

# RheoLight<sup>tm</sup>

Crystal Glass Pigments

*Signature Color*

B r i g h t   W h i t e



Bright White

VOL

03

COLORLAB ACADEMY

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# WORLD'S WHITEST AND BRIGHTEST WHITE



SwapFiets Innovation Manager Luuk de Leeuw is pictured with the Bright White concept bike "Swapfiets Infinity"

***The RheoLight ColorLab Academy engineers have created a special formula that enhances visibility in low light conditions and improves the performance of autonomous driving assistance (ADAS) systems.***

Bright White is a high-performance, ultra-bright White that enhances aesthetics and visibility. Using an advanced automotive 3-layer system, this color includes a unique, semi-transparent pearlescent layer that amplifies brightness and depth.

This layer incorporates RheoLight Crystal Glass Pigments, Kuncai XillaMaya T60-10 SW Crystal Silver, and Syrox S101 White Toner to create a dynamic, reflective quality that maximizes light return from multiple angles. RheoLight Crystal Glass Pigments are essential to Bright White's functionality; they enhance visibility by increasing visibility, making vehicles more noticeable on the road for the human eye and machine vision.

In summary, Bright White features an optimized formulation with an advanced layering system, resulting in a brighter, more reflective, and safer color than conventional whites or pearl whites.

# VISIBILITY LABEL

*The Visibility Label rates the visibility of different colors for mobility, from A (very visible) to G (hardly visible), and ND (Not Detectable)*

fig 1.

LEFT :  
RAL 9003 (A)  
RIGHT :  
Bright White (A<sup>+</sup>)

It takes into account how easily colors can be seen by people, computers, and LiDAR in three dimensions. This rating helps people choose safer colors for bicycles by showing how visible they are in challenging lighting conditions. Bright White has a Visibility score of A<sup>+</sup> for all conditions.



| Visibility Label       | REF white | Bright White RheoLight |
|------------------------|-----------|------------------------|
| RheoLight (w%)         | 0         | 30                     |
| Human Visibility       | 100%      | 140%                   |
| Computer Vision        | 100%      | 201%                   |
| LiDAR Visibility       | 100%      | 132%                   |
| Full Object Visibility | 100%      | 565%                   |
| Twilight Visibility    | 100%      | 954%                   |

Above figures underscore the effectiveness of Bright White RheoLight in dramatically enhancing visibility across different conditions and technologies. With a 30% integration of RheoLight, human visibility increases by 40%, and computer vision substantially boosts by 101%. LiDAR visibility improves by 32%, while full object visibility experiences a remarkable 465% increase. Twilight visibility is most notably enhanced, with a staggering 854% improvement.

More information on the Visibility can be found on [www.visibilitysaveslives.org](http://www.visibilitysaveslives.org)

# Bright White Overview

**Color Name:** Bright White

**Inspiration:** Winter's Pure Brilliance

**Base Color:**

- Primary Hue: Ultra-Bright, Sparkling White
- Undertones: Clean, Crisp, and Reflective

**Key Pigments:**

- **RheoLight Crystal Glass Pigments – RheoLight-Base WB CSL**
  - Function: Enhances visibility and provides a reflective quality
  - Benefits: Increases visibility and safety by amplifying light return, making the color exceptionally noticeable
  - Particle Size: D50 10 um
- **Kuncai XillaMaya T60-10 SW Crystal Silver**
  - Function: Adds shimmer and depth
  - Benefits: Contributes to a multi-dimensional sparkle and reflective quality
  - Particle Size: 6 – 30 um
- **Syrox S101 White Toner**
  - Function: Establishes a solid white base tone
  - Benefits: Ensures color purity and brightness

**Characteristics:**

- Finish: High gloss with a sophisticated pearlescent effect
- Visibility: Excellent visibility in all lighting conditions, enhancing safety
- Durability: Formulated to withstand environmental exposure and maintain its brightness over time

**Applications:**

- Primary Use: Automotive coatings, ideal for vehicles prioritizing both aesthetics and safety
- Secondary Use: Suitable for other design elements where high visibility is essential

**Purpose:**

- Design Objective: To create a high-performance white that combines visual appeal with enhanced safety by maximizing light reflectivity and visibility on the road
- Market Positioning: A premium, functional color for customers who value both style and heightened safety

# LOOK INSIDE



## Formulation 0% RheoLight

| Component                                 | Weight percentage (%) in grams |
|-------------------------------------------|--------------------------------|
| Syrox S900 (Clear Binder)                 | 76,6                           |
| Syrox S101 White Toner                    | 2,4                            |
| Kuncaí XillaMaya T60-10 SW Crystal Silver | 4,3                            |
| Syrox S940 (Dilution)                     | 16,7                           |
| Total                                     | 100,0                          |

## Formulation 30% RheoLight-Base WB CSL

| Component                                 | Weight percentage (%) in grams |
|-------------------------------------------|--------------------------------|
| Syrox S900 (Clear Binder)                 | 53,6                           |
| Syrox S101 White Toner                    | 1,8                            |
| Kuncaí XillaMaya T60-10 SW Crystal Silver | 3,0                            |
| Syrox S940 (Dilution)                     | 11,6                           |
| RheoLight-Base WB CSL                     | 30,0                           |
| Total                                     | 100,0                          |



# SAFETY MADE BEAUTIFUL



**Ink Invent BV**

Twentehaven 5, 3433 PT Nieuwegein, The Netherlands

Email: [info@inkinvent.com](mailto:info@inkinvent.com) - Phone: +31 35 74 00 174

[www.inkinvent.com](http://www.inkinvent.com) - [www.rheolight.com](http://www.rheolight.com)