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 **colorstream®**

**EMD
PERFORMANCE
MATERIALS**

W.58921.6 08/2020

JOIN THE JOURNEY

COLORSTREAM®
GATEWAY TO POSSIBILITIES

EMD Performance Materials is a business of Merck KGaA, Darmstadt, Germany.

READY TO stream?

 colorstream®

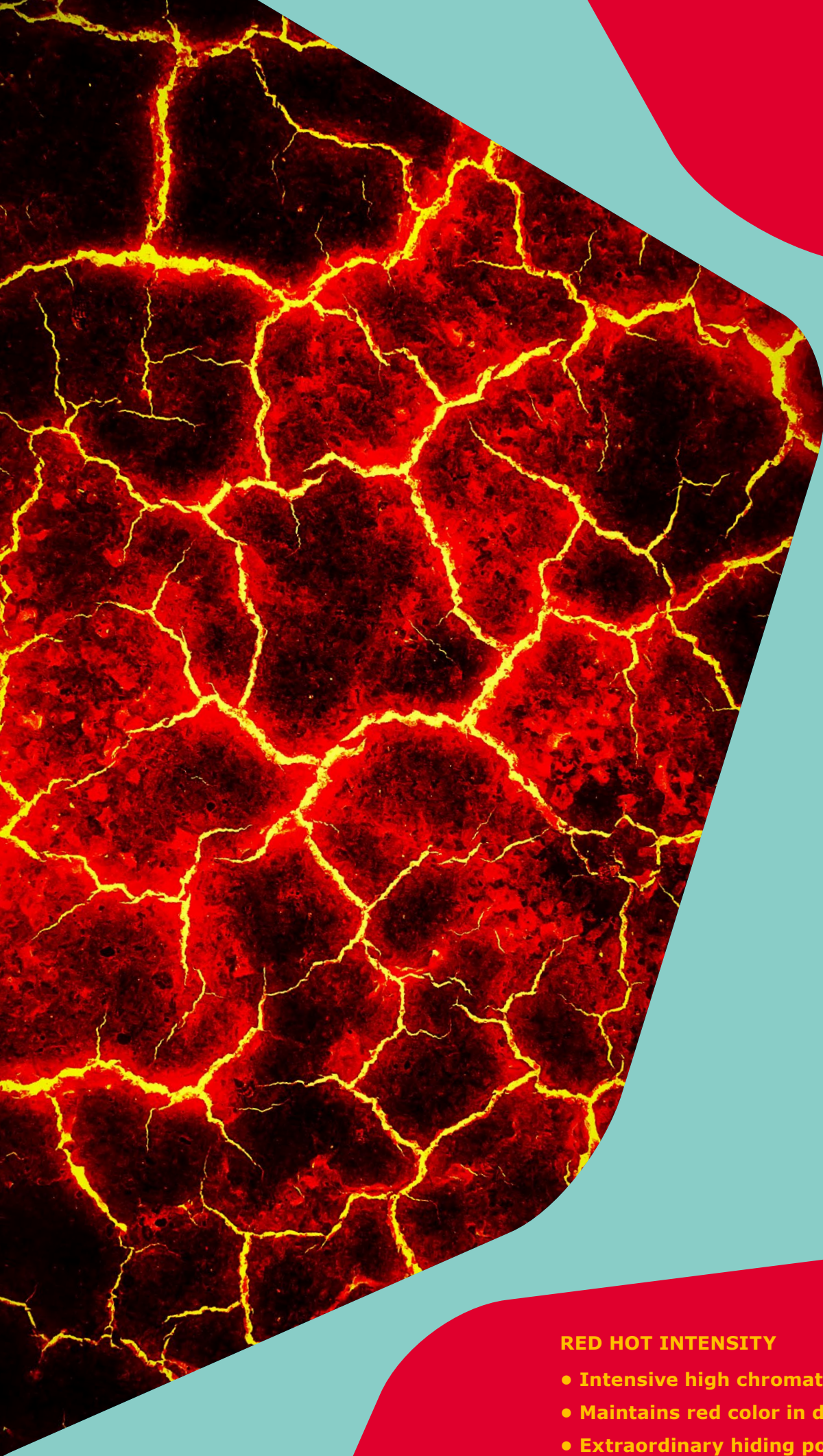
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EXPRESSIVE POWER AND UNSEEN SURPRISES

Colorstream® encourages the pursuit of dreams. A new generation of aspiring designers are being encouraged to bring their automotive color dreams to life through a special range of pigments. Launched to enable designers to let their imaginations and creativity run free.

