the coating, the film will shrink back down to the correct thickness and the colour will shift back accordingly.
- Glass breaks. Ensure that the application and installation take safety into consideration.

Permacolor™ Dichroics Filters



Sample kits Rosco Permacolor dichroic filters. Available from Rosco.



Simply By Others chose Permacolor dichroics for this permanent installation at Strike Long Island, with Rosco gobos for the added stunning effects.

Photo by Simply By Others. Owner, Strike Holdings LLC.

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35156 Fern Green 389	34959 Lt Yellow Green		089	
	35156 Fern Green	389		
35055 Primary Green 124	35055 Primary Green		124	
43026 White Diffusion 3027	43026 White Diffusion			3027
38000 IR/UV Filter	38000 IR/UV Filter			
34000 UV Blocker	34000 UV Blocker			



The Permacolor swatchbook, providing Roscolux matches to the Permacolor standard and architectural series, is available free from any Rosco office.

Permacolor[™] **Dichroics Filters - Specialized Filters**



CORRECTION FILTERS

Cinedichro™ Correction Filters are engineered to provide true, accurate colour correction, precisely matching industry standards for balancing the Kelvin temperatures among disparate light sources.

UV FILTERS

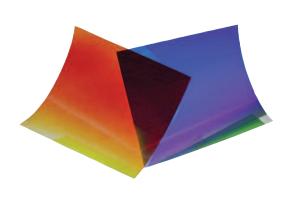
Rosco offers a UV blocking filter in both Permacolor dichroic glass and plastic. The Permacolor UV Blocking filter reflects both near and far ultraviolet energy as far out as 250 nm.

IR/UV REFLECTOR (Hot Mirror)

Also available in Permacolor glass is an IR/UV filter (hot mirror), a clear filter which passes visible light while reflecting both the infrared and near UV energy. This filter is widely used in museum and architectural applications



Paul Gregory of Focus Lighting enhanced the aesthetic colour of these varying light sources while at the same time balancing the differing Kelvin temperatures at this high-fashion Carlos Miele retail store. Architecture by Asymptote.



DICHROFILM

A gel that never burns out? DichroFilm is Rosco's answer: a flexible, light weight safe, durable plastic gel but with the resistance and long life of Permacolor dichroic Filter.

DichroFilm will by far outlast any plastic filter and is good for permanent installations, and where installing glass could be a safety hazard.

DichroFilm is in $25'' \times 25''$ (63.5cm \times 63.5cm) sheets in 10 standard colours with custom colours available.

DICHROFILM	PERMACOLOR	ROSCO COLOUR FILTER
09108 Primary Blue	31080	Supergel 80
09320 CTB Daylight	43202	E-Colour+ 201
09340 CTO Tungsten	43407	E-Colour+ 204
09460 Indigo	34600	Supergel 385
09476 Magenta	34763	Roscolux 44
09520 Primary Green	35156	Supergel 389
09550 Yellow	35200	Supergel 312
09559 Cyan	35590	Supergel 72
09590 Orange	35900	Supergel 23
09650 Red	36500	Supergel 26

Equivalents to Permacolor Dichroics and Rosco Colour Filters are subjective and offered as a guideline only. For more information, or to order a sample, please contact Rosco.



Herrick Goldman brought this gala function at the Boston Public library to life with rich colours from the Permacolor Dichroic range. The ceiling light globes were enhanced by projected Gobos.

Photo by Jeffrey Mayes.

Gobos are used everywhere in modern lighting to create shapes, shadows and textures. Many designers use gobos to sculpt the light in an environment or on an object. The range of standard gobos, well over 1,800 designs, can be seen on Rosco's website or Gobo Catalogue.

In addition, Rosco offers custom gobos, fabricated in steel or glass to your design, and manufactured in our London and Texas facilities.

STANDARD STEEL GOBOS

All DHA:Rosco standard gobos are precision etched onto hard rolled stainless steel to fit most mainstream lanterns, follow spots and moving lights. All catalogue designs are available as standard in any size subject only to the physical attributes of the image. Certain fine designs cannot be reproduced in smaller sizes.

It is also worth noting that some luminaires cannot resolve the full image diameter and most of the popular lanterns have a number of alternative holders to facilitate the use of different size gobos. If a gobo is being purchased for use in an existing holder it is important to check that the gobo and holder are compatible and that the full image size can be projected.

