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Issue 12

## PPM Technology at IPPS 2011.

PPM Technology had a trade stand and representative at the recent International Panel Products Symposium (IPPS) held in Llandudno, North Wales.

IPPS is the leading technical conference on wood based panels, including all aspects of panel production technology, feedstocks, resins and additives, market analysis and the use of wood based panels in furniture and construction applications.

Amongst the topics discussed were Formaldehyde resins. Formaldehyde is often used in the manufacture of adhesive resin that acts as glue in the manufacture of pressed wood products.

Anyone involved in the manufacture of any of wood based panel products could be exposed to formaldehyde. Unless due care and attention is given formaldehyde emissions can reach dangerously levels at panel mills' production lines.

The event attracted industry delegates from around the world; many of whom were interested in formaldehyde detection and safety.



*Symposium website* - <http://www.bc.bangor.ac.uk/ipps/>

## Visit to French distributors Equipment Scientifiques.

PPM Technology recently visited the offices of our distributors in France – Equipment Scientifiques. Equipment Scientifiques have long distributed our handheld instruments for detection of Formaldehyde and Glutaraldehyde. In the past year or so they have also introduced our range of multi-parameter Indoor Air Quality monitoring instruments into the French market.



During the visit John B Jones demonstrated the new features and software for our IAQ instruments; and also discussed future plans and strategies for both companies. John also had some free time to do some sightseeing.

## Customer Satisfaction Survey.

PPM recently conducted our annual 'Customer Satisfaction Survey', results were generally positive. The areas covered by the survey were – Marketing, Staff and Service/Products. We always strive to improve our company's performance in all areas. We welcome any input from our customers.

If you haven't yet received the survey and would like to complete it please contact – [sales@ppm-technology.com](mailto:sales@ppm-technology.com)

If you have any relevant stories, including any recent or upcoming exhibitions, application stories or customer testimonials that you want to be included in the next newsletter please feel free to contact us:

[gevans@ppm-technology.com](mailto:gevans@ppm-technology.com)

## Formaldehyde released from wood-based panels

Formaldehyde is a toxic chemical widely used to manufacture building materials and various household products. Most resin systems used in the panelboard industry are based on formaldehyde. The resins traditionally employed in the wood panel industry are those of urea formaldehyde (UF), melamine formaldehyde (MF), phenol formaldehyde and, most notably, UF resins.

Wood-based panel products can emit small amounts of formaldehyde. Each product type has a product standard governing the testing and certification of that product for formaldehyde emissions.

**Particle Board and MDF** - Both particleboard and MDF generally use urea formaldehyde (UF) resins, which emit small amounts of formaldehyde.

**Decorative Plywood and Composites** - Decorative plywood and veneered composites using urea formaldehyde (UF) or melamine formaldehyde resins are used for interior applications such as panelling, cabinets or furniture.



**Structural Panels - OSB and Plywood** - Structural panels such as OSB and plywood using exterior type phenol formaldehyde and isocyanate resins. The amount of formaldehyde emitted from panels using phenolic-based adhesives is considered very small.

Anyone involved in the manufacture of any of these products could be exposed to formaldehyde. Unless due care and attention is given formaldehyde emissions can reach dangerously levels at panel mills production lines. Ventilation in these facilities must be good; and airborne samples of formaldehyde should be taken regularly to ensure workers aren't at risk of exposure to a dangerous level.

Formaldehyde release is highest in newly manufactured pressed wood products, and decreases over time. Experiments have demonstrated that in a stable environment (temperature and humidity) formaldehyde release does decrease over time and the low initial values of typical particleboards and MDF will decrease by at least 50% within a few weeks of manufacture.

Formaldehyde can be released as a vapour, due to off-gassing from products containing formaldehyde based resins. Conditions of high humidity, heating or agitation (including sawing or grinding) of formaldehyde based products can lead to increased levels of formaldehyde in the air.

Workers may be exposed by breathing in the fumes from formaldehyde products as a result of off-gassing from unsealed or freshly cut surfaces and the associated dust particles.

*More info -*

[http://www.nicnas.gov.au/publications/information\\_sheets/Safety\\_Information\\_Sheets/SIS\\_3\\_0\\_Formaldehyde\\_Cabinet\\_PDF.pdf](http://www.nicnas.gov.au/publications/information_sheets/Safety_Information_Sheets/SIS_3_0_Formaldehyde_Cabinet_PDF.pdf)

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## Monitor Volatile Organic Compounds (VOC's) with PPM Technology's IAQ Monitor.

Volatile organic compounds (VOC's) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors.

VOC's is one of numerous sensor options that can be incorporated into PPM Technology's range of Indoor Air Quality monitoring instruments. The **Wireless IAQ Profile Monitor** can continuously monitor up to 7 customer specified parameters (including VOC's).

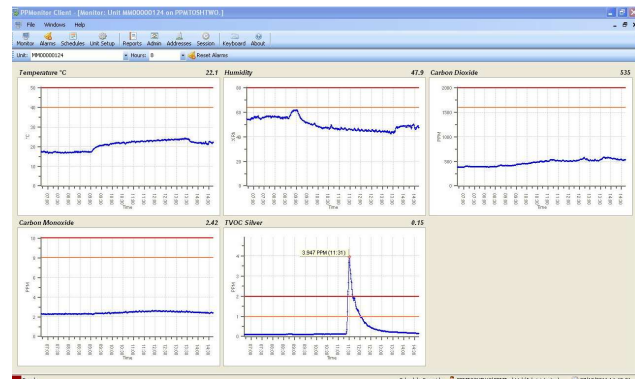
**Sources** - Household products including: paints, paint strippers, and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; air fresheners; stored fuels and automotive products

**Health effects** - Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

**Industries** - In offices, VOC results from new furnishings, wall coverings, and office equipment such as photocopy machines, which can off-gas VOCs into the air.

**Guidelines and Legislation** - In most countries, a separate definition of VOCs is used with regard to indoor air quality that comprises each organic chemical compound that can be measured as follows: Adsorption from air on Tenax TA, thermal desorption, gas chromatographic separation over a 100% non polar column (dimethylpolysiloxane). VOC (volatile organic compounds) are all compounds that appear in the gas chromatogram between and including n-hexane and n-hexadecane.

**Sensor** - Range ca. 0-20ppm, Resolution 0.01ppm, Response time: 60s



*PPMonitor software displaying real-time results for TVOC, CO, CO2 Temperature and Humidity.*

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PPM Technology Ltd  
Unit 34-35 \* Cibyn Industrial Estate  
Caernarfon \* LL55 2BD \* Wales / UK

Tel: +44 (0)1286 676 999  
Fax: +44 (0)1286 671 811

sales@ppm-technology.com

