

## THE COLOUR OF AUSTRALIAN UNLEADED PETROL GRADES IS EVOLVING: TECHNICAL MARKET UPDATE

30 July 2021

The Australian Institute of Petroleum (AIP) in conjunction with petrol manufacturing and importing member companies have agreed to amend the colour range specification of all unleaded petrol grades (excluding Low Aromatic Fuel used in regulated communities).







**This change will not have any impact on the fuel's performance, nor on compliance with Federal and State government quality standards or other legislation.**

Historically, dye was added to petrol to assist workers in the petroleum industry to quickly identify different petrol grades when handling fuels in the supply and distribution process. Over the past two decades there have been several changes in the colours used, and most recently, in 2016, the removal of dye completely from ULP and E10 Unleaded grades. This latest colour change is the next step in this continually evolving process, taking into account the current monitoring equipment and procedures that no longer rely upon fuel colour to differentiate between fuel grades.

Additionally, this colour change will align petrol manufactured in Australia with international practices (e.g. Europe, USA, Asia) and trading markets, where petrol grades are not dyed. Amending the colour range specification and applying it consistently for all grades will remove the need to dye premium unleaded petrol grades, which will assist AIP member companies, and other suppliers who import fuels, with the purchase of petrol cargoes from international refineries.

The amendment of the colour range specification across all petrol grades will become the new industry standard commencing 1 August 2021. Coincident with the colour range amendment, the need to dye premium unleaded petrol grades to achieve a consistent yellow colour will cease. We anticipate that the transition to all grades being undyed will take up to 12 months. During this period both dyed and undyed petrol grades may be present in the market.

The current colour range specification for Regular Unleaded (ULP, 91 RON) and E10 grades is **Pale Yellow to Yellow**, and the current colour specification for Premium Unleaded grades (95 RON and 98 RON) is **Yellow**. The new colour range specification for all petrol grades will be **Colourless (also referred to as Water White) through to Yellow**. See table below for examples.

	CURRENT	NEW COLOUR RANGE (ULP, E10, PULP, 98PULP)			
ULP / E10	 Pale Yellow - Yellow	 Colourless / Water White	 Faint Yellow	 Pale Yellow / Light Yellow	 Yellow
PULP / 98PULP	 Yellow				

Following is a set of questions and answers (Q&A) to provide you with more detail about the change.

**If you have any additional queries that are not addressed by the Q&A, please contact your current fuel supplier for further information.**

**AIP Contact:** [aip@aip.com.au](mailto:aip@aip.com.au).

---

## Questions & Answers (Q&A)

### **Why has the colour range been expanded to include “colourless”?**

The inherent colour of fuel is dependent upon the refining processes used to produce the blendstocks that go into making a petrol grade. The colour of the blendstocks can vary from Colourless to Yellow depending upon the refinery, the crude and the processes used to create each petrol blendstock. Since 2016, when the colour range specification for ULP and E10 was amended to Pale Yellow/Yellow, a greater number of imports have arrived with colours lighter than the expected Pale Yellow minimum of the specification. While some dilution into existing tank stocks does attenuate the colour present in the market, it is possible that some batches may see little dilution and consequently a colourless batch can/will make it into the market on occasion.

### **Why was dye added to petrol grades?**

Historically, dye was added to petrol to assist workers in the petroleum industry to quickly identify different petrol grades when handling fuels in the supply and distribution process. It also previously, but no longer, had customer dimensions. For example, transparent sight glasses were also an ‘advertising’ tool on retail site bowsers for customers many years ago to see their fuel as it was pumped. The introduction of new equipment and procedures means that relying on colour is no longer required to differentiate fuel grades.

### **Will removing dye from premium unleaded grades affect the quality or performance of the fuel?**

No. Adding dye to fuel is purely aesthetic. Removing dye will not affect the quality or performance of the fuel in any way.

### **What grades of fuel will change in colour?**

Regular Unleaded petrol (ULP / 91R), E10 Unleaded, and both the 95R and 98R grades of Premium Unleaded Petrol will have the new colour range specification applied. Unleaded Petrol and E10 have been undyed since 2016 so any colour change will be minimal for these grades. The Premium Unleaded grades (95R and 98R) were historically dyed to meet the colour specification of Yellow, so the change will be more noticeable in these grades.

At this time the colour of Low Aromatic ULP, as supplied under the Low Aromatic Fuel Act 2013, will remain specified as Yellow, requiring the use of dye to maintain a consistent colour for this bespoke grade.

### **Who is likely to be impacted by the change to undyed premium unleaded grades?**

The change to undyed petrol grades is purely aesthetic. It will not affect the quality or performance of the fuel in any way. Those who may be impacted by the relaxation of the colour range include:

- The introduction of new equipment and procedures means that relying on dye to differentiate fuel grades is no longer required. However, some employees in the petroleum industry may use colour to help identify different petrol grades in the day-to-day handling of fuels.
- Local suppliers of fuel dyes who will no longer be required to provide yellow dye for local refineries.
- Petroleum services companies such as fuel testing laboratories and those sampling fuel for testing purposes who test and report to colour specifications for different fuel grades.
- Motor trades, such as vehicle service and repairs, who may have used colour to assist in identifying different fuel grades.
- Although highly unlikely for customers refuelling their vehicle in a service station, some customers refuelling smaller equipment may also notice a change in colour when they pour the fuel into the tank.

### **When will the change to the petrol colour range occur?**

The amendment and alignment of the colour range for petrol grades will commence from 1 August 2021. It is anticipated that it could take up to 12 months for the full transition to undyed premium unleaded petrol grades to occur. During this period both dyed (Yellow) and undyed (Colourless to Yellow) petrol grades may be seen in the market.

### **Why could the transition to undyed petrol grades take up to 12 months?**

The change to undyed petrol grades presents several logistic challenges for the petroleum industry that may influence the timing of the transition. These include:

- The need for refineries to 'run down' or use their current inventories of dye.
- Coordination of fuel deliveries from multiple sources into storage terminals, particularly jointly operated storage facilities.

As a result, it is possible that both dyed (**Yellow**) and undyed (**Colourless to Yellow**) petrol grades may be seen in the market for up to 12 months.

### **Have there been changes to the colour of fuels in the past?**

Yes. The most recent change was in 2016 when the dye requirement was removed from Unleaded Petrol and E10 and the specified colour range was changed from **Red/Orange** to **Pale Yellow/Yellow**