Open your eyes for fascinating performance. Colorstream® is alive with unseen surprises, its dynamic variety energized when light hits the surface. Every color journey is an experience to excite even the most insatiable seeker. Continue your journey and delve further into stories of an inspiring dream.



COLORSTREAM® LAVA RED

The volcanic red of Colorstream® Lava Red shows an uncompromisingly dynamic color variety in continuous harmony. Its multitude of interweaving nuances and fascinating color gradations are like the energetic beauty of flowing Lava.



COLOR OF ENERGETIC DREAMS

Its fascinating tonality and interwoven hue nuances, enhance every journey with a one of a kind interplay of red excitement. Lava Red sets the scene for the pure surprise that once only existed in energetic dreams.

Lava Red is synonymous with limitless imagination. Our ambition embodies the same restless curiosity that spurs designers into new dreams. Lava Red is designed to foster creativity through collaboration with designers who share our passion for pushing technical and applicational limits.

RED HOT INTENSITY

- Intensive high chromatic red
- Maintains red color in downflop
- Extraordinary hiding power

2.5 % LAVA RED
ON BLACK BACKGROUND
(% IN LIQUID PAINT)

COLORSTREAM® VIOLA FANTASY

The mysterious ever-changing effects of Colorstream® Viola Fantasy deliver a thrilling experience that is alive with potential. Its color travel from intense violet to turquoise runs over a chromatic silver-grey and presents a manifestation of the most iridescent metamorphosis.

COLOR OF SCULPTURAL DREAMS

The eye-catching play of the shifting hues of iridescence creates an irresistible tension, developed for those who dare to defy convention.

Out of darkness, rises chromatic depth. The unique light edge shines in violet and has an effect backlit almost like chrome. Colorstream® Viola Fantasy pigments set formulations in motion and trigger emotions. Enhanced in expression, it brings an incarnation of thrill that is beyond this world.

UNLEASHED DARK DYNAMISM

- Color travel effect from violet to silver to turquoise
- Subtle texture
- Medium brightness flop from color to dark

2.5 % VIOLA FANTASY
ON BLACK BACKGROUND
(% IN LIQUID PAINT)



COLORSTREAM®

ARCTIC FIRE

The addicting beauty of Colorstream® Arctic Fire offers the spirit of living energy and eternal elegance. It transforms light into an unforgettable color adventure, from a greenish metallic silver-grey to a bright lilac tone.

COLOR OF SENSORY DREAMS

The sophisticated interplay of warm and cool colors presents an outperforming chroma brilliance and a fine-tuned silvery color equilibrium, designed for those who expect unrivalled finesse.

A moment's escape from an ever-changing journey. Every change brings a new beginning. The silvery, lustrous effect of Colorstream® Arctic Fire pigments energizes character lines and enriches volumes with an expressive brilliance. And everything serves to amplify the senses.



2.5 % ARCTIC FIRE
ON BLACK BACKGROUND
(% IN LIQUID PAINT)

SUBLIME METALLIC MASTERY

- Color travel from silver green through silver red to silver yellowish-green
- Elegant sparkle
- Metallic shade



COLORSTREAM®

TROPIC SUNRISE

The exciting spectacle of the Colorstream® Tropic Sunrise effect is powered by a high chromatic color flop from green to silver to orange. Orange-gold colors bathed in sunlight and green shades bursting with chlorophyll are contrasting in harmony.

COLOR OF BLENDING DREAMS

Colorstream® Tropic Sunrise is a flow of color vibrancy. The extraordinary pigment formulation creates color designs with thrilling high chroma flop, marvelous organic harmonies or secret light infusion in bright colors.

The multi-dimensional dynamics of Colorstream® Tropic Sunrise push the boundaries of conventional color designs and can inspire you to interpret the rainbow spectrum monochromatically.



