HOW PERMANENT COLOUR WORKS

THE SCIENCE

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+140 YEARS PIONEERING SCIENCE

We love hair and understand its limitless creative potential. Hair is the “crown” of peoples’ identity. We co-create with leading professionals and work relentlessly to unlock the full potential of hair-delivering the highest quality, performance-driven products rooted in deep, patented science.

Together, we set the standard in hair innovation, always prioritising what’s best for hair and the professionals who trust us. We’ve been pioneering innovation for 140+ years and continue to break new ground to bring the best out of every hair.

COMPONENTS OF A PERMANENT COLOUR

Understand what makes up a permanent colour and why it matters.

THE CHASSIS

AKA THE COLOUR CREAM.

The chassis is the cream base that carries all ingredients and gives the colour its workable consistency. We refer to the chassis as all the product's ingredients except the dyes, the alkaliser, and the metal purifier.

THE DYES

AKA THE MAGIC CREATING YOUR COLOUR.

Each colour line has its unique blend of dyes making up the range of shades.

The primaries react with the couplers. This all takes place inside the hair fiber to form coloured dyes which are too big to move out of the hair shaft so they remain in the hair providing permanent colour.

THE ALKALISERS

AKA THE ENGINE.

Ammonia and MEA are different alkalisers, the alkalising agent helps to open the outer hair layer. The oxidative dyes can then enter the hair fiber.

THE CHASSIS

AKA THE COLOUR CREAM.

This is what you see when you squeeze your tube. It's the base responsible for delivering all the ingredients to the hair and for giving the colour its precise, workable consistency.

This can be in the format of a cream, gel or liquid.

Koleston Perfect and Illumina Color has a cream gel consistency making it easy to apply and rinse out from the hair.

We refer to the chassis as all the product's ingredients except the dyes, the alkaliser, and the metal purifier, its job is simply to form the cream.

Pure Perfection's chassis is a cream-based system. It may feel slightly thicker and viscous vs the cream gel consistency you know from the other two permanent brands.

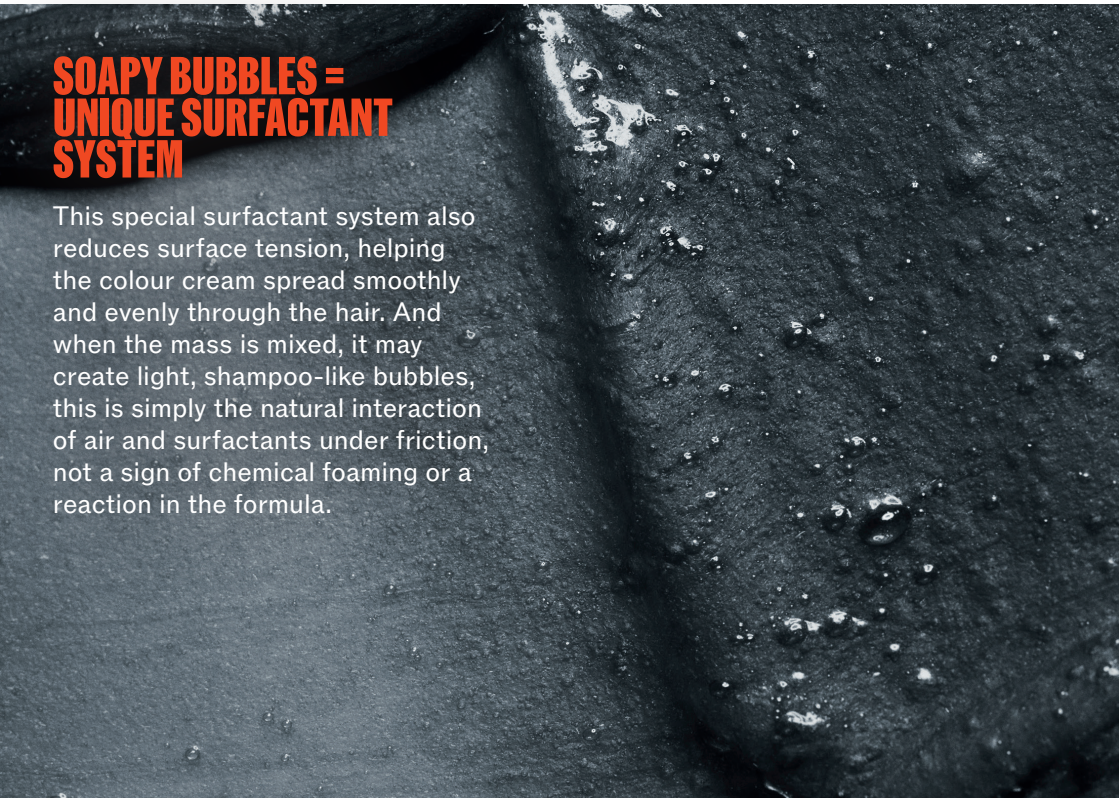
In Pure Perfection, this cream is built with several ingredients and a carefully selected blend of surfactants, which support both scalp comfort and easy rinseability.