It is DHA:Rosco's policy to maintain stock of all catalogue designs in the most popular sizes, allowing the majority of orders to be despatched by return. With the increased range, however, there may be occasions on which we are out of stock of a particular design or a particular size, but rest assured that we will always aim to meet your deadline.

STANDARD GLASS GOBOS

To complement their range of steel gobos DHA:Rosco also produces a range of glass gobos available to special order in sizes to fit most mainstream profile lanterns and moving lights. Unlike metal, glass has the advantage of being able to hold very intricate images and thus allows the projection of extremely fine detail and tonal images from suitable profile spotlights.

Each of the original images in our standard black and white glass range has been designed for use in moving lights and standard profiles and complements our existing range of metal designs. All the images have been designed, projected, assessed and reworked to achieve the perfect contrast and balance of tonal shade to solid block. See the DHA:Rosco Gobo Catalogue for a complete selection of these gobos or visit our website.

The scope of projection effects is enhanced by Rosco's ColorWaves™, Colorizers™, Prismatics™ and Image Glass™ Effects Glass Gobos. Allowing the designer access to a range of colour and texture effects limited only by imagination.

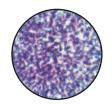
Types of glass gobos:



Standard Black & White Rosco82709/DHA 709G Silly Cones



ColorWaves™ 33001 Waves - Red



Colorizers™55004
Stippled - Blue and Lavender



Prismatics™ 43801 Kaleidoscope



Image Glass™ 33617 Hammered



CUSTOM GOBOS

Metal -

Metal gobos are usually etched on hard rolled stainless steel for a clean-etched, high quality image. DHA:Rosco also manufactures custom gobos in alternative metals (eg. aluminium or phosphor bronze), to any size, and makes gobo wheels suitable for most available moving lights.

DHA:Rosco custom metal gobos are produced to the highest quality on the most suitable material for the purpose. This can vary between lighting fixtures and your customer service consultant will advise you if any special metals or finishes are recommended.

Glass -

Black & White - As the quality of projection optics has improved so has the market's demand for greater fidelity in image projection; no "tagging", finer detail and grey scales can all be achieved using DHA:Rosco black and white glass gobos.

These are produced using Borosilicate glass with a minimal co-efficient of heat expansion thus giving maximum protection from thermal shock. Conventional screened half tone resolution is at 3560dpi (1400dpcm) and at 400 lines per inch (156 lpcm), Stochastic screening is also used when appropriate to maximise perceived resolution.

Colour - Dichroic glass gobos are ideal for coloured artworks ranging from simple line art to full colour photographic images.

For less complex line artworks, with just one or two colours, we will almost certainly opt for a laser ablation technique, producing crisp images on saturated colours chosen from the wide range of standard Rosco dichroic filters. However, if your image contains a range of colours or tones a chemical etching process will provide an almost perfect reproduction of your image or logo.

Full colour dichroic images, such as complex logos are reproduced using the same CMYK (Cyan, Magenta, Yellow, Black) technology used in printing. Colour separations are made and etched to the equivalent filters, these are then precision assembled to ensure perfect registration.



The designers at Simply By Others used gobos to mark the lane numbers at this 300 San Jose AMF Bowling Center. This clever method to draw attention to an area is flexible and cost effective. A rippling water effect is added to the side walls with the X24 X-Effects projector.

Photo by Simply By Others.

Examples of Custom Gobos: METAL BLACK & WHITE ONE COLOUR TWO COLOUR THREE COLOUR FULL COLOUR

LIGHTING AND PROJECTION EQUIPMENT



The arresting effect in the window of this set was created with Rosco's standard steel Dots Breakup (Medium) gobo 77053 in one slot of the rotator and the Sunset Prismatic (glass) gobo 43804 in the other slot.

SINGLE & DOUBLE GOBO ROTATORS

The Single & Double Gobo Rotator allow kinetic and often spectacular lighting effects.

They are designed to fit in most fixtures with a dropin iris slot. Both rotators have a range of motor ranges, varying speeds in both directions. The DC/DMX controller can operate 4 Single Rotators, or 2 Double Rotators.