MULTIDIMENSIONAL CHROMATIC SURPRISE

- Color travel effect from green to silver to orange
- Well balanced texture
- Color travel from one high chromatic color to another high chromatic color

2.5 % TROPIC SUNRISE
ON BLACK BACKGROUND
(% IN LIQUID PAINT)





COLORSTREAM® LAPIS SUNLIGHT

Colorstream® Lapis Sunlight is like diving into a world of infinite shades from gold to silver-green to blue. This gorgeous color show merges into a unique light play with cool brilliance and chromatic shadows. Colorstream® Lapis Sunlight is a perfect symbiosis of breathtaking dynamic and a cool blaze of color.

COLOR OF COOL DREAMS

The unique color travel of Colorstream® Lapis Sunlight creates a virtuosic dynamic variety with beautiful, flowing surface designs. Its strong brightness flop and the subtle texture will refine precisely designed sculptures.

The exquisite coolness of Colorstream® Lapis Sunlight opens the door to an imaginative world in which colors in crystal clear brilliance, cool width and unmatched depth can be redesigned.

2.5 % LAPIS SUNLIGHT
ON BLACK BACKGROUND
(% IN LIQUID PAINT)

BRIGHT COOL BRILLIANCE

- Color travel from gold to silver green to blue
- Subtle texture
- Strong brightness flop from shiny to dark



Colorstream® Stylings



CS 20-01 | DEEP BLUE

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-02 Arctic Fire	0,165 %
Heliogen® Blue L7101 F	3,218 %
Kronos® 2190	0,033 %
Emperor® 2000	0,208 %

Layer 2 2K high gloss clear coat



CS 20-02 | FLOWING BLUE

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-02 Arctic Fire	1,326 %
Heliogen® Blue L7101 F	2,152 %
Kronos® 2190	0,022 %
Emperor® 2000	0,139 %

Layer 2 2K high gloss clear coat



CS 20-03 | LAGUNA BLUE

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-02 Arctic Fire	2,665 %
Heliogen® Blue L7101 F	0,923 %
Kronos® 2190	0,060 %
Emperor® 2000	0,010 %

Layer 2 2K high gloss clear coat



CS 20-07 | PURE RED

Layer 1 (% pigment in liquid paint)	
Colorstream® F20-51 Lava Red	2,125 %
Meoxal® F120-51 Victoria Red	1,658 %
Irgazin® Yellow L 2040	0,267 %
Irgazin® Red L 3660 HD	0,054 %
Paliogen® Red L 3875	1,233 %

Layer 2 2K high gloss clear coat



CS 20-08 | BLOOMY RED

Layer 1 (% pigment in liquid paint)	
Colorstream® F20-51 Lava Red	2,394 %
Colorstream® T20-02 Arctic Fire	1,281 %
Irgazin® Yellow L 2040	0,172 %
Irgazin® Red L 3660 HD	0,057 %
Paliogen® Red L 4039	1,657 %
Emperor® 2000	0,012 %

Layer 2 2K high gloss clear coat



CS 20-09 | VIBRANT RED

Layer 1 (% pigment in liquid paint)	
Colorstream® F20-51 Lava Red	3,110 %
Xirallic® NXT F260-51 Cougar Red	0,293 %
Irgazin® Yellow L 2040	0,614 %
Irgazin® Red L 3660 HD	0,056 %
Paliogen® Red L 4039	1,559 %
Emperor® 2000	0,015 %

Layer 2 2K high gloss clear coat



CS 20-04 | INFINITY BLUE

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-03 Tropic Sunrise	1,597 %
Iridin® 9111 Rutile Fine Satin	1,570 %
Stapa® IL Hydrolan 2156	0,783 %
Hostaperm® Pink E-TS	0,029 %
Hostaperm® Violet RL spec. TS	0,001 %
Monolite® Blue 3R-H	0,256 %
Microtitan MT 500 HD	0,638 %
Emperor® 2000	0,006 %