The Pure Perfection chassis is designed to create a stable, smooth texture ideal for root application, blending, and precise placement on defined sections.

THE JOB OF SURFACTANTS

Surfactants work a bit like tiny double sided magnets: one end is attracted to water and the other to oils. This allows them to grab onto oily or greasy residues, including MEA, used in ammonia-free colour, and help lift them off the hair so they rinse away easily with water. This ensures a clean, comfortable rinse-out without leaving a greasy hair feel.

Thanks to this specific blend of surfactants and the other ingredients in the chassis, the cream has excellent compatibility with the skin, making it comfortable on the scalp and supporting a gentle colour experience for the client.



SOAPY BUBBLES = UNIQUE SURFACTANT SYSTEM

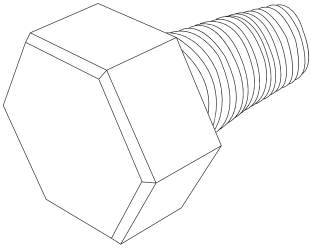
This special surfactant system also reduces surface tension, helping the colour cream spread smoothly and evenly through the hair. And when the mass is mixed, it may create light, shampoo-like bubbles, this is simply the natural interaction of air and surfactants under friction, not a sign of chemical foaming or a reaction in the formula.

THE DYES

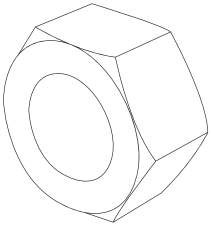
AKA THE MAGIC CREATING YOUR COLOUR.

Each colour line has its own unique blend of dyes that define the character of its shade palette.

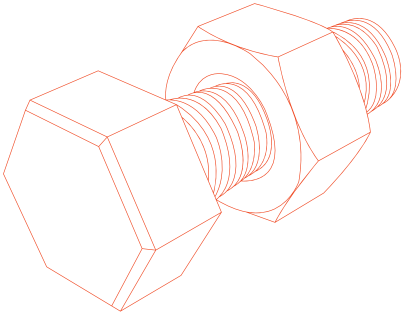
In all permanent hair colours, these dyes begin as tiny components known as couplers and primaries. Small, colorless molecules that travel inside the cortex and, when mixed with the developer, react with each other and transform into full colour inside the hair.



PRIMARY



COUPLER



OXIDATIVE COLOURANT

Pure Perfection also avoids traditional PPD/PTD dyes, which are commonly associated with a high risk of developing allergies. Instead, it uses amongst other dyes, **Wella's ME+™ molecule**, an innovative dye designed to deliver rich, permanent colour without compromising intensity or longevity.

The result is a highly refined dye system where every microscopic colour reaction is designed to deliver one thing: **a pure, true-to-tone colour result you can trust.**

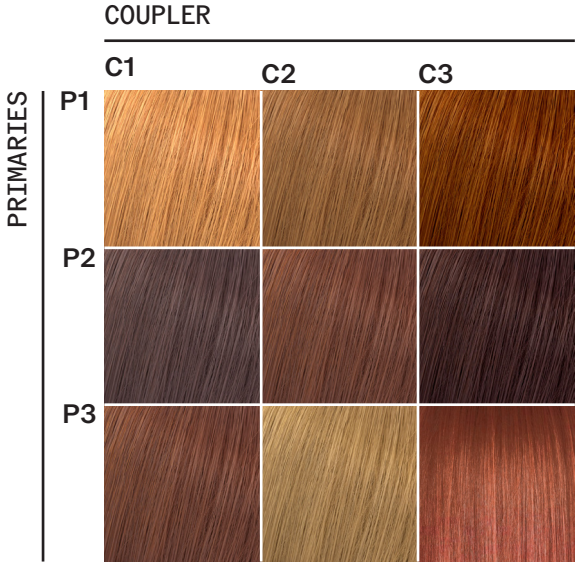
COMBINED DYES MAKE UP EACH SHADE

In Pure Perfection, every single dye precursor has been **carefully selected and precisely combined** so that all these microscopic colour molecules come together to form pure tonalities.

