

# What's the difference between water and solvent-based paints?

# Are all water-based paints eco-friendly?

**Roger Maher**

**Earthborn Paints**

**Webinar: Paints & Finishes Explained**

**FAQs** and

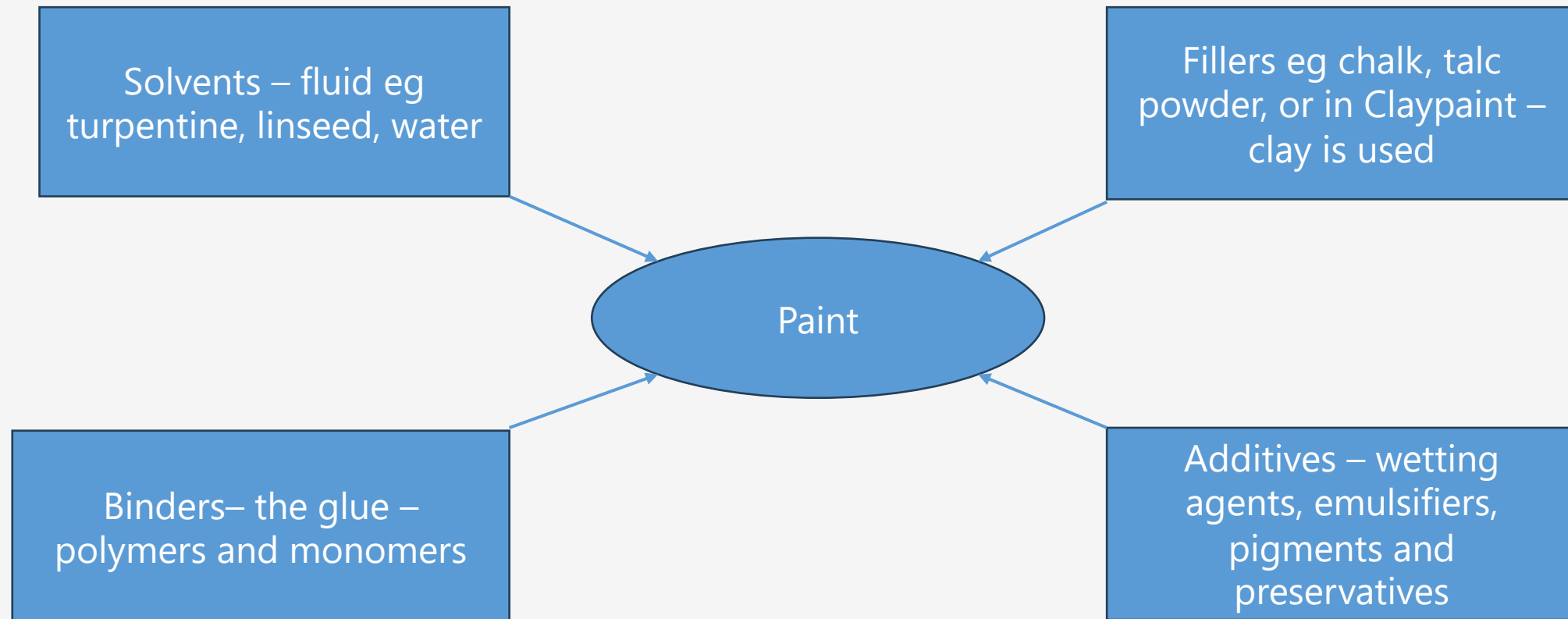
**MYTH-BUSTING**

**Thursday 15<sup>th</sup>  
June 2023**

# What's the difference between water and solvent-based paints?

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## What is typically in paint?



(Note: no binders used in silicate mineral paints)

# What's the difference between water and solvent-based paints?

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## Oil-based paints

- Higher VOCs (Volatile Organic Compounds) – prominent odours, likely to be flammable and not eco-friendly eg circa 300g/L
- Thinner – clean brushes and equipment in turpentine, white spirit, brush cleaner
- Weather resistant – can be more so in higher temperatures and humidity but will become brittle allowing moisture penetration
- Longer drying times
- Block resistant – strong blocking resistance when dry
- Gloss paints will have a higher sheen than water based but fade quicker over time
- Less reactive to existing substrate materials and coatings and more flexible to movement
- Not breathable – trapped moisture and prone to mould issues

# What's the difference between water and solvent-based paints?

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## Water-based paints - acrylic/latex

- Lower VOCs – reduced odours, generally not flammable and are still not eco-friendly
  - low VOCs water-based paints defined as less than 30g/L
- Thinner – clean brushes and equipment in water
- Weather resistant – less tolerant and can become brittle due to plastics allowing moisture penetration
- Faster drying times than oil-based paints
- Block resistant – less blocking resistance and can be more prone to surfaces sticking
- Gloss paints will have a lower sheen than water based but not fade over time
- Spraying is easier than oil-based paints
- Not breathable with potential to cause mould issues

# Are all water-based paints eco-friendly?

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What do we mean by eco-friendly?