Layer 2 2K high gloss clear coat



CS 20-05 | SPECTRA SILVER

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-03 Tropic Sunrise	2,264 %
Xirallic® T60-24 Stellar Green	0,549 %
Stapa® IL Hydrolan 2156	1,775 %
Heliogen® Blue L 6950 F	0,051 %
Kronos® 2190	0,134 %
Emperor® 2000	0,033 %

Layer 2 2K high gloss clear coat



CS 20-06 | LIGHT BLUE

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-04 Lapis Sunlight	1,999 %
Colorstream® T20-01 Viola Fantasy	1,166 %
Stapa® IL Hydrolan 2156	0,781 %
Hostaperm® Pink E-TS	0,028 %
Monolite® Blue 3R-H	0,263 %
Microtitan MT 500 HD	0,639 %
Emperor® 2000	0,007 %

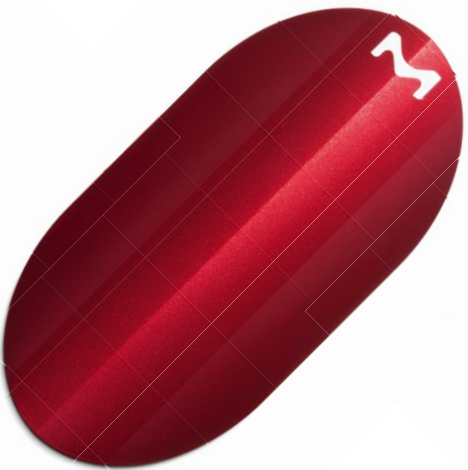
Layer 2 2K high gloss clear coat



CS 20-10 | NIGHT GREEN

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-04 Lapis Sunlight	0,243 %
Colorstream® T20-02 Arctic Fire	0,092 %
Heliogen® Blue L 6950 F	1,412 %
Emperor® 2000	0,895 %

Layer 2 2K high gloss clear coat



CS 20-11 | BORDEAUX RED

Layer 1 (% pigment in liquid paint)	
Colorstream® F20-51 Lava Red	2,477 %
Xirallic® NXT M260-70 Amur Black	0,853 %
Irgazin® Yellow L 2040	0,143 %
Paliogen® Red L 4039	1,384 %
Special Black® 100	0,123 %

Layer 2 2K high gloss clear coat



CS 20-12 | LIVING GREEN

Layer 1 (% pigment in liquid paint)	
Colorstream® T20-03 Tropic Sunrise	0,782 %
Xirallic® NXT M260-30 Leonis Gold	0,260 %
Heliogen® Blue L 7460	0,815 %
Emperor® 2000	0,423 %

Layer 2 2K high gloss clear coat

INTERVIEW

3A Composites GmbH



WERKSTÄTTE LIECHTBlick, SWITZERLAND

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Merck KGaA, Darmstadt, Germany

What fascinates you and your customers most about our Colorstream® effect pigments?

G. Eydner

"The introduction of the first architectural colors containing Colorstream® effect pigments by 3A Composites happened way back in 2007, with the „Spectra“ color range. With this „Spectra“ color range, the company opened a completely new market segment. The architectural market is basically very conservative, and with this new approach, we wanted to break out of the usual product choices and offer something new and powerful.

Especially with the color „Sakura“, containing Colorstream® Arctic Fire, 3A has found a way to inspire architects, who are usually looking for natural materials, colors and geometries. The „Sakura“ color was a trendsetter in the architectural market despite very conservative habits. Since then other industries have followed this trend and have introduced similar effects.

Colorstream® can add extraordinary effects to facade colors and has been established along the standard architectural colors. Colorstream® is extrovert, striking and polarizing! All of the projects with those pigments stand out from the rest!"

Merck KGaA, Darmstadt, Germany

Are there applications or types of building colors that Colorstream® fits best with?

G. Eydner

"Colorstream® is especially suited for geometric, deformable materials like Alucobond® from 3A Composites. Curves, corners, edges, rounded elements and geometric forms are particularly suited in combination with Colorstream® pigments."

Merck KGaA, Darmstadt, Germany

What was the most exciting project you have realized with Colorstream® effect pigments?