A red is a pure red, not orange-leaning or blue-leaning. Gold reflects as a pure gold, not a yellow-gold or orange-gold.

The neutral shades are crafted with a unique **neutral beige undertone** neither brown-heavy nor violet-heavy, just a perfectly balanced beige. This gives colourists extreme control, predictable results, and beautifully pure shades that behave exactly as intended.

For every shade, **multiple dye precursors react in many different combinations**, forming a variety of colour molecules at a microscopic level. You don't see each of these tiny colour molecules individually; instead, **all of them together blend into the final shade you see on the hair.** This is why even a single "tone" is actually made of many microscopic colour components working in harmony.



COMBINATION OF DYES

FINAL COLOUR RESULT

THE ALKALISER

AKA THE ENGINE.

Alkalisers are essential in permanent colours: their job is to raise the pH to gently lift the hair's cuticles so that dye precursors can enter the cortex and develop into colour.

Ammonia and MEA (Monoethanolamine) are the two main alkalisers used in oxidative hair colour.

AMMONIA

It is extremely efficient, strong enough to give excellent grey coverage on even the most resistant hair, vibrant results, and controlled lightening while helping to keep the damage under control.

Ammonia quickly evaporates and that's what makes it briefly smell. But some clients dislike its noticeable odor.

MEA (MONOETHANOLAMINE)

On the other hand, MEA is odorless, making it a great alternative.

However, MEA behaves differently from ammonia. It is a bigger molecule, so it is liquid and less volatile (therefore odorless), and it can be harder to remove from hair.

It is also less powerful, therefore ammonia free formulas may require higher levels of MEA to match ammonia's colour performance and that higher concentration can lead to increased risk of damage.

THE DISCOVERY

During our research we discovered the triggers behind this damage: during the colour process naturally occurring metals inside the hair become very reactive. And when MEA is used, we discovered that not only copper, but also Iron is involved in hair damage.

This MEA specific reactivity can amplify stress on the hair fiber and increase the risk of damage if not carefully controlled.

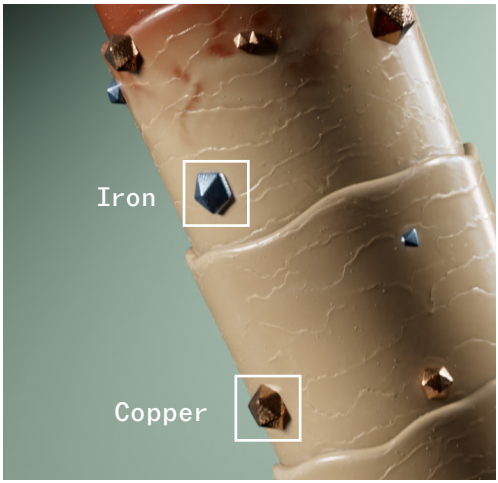
HOW PURE PERFECTION IS CHANGING THE GAME

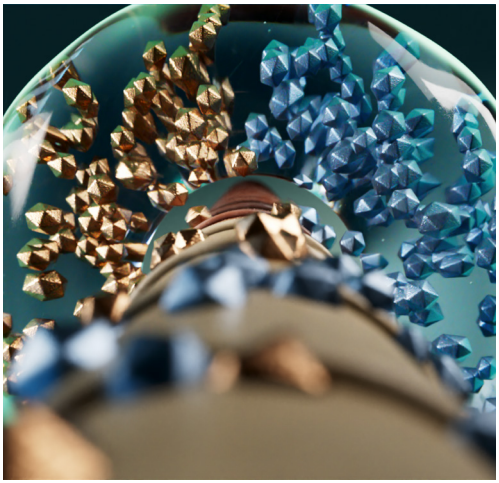
Pure Perfection brings true scientific innovation. To meet Wella's performance standards for an ammonia-free permanent colour, the formula is powered by a breakthrough: the **Supercharged Metal Purifier.**

We engineered a next-generation metal purifier able to **capture both copper and iron at the same time.** That dual-action capability is what makes it "supercharged."

By capturing these highly reactive metals during oxidation especially Iron, the Supercharged Metal Purifier helps control the stress that MEA can otherwise create.

This means Pure Perfection can use the **precise amount of MEA needed for beautiful, reliable colour performance** without pushing the hair into an over-stressed state. The result is an ammonia-free permanent colour that delivers Wella level colour results and advanced care for hair integrity.