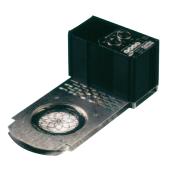


DMX IRIS

The New DMX Iris is a 24 leaf IRIS, giving an even edged perfectly round aperture all the way down to it's smallest aperture diameter, for control with or without DMX control.

This motorised unit fits the ETC Source 4 and Selecon Pacific and other units in the market. It uses one channel of DMX512 and has a microprocessor controlled stepper motor giving a smooth movement even on slow cross fades.

It's powered by a non-dim circuit, no external PSU is needed.



INDEXING ROTATOR

Rosco's Indexing Rotators are Double and Single Gobo Rotators which allow you to stop and start the gobo rotation precisely, whenever and wherever you want. This is particularly useful for repetitive effects, such as the hands of a gobo clock, or for architectural effects, such as a shop display window. Rosco's Indexing Rotators are controlled through DMX512 and the DMX addressing facility is built into the unit. You control both the speed and direction of the rotation as well as the indexing position (up to 180 degrees available) and the amount of time the gobo stays in that position.



Standard steel and glass (ColorWave) gobos were used in Vortex rotators to create the interesting and kinetic reflected fire effect on the upstage wall.

VORTEX 360 DUAL ROTATOR™

The Vortex 360 Dual Rotator is a versatile low cost dual rotator. It has 2 stainless steel gear drives. The speed can be controlled by a simple control knob on top of the unit, or through the lighting control desk.

The unit is vey quiet, takes B size gobos, and is designed to fit several fixtures including the ETC Source 4 and Selecon Pacific.

... A Selection of the Growing Collection of Rosco Rotators and Projectors.



The designers at Focus Lighting found a brilliant solution to projecting rippling water on the ceiling of The Pier in Caesars Atlantic City. X-Effects Projectors, mounted down the length of the mall shopping area, gave them the effect they wanted.

Photo by J. R. Krauza.

X24 X-EFFECTS PROJECTOR

The X-Effects Projector provides large scale 3-D effects previously unavailable to lighting designers. The device utilizes a 200-watt Enhanced Metal Arc source, whose short arc allows for an output of 5000 lumens, and a 7000 hour lamp life. The colour temperature is similar to a Xenon source at 6000°K, but with nearly two times the luminous effectiveness.

The effect itself is created by rotating two "X' size glass gobos off-centre of the optical path. This results in a projection that does not appear to have a visible direction or pattern. Onboard potentiometers control the speed and direction of both gobos.

The X-Effects Projector is available in two configurations, with a DMX on board, or an analogue model.

I-CUE INTELLIGENT MIRROR

The Rosco I-Cue Intelligent Mirror is an ellipsoidal spotlight attachment that allows you to use your spotlight with much greater flexibility and control. The unit slides into the colour slot of the ETC Source 4, Altman Shakespeare, Strand SL and Selecon Pacific. The major function of the unit is to re-position the beam of light so a single spotlight in a fixed position can be used for multiple specials in dozens of locations. With it's onboard DMX the unit is controlled directly from your lighting console giving you precise control of the mirror's pan and tilt motion.





iPRO™ IMAGE PROJECTOR

Rosco's iPro Image Projector system offers users an easy, inexpensive solution for projecting photographic quality images in a theatrical environment. The system consists of the iPro Projector, a precisely engineered accessory which fits the iris slot of most modern spotlights and the iPro Slides. iPro slides can be prepared from virtually any electronic artwork, or can be chosen from the array of library images available or can even be prepared in your own facility on an inkjet printer.

Rosco has iPro film available, a One-Time Slide Kit, and an iPro Printing Pack with 10 sheets of Slide Film and 10 iPro Slide Mounts.



Rosco's Infinity was affixed to two overlapping spotlights to generate this realistic rain effect. Both spotlights included a Water 1 gobo (No.77833) in their gates. The Infinity in one unit was disk 30019, in the other disk 30011.

INFINITY

The Infinity, Rosco's gobo animation device, offers superb kinetic lighting effects combined with simplicity of use and low cost.

The Infinity device affixes to the gel frame of virtually any spotlight. Affix one of the disks to the device, place a steel or glass gobo in the gate, plug the Infinity into an outlet or dimmer and watch magic appear on your stage or studio. The Infinity is equipped with onboard control of the Infinity Disk speed and direction, as well as an on/off switch.

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