Minimising  
impact on  
the  
environment

Sustainability

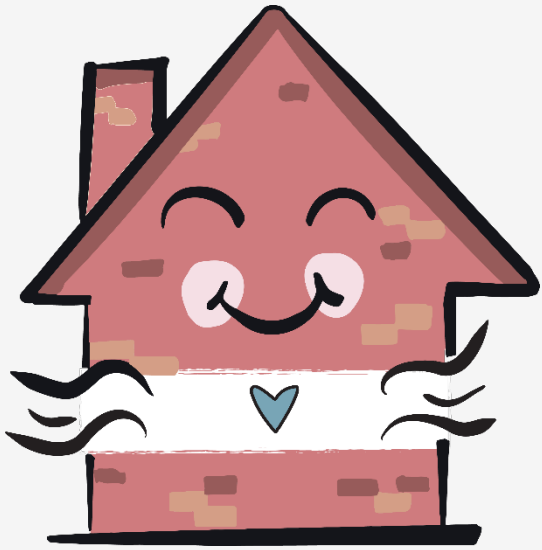


What can we do with leftover paint?

## Are all water-based paints eco-friendly?

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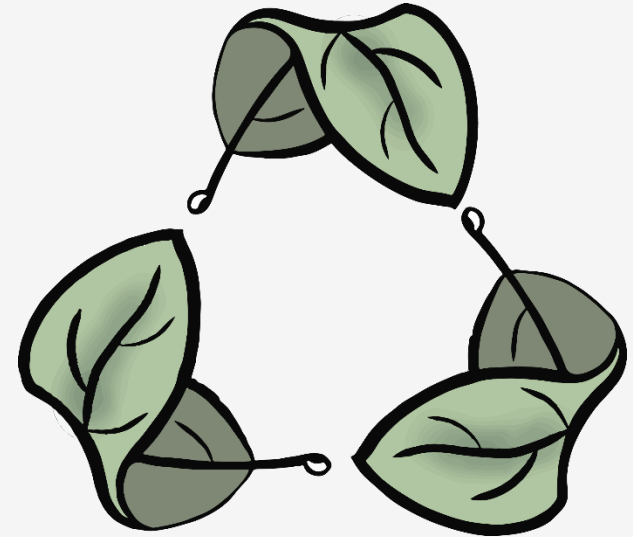
Eco-friendly water-based paints – natural materials - clay paint, milk (casein) paint, limewash paint, and plant - and natural mineral/silicate-based paints



Improved  
air quality



Preserve the  
waterways



Reduce landfill

# Are all water-based paints eco-friendly?

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## Eco-friendly paints will...

- Use natural and eco-friendly derived ingredients in their purest forms.
- VOC levels will be 0.5g/L or lower – compared to Low VOC levels defined at 30g/L
- No off gassing – good for allergy sufferers and creating healthy homes
- Enable quick turnaround times in rooms due to no smells
- Help to reduce carbon footprint and are biodegradable
- Compliment sustainable building materials particularly in older/historic and Passivhaus Standard projects

# Are all water-based paints eco-friendly?

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## Breathability

- Benefits particularly for older properties – solid walls, no cavities to work with traditional substrates –eg lime plaster, lime renders, stone, brick to allow moisture to pass through.
- Different methods to evaluate eg Water Vapour Permeability – Sd value – less than 1m. eg Claypaint = 0.02m

## Vegan Friendly

- Natural paints can be vegan friendly depending on the ingredients used

## Toy Safety Standard

- Due to the ingredients used certification can be obtained for Toy Safety EN71

## Fire Safety Rating

- Certain paints eg clay paints can achieve a 'Class O' rating due to properties of clay and non-flammable ingredients



# Are all water-based paints eco-friendly?

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What to look for in an environmentally friendly paint...



Thank you

[roger@earthbornpaints.co.uk](mailto:roger@earthbornpaints.co.uk)

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