METAL PURIFIERS

IN PERMANENT / DEMI-PERMANENT COLOUR

Metals like copper can deposit on the surface of the hair. When they get in contact with the Hydrogen Peroxide in oxidative hair colours they can build free radicals which interfere with the dye formation, leading to shift in depth and tone.

Wella Professionals colourants contain Metal Purifier which helps to reduce the formation of free radicals, by encapsulating metals before they can interfere with colour formation.

This creates a controlled environment for the colour molecules to penetrate and deposit precisely without any distraction, leading to more true to tone results even on damaged hair where more metals are present.

IN AMMONIA FREE PERMANENT COLOUR

In ammonia-free permanent colour the alkaliser is MEA, an alkaliser that can create a specific chemical environment when used in higher concentrations, where not only copper, but also iron can become very reactive and lead to hair damage.

With Pure Perfection we introduce the solution to this challenge by introducing **Supercharged Metal Purifier:** by capturing both copper and Iron simultaneously, it helps control the stress that MEA can otherwise create and enable to achieve great colour results.

FAQ

IS AMMONIA FREE COLOUR BETTER FOR THE HAIR?

No, it's a choice. Like some people like to drink green tea instead of coffee. It may align better with their lifestyle or they just like the taste.

Offering different options allow you to satisfy different types of clients.

IS THERE A DIFFERENCE IN LASTINGNESS BETWEEN AN AMMONIA FREE OR AMMONIA PERMANENT COLOUR?

Generally, no they all use oxidative dyes and permanent colour chemistry. However lastingness depends on intensity of shade chosen and the starting point of the hair. This can cause the variations.

CAN I EXPECT THE SAME PERFORMANCE FROM A NO AMMONIA PERMANENT COLOUR VS ONE WITH AMMONIA?

Not exactly, both will deliver great colour deposit, lift and coverage for majority of clients.

However, for specific cases ammonia color may be a preferred choice such; High-lift shades with up to 5 levels of lift, whilst baseline for both will give you up to 3 levels of lift.

For the most resistant hair, ammonia will provide the most opaque coverage on white hair.

THE PURE COLOUR RESULTS

How does Pure Perfection compare to Koleston Perfect & Illumina Color

RESULTS & COVERAGE

Rich & transformative	Pure colour results	100% natural looking
Up to 100% grey coverage even on the most resistant hair	Up to 100% grey coverage with natural dimensions	Up to 100% sheer grey coverage

PALETTE

The broadest palette with 170+ shades	30 shades designed for easy mixing	58 sheer shades

SERVICE

Grey coverage, full head colour	Root-touch up, full head colour Pure colour	Illuminage, blonde toning, natural looking transformations

TECHNOLOGY

Metal purifier, ME+ technology	Super charged metal purifier	Metal purifier, micro light technology & micro tones
Cream-Gel	Rich Cream, Free-of ammonia, fragrance, mineral oil	Cream-Gel

BASE COLOUR

Brown base for richness	Neutral base for pure tones	Violet base for coolness and natural looking results

OPACITY

PURE PERFECTION SHADE PALETTE

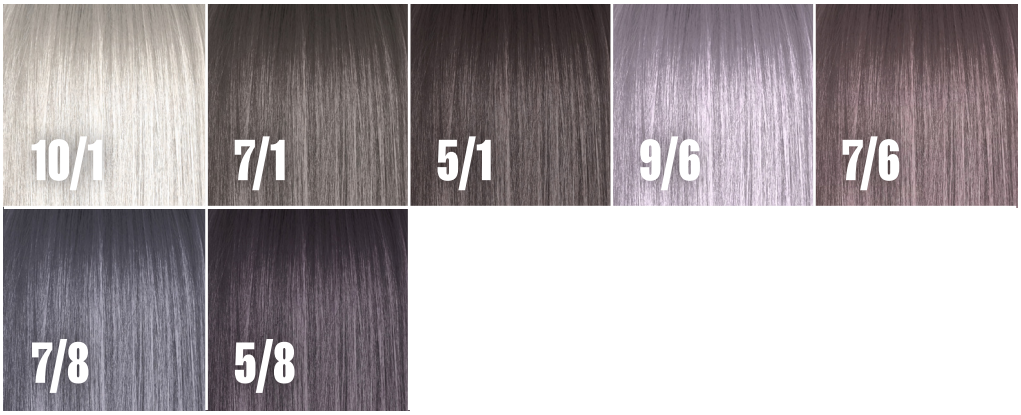
30 PURE COLOR SHADES

Naturals are neutral with no off tones. Major tones only for easy predictability when formulating.

Natural

Warm

Cool



MY NOTES

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