



**PROTECTAPEEL**  
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**PROTECTAPEEL**

*Water-Based  
Vs  
Solvent-Based...  
An environmental argument*

# Spraylat International Ltd

- Spraylat International Ltd operates in compliance with all relevant environmental legislation to ensure our manufacturing capabilities, final product and product disposal is of minimal impact to the environment.
- Our water-based coatings contain 98% less VOC than solvent-based coatings.



# VOC levels

- Solvents used in coatings assists in the coating's application, drying and formulation into a film. During the drying process the solvent will evaporate, releasing Volatile Organic Compounds (VOCs) into the atmosphere creating a negative toxic impact on the environment.
- Solvents have been widely used in the past, however advances in technology mean that water based coatings are increasingly replacing organic solvents. Legislation has increased to support this trend, spurring many companies to make the switch from solvent-based coatings to water-based.



# Microwave Technology

- An argument made against water-based coatings is the drying time is longer than solvent-based coatings, prolonging the process time.
- With the use of microwave dryers the drying time of water-based coatings can be reduced from several hours down to less than fifteen minutes.
- 100% of the capital cost of the microwave can be off-set against corporation tax, the amount can be financed by Siemens working in conjunction with The Carbon Trust.
- Microwave drying is a far more time efficient, environmentally friendly and economical method of drying.



# Organisations and the Environment

- With Government regulations regarding environmental responsibilities increasing, it has never been more important for organisations to be environmentally aware.
- Many organisations have realised that acting in an environmentally friendly way is more than just a legal requirement... it affects the long-term success of the business.



# Organisations and the Environment

- The coatings industry is pro-active on environmentally friendly matters
- The use of water-based coatings rather than solvent-based coatings has increased since 2007 due to UK environmental legislation regarding lower VOC levels.



# Solvent-based products

- Solvent based coatings are a source of potentially hazardous emissions called VOCs (Volatile Organic Compounds) – when evaporating VOCs react with oxygen damaging the ozone layer.
- Solvent-based coatings usually use Isocyanate, which can be harmful to the environment and employees, and is also very expensive.



# Water-based Products

- The development of water-based coatings have been driven by the fact most traditional coatings are solvent-based, which produce harmful VOC levels into the ozone.
- The coatings dry through the evaporation of the water. During the drying process, the dispersed particles fuse to form a film.
- There is no Isocyanate in our coatings – reducing impact on the environment and your employees.
- Our coatings are non-flammable - reducing Health and Safety issues.
- There is no need for costly ventilation systems.
- 'Ready-to-use' one pack product – no wasted time mixing products.



# Advantages

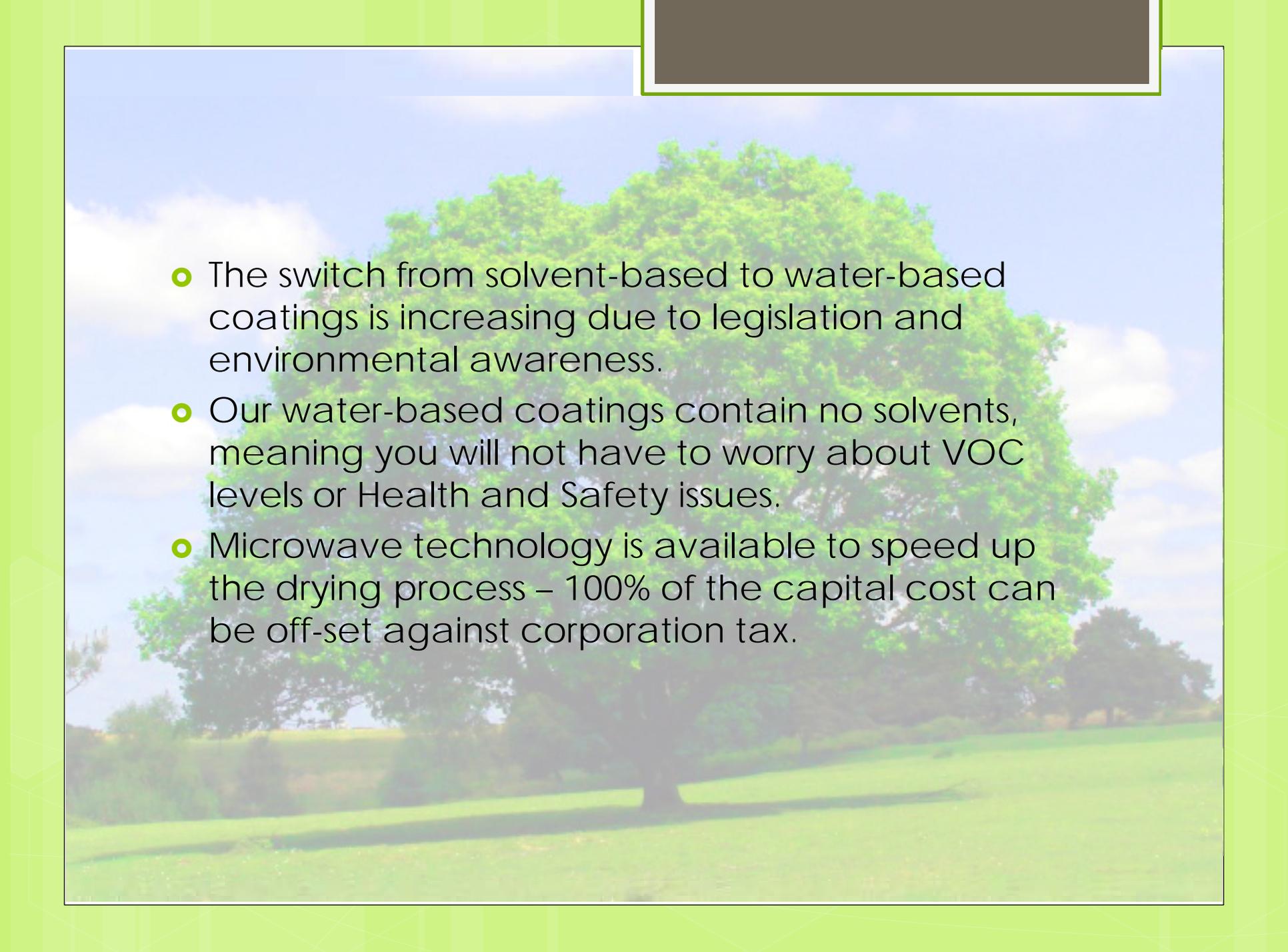
Benefits of Water-Based Coatings	Benefits of Solvent Based Coatings
Environmentally friendly	Quick drying time
98% less VOC than solvent-based coatings	Provides almost immediate water proofing
No need for special ventilation as there are no hazardous fumes – decreased additional cost	
Equipment can be cleaned with water rather than solvents – decreased additional cost	
One pack product – saving time by not having to mix materials	
No use of Isocyanate – ensuring the health and safety of employees	



# Disadvantages

Disadvantages of Water-Based Coatings	Disadvantages of Solvent Based Coatings
Longer drying time (Microwave drying is available – faster than solvent based drying times)	Harmful to the environment and employees health
Susceptible to frost damage	Need specialist ventilation equipment – increased additional costs
	Flammable
	Solvents are needed to clean equipment – increased additional costs



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- The switch from solvent-based to water-based coatings is increasing due to legislation and environmental awareness.
  - Our water-based coatings contain no solvents, meaning you will not have to worry about VOC levels or Health and Safety issues.
  - Microwave technology is available to speed up the drying process – 100% of the capital cost can be off-set against corporation tax.

Thank you

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