G. Eydner

"There is not one special project, as there have already been many projects in different cultural areas, which have been successfully realized with Colorstream® pigments containing colors. But all have these facts in common: the architects have been very satisfied with the result; the projects are polarizing and exciting; and differ from other buildings making them unique objects."

Merck KGaA, Darmstadt, Germany

Is there anything to pay attention to when working with Colorstream® containing paint?

G. Eydner

"In general, effect pigments need to be processable in coil coating production plants. The particle size distribution plays a crucial role, and for coil plants, the PSD limit lies at 30 µm. The coloristic effects that can be achieved are stronger and more visible in coil than in other coatings e.g. in powder coatings.

This is related to the one-directional orientation of the effect pigments in the coil coating process. The pigment particles are horizontally positioned and the effect is made even stronger due to the flat pigment orientation. The visual effects with Colorstream® are very strong, even at lower pigment concentrations."

Interview with Guntram Eydner

Head of New Products & Product Management 3A Composites GmbH, Singen, Germany

3A Composites develops, manufactures and markets high-quality aluminium composite panels, structural composite materials, plastic sheets and lightweight foam boards. The company is focusing on the following market segments:

- Core Materials
- Architecture & Design
- Display & Graphic Arts
- Transport & Industry
- Corporate Identity Design
- Fitness, Yoga & Rehabilitation

In each segment 3A Composites offers a unique product range and is a leading player in all target markets. With its famous brands the group has established its reputation as a global company.

3A Composites has offices and manufacturing operations in 27 locations in Europe, the Americas and Asia with approximately 4'000 employees. The company achieves an annual turnover of about 940 Million EUR.

3A Composites belongs to the listed company Schweizer Technologies.

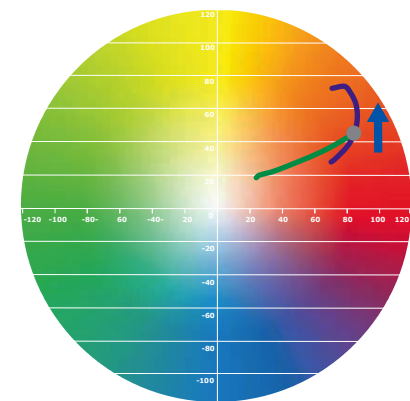


Visualization of the Colorstream® effects

LAVA RED

F20-51 SW

Subtle color travel effect from red to orange-red



Colorstream®

F20-51 SW Lava Red

150g* 1.58217.0150
15kg 1.58217.9015
1kg 1.58217.1000

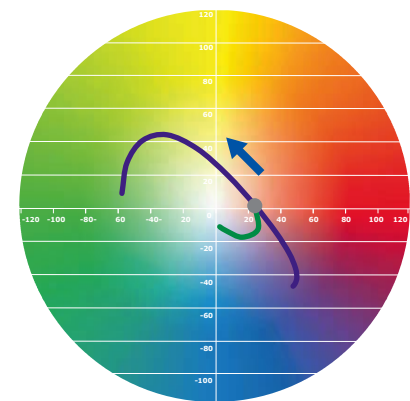
*free of charge sample



VIOLA FANTASY

T20-01 WNT

Color travel effect from violet to silver to turquoise



Colorstream®

T20-01 WNT Viola Fantasy

150g* 1.58015.0150
15kg 1.58015.9015
1kg 1.58015.1000

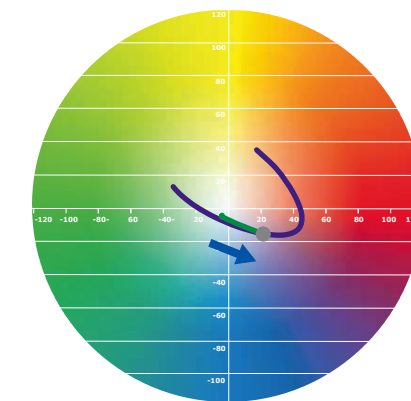
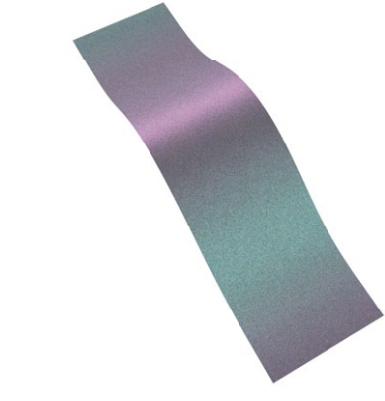
*free of charge sample



