



After another positive year in a less than wonderful economic climate, we'd like to express our thanks and festive good wishes to all of our customers for their support and business in 2011.

Electrical High Voltage Focus

Gloves are for Life, not just for Christmas

Working with electricity carries the risk of electric shock – painful and possibly deadly.

Among the more unusual items we have tested here at AMECaL are protective gloves.



The effect of having an electricity current flow through your body differs from person to person but it's clearly undesirable. From a slight tingle in your skin with a low current to pain at higher current, leading up to muscle spasms as the current grows above 20mA, electricity and the human body do not go together well.

Working with a supply disconnected, isolated or earthed reduces the risk but the ultimate insurance against personal harm is protective equipment like gloves. As with most safety equipment, these need to be tested and approved for use, so users can be sure of the level of protection they're receiving.

Tests vary based on what the gloves are used for, but can include tensile strength and resistance to cuts, tears and punctures, flame retardancy and resistance to low temperature, acid, oil and ozone. Many tests are optional (according to the European standard: EN 60903) but there are mandatory tests too.

Where the gloves are protecting against higher voltages, testing become even more important – and includes insulation resistance and dielectric strength – applying perhaps 5kV to the gloves for several minutes to test the leakage and resistance.

CHANCE TO WIN: See our Competition on the right.

Electrical Focus

The High Price of Low Temperature

Every year, when the nights draw in, the mercury falls and the frost appears, a wave of equipment heads for the repair shop. Apart from the inconvenience of taking your equipment for repair, and not having your kit available for work, there is also the cost of the repair work itself. While you can never completely remove the possibility of break-downs, many faults can be avoided by following some simple rules.



GET OUR TOP 5 TIPS TO REDUCE THE COST:

To find out which electronics are affected most and the best way to safeguard against problems, see our article online: http://www.amecal.com/downloads/Killer_Equipment.pdf

http://www.amecal.com/downloads/2011_Winter.pdf

Featured Products

Special Exclusive Offer to Customers Over 1/3 OFF New AMECaL Testers

Due to customer demand, we have decided to extend our fantastic offer into January: **35% off** AMECaL Testers.



There has never been a better, and more cost effective, time to buy from our range of instruments.

All of our Electrical and Environmental Testers are included in the offer; catalogues and prices are available from: products.amecal.com (Hurry: Offer ends **31.01.12**; accessories not included).

If you would like a catalogue and pricelist posted to you, please send your name and address to david@amecal.com.



Latest Offers

Unusual? Precise? High Volume? Let us know about your exceptional items and WIN A MULTIMETER!

With Test Equipment, what is everyday to one is exceptional to another. We want to hear about what testing and measurement you carry out – and if you let us know (in 50 words or less) you could **WIN** an AMECaL Multimeter (ST-9905).

Does your company have unusual equipment that needs testing/calibrating – like the protective gloves (above left)? Do you measure to the highest accuracy? Or do you have hundreds of testers? Whatever is exceptional about your testing equipment, let us know – we'll include the most interesting answers in the next Newsletter.

Just send 50 words or less to david@amecal.com to be in with a chance to WIN a Multimeter!

(Deadline 31.01.12; max 1 entry per company).

Calibration News

No Uncertainty about Uncertainty



ILAC (International Laboratory Accreditation Cooperation) has announced that, as from 1st November 2011, accredited calibration laboratories will now be required to deliver test data and uncertainty of measurement with all accredited calibration certificates.

In the UK, this means all UKAS Certificates. AMECaL have always provided this information, so it's good to see what we regard as best practice being taken up internationally.

It is important to note that uncertainty doesn't imply error – obtaining a highly precise result with zero chance of error is an impossible (and very expensive) goal. What is important is that the uncertainty itself is measured accurately and documented in any results – only then can you be sure that a reading is within specification. Paradoxically, at first glance, most uncertainty exists where there are no uncertainty figures provided at all.

Electrical Product News

Putting On A Show...

AMECaL has recently signed up to take exhibition space at all five ELEX exhibitions in 2012. This will enable us to demonstrate our Product Range face-to-face and promote not only the products but also the Calibration Services we provide, raising our national profile even further.



The [ELEX exhibitions](#) are produced in association with Professional Electrician magazine and are major exhibitions in the electrical industry.

We will be running several special offers and competitions throughout the year, associated with the exhibitions, and we would like to encourage you to come along and visit our stand when there is an exhibition close to you (tickets are free).

ELEX 2012 Dates for your Diary:

Harrogate	8 th /9 th March 2012
Exeter	26 th / 27 th April 2012
Manchester	21 st / 22 nd June 2012
Coventry	20 th / 21 st September 2012
Sandown	8 th / 9 th November 2012

Save More: Special Pricing: Special Offers!

Don't miss out! You could be saving more and getting useful hints and tips too!

Sign up to the e-newsletter to keep up to date with developments, equipment, facilities and techniques. Just email david@amecal.com with **SUBSCRIBE** in the subject line.

You can let your colleagues in on it too.

Do you have a burning question for our FAQs? Email david@amecal.com for an answer.

Customer FAQs

Frequently Asked Questions

Q: CALIBRATION CERTIFICATES GIVE TRACEABILITY, BUT WHAT DOES THAT MEAN?

A: 'Traceability' is used to certify, or prove, the accuracy of an instrument in relation to a relevant and accepted international standard. It refers to an unbroken chain of comparisons (of measurements), connecting an individual instrument to a known international standard.

In practice, this means that an instrument's measurements have been compared with the measurements of another instrument, which has in turn been compared to another instrument – in a chain which leads, ultimately, to a recognized national and legal standard.

This national standard is itself traceable to an international standard – an appropriate fundamental international system unit of measurement (the SI unit).

Q: WHAT DO THE OTHER TERMS ON MY CALIBRATION CERTIFICATE MEAN?

A: Tolerance: This is a range set by the manufacturer - the amount the equipment is allowed to vary from the 'input' in order to be called accurate / within calibration.

Set/Applied: This is the 'input' applied by the calibration company to assess the testing equipment's readings / accuracy.

Meas/Ind: This is the reading given by the equipment as a result of the 'input' above – the measurement or indication the equipment gives.

% of Spec: The amount the reading given by the equipment varies from the input – given as a percentage of the amount 'allowed' (Tolerance).

Uncertainties: A reflection of the calibration company's accuracy – by how much the calibrator is uncertain about their 'input' (see ILAC article).

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