ARCTIC FIRE

T20-02 WNT

Color travel from silver green through silver-red to silver yellowish-green



Colorstream®

T20-02 WNT Arctic Fire

150g* 1.58090.0150
15kg 1.58090.9015
1kg 1.58090.1000

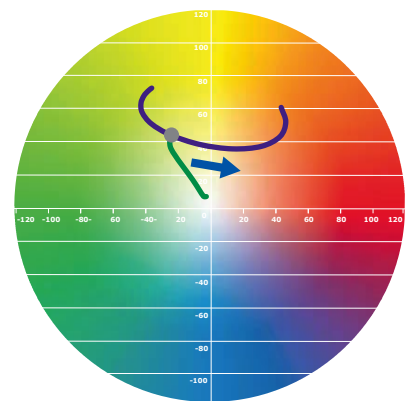
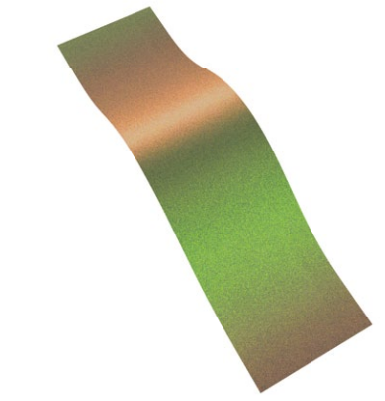
*free of charge sample



TROPIC SUNRISE

T20-03 WNT

Color travel effect from green to silver to orange



Colorstream®

T20-03 WNT Tropic Sunrise

150g* 1.58096.0150
15kg 1.58096.9015
1kg 1.58096.1000

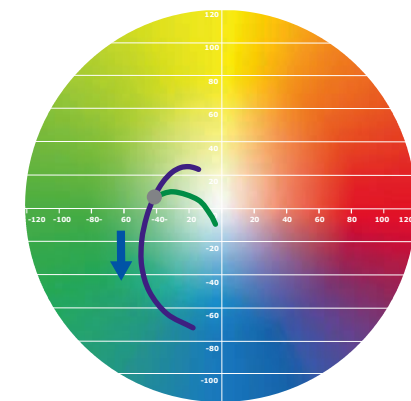
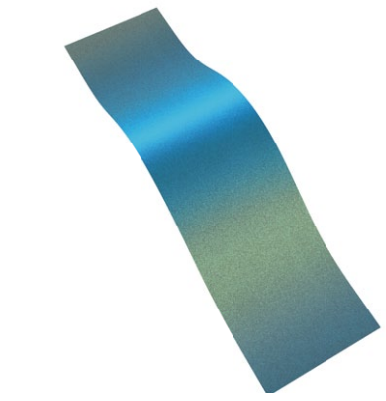
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LAPIS SUNLIGHT

T20-04 WNT

Color travel from gold to silver green to blue



Colorstream®

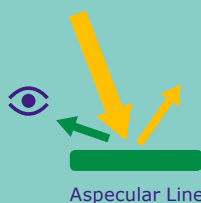
T20-04 WNT Lapis Sunlight

150g* 1.58103.0150
15kg 1.58103.9015
1kg 1.58103.1000

*free of charge sample



SCHEMATIC ILLUSTRATION



KNOW-HOW

Colorstream® is the pigment to achieve unique and surprising effects in all color areas.

Colorstream® is a silica flakes based pigment which is coated with our well established metal oxide coating technology. The silica flakes are produced by an established belt coating technology which we adapted. This adapted silica flake production process is the secret to achieve extraordinary interference colors and color effects.



stream our
powerful
movie

#jointhecolorstream



2nd PRODUCTION PLANT FOR COLORSTREAM®

OUR COMMITMENT

We invest in our production capabilities. This will help us to fortify the key pillars of our strong partnership: Constant innovation, premium quality and supply reliability.



New silica flake production facility in Gernsheim, Germany