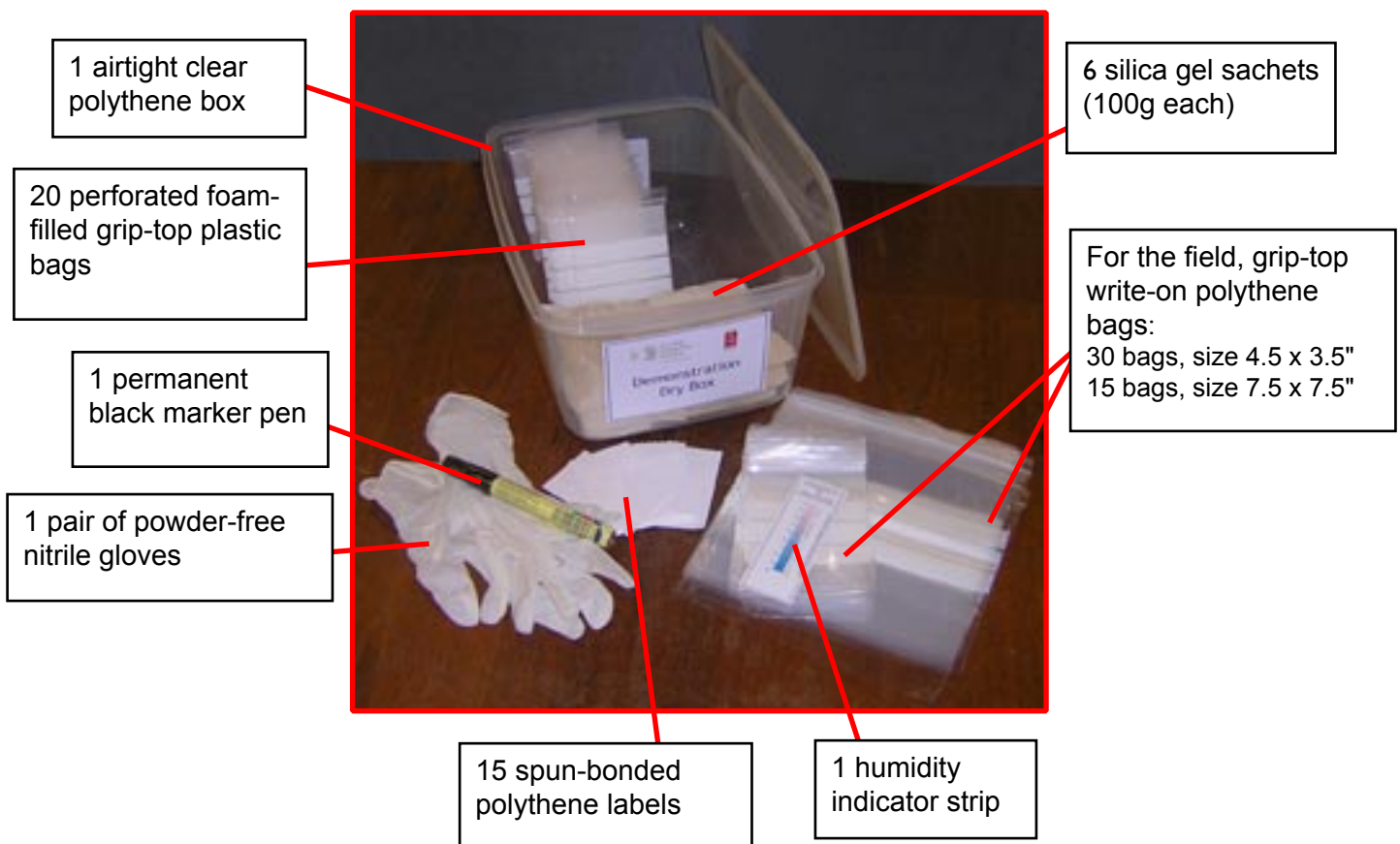


# Safe storage for metal finds

## The PAS Dry Box

The Portable Antiquities Scheme is supplying each Finds Liaison Officer with a Dry Box to demonstrate safe storage for metal finds. The box contains a range of packing materials which members of the public might find useful. If sufficient interest is shown, commercial suppliers could perhaps be contacted to make the box or small quantities of materials more widely available to the detecting community.

### Each Dry Box includes:



All materials are conservation grade and have been tested for stability in long-term storage.

### **REMEMBER!**

- **MAKE SURE THE LID IS FIRMLY ON**
- **REPLACE THE LID WHEN YOU TAKE SOMETHING OUT OF THE BOX.**

**OTHERWISE YOUR SILICA GEL WILL QUICKLY BE EXHAUSTED!**

# Safe storage for metal finds

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## Maintaining a dry environment

Moisture and oxygen cause corrosion, so maintaining a dry environment is the easiest way to protect metal finds. Studies have shown that iron will not corrode when it is stored dry at <15% Relative Humidity (RH), and copper alloy at < 35% RH. Normally a centrally heated building will range between 40–60%RH.

Silica gel absorbs water from its surroundings and releases it again when it is heated; it can be used to create a dry environment within a sealed box.

This dry box contains 6x100g sachets of non-indicating silica gel crystals: the weight has been calculated to dry out the volume of this container\*. The silica gel will absorb the water vapour in the box until it has absorbed as much as it can. Don't leave the lid off the box or the gel will absorb water vapour from the surrounding room until it becomes fully saturated and won't be able to keep the metal finds dry any longer.

Your PAS dry box contains an indicator strip to register the RH inside the box. It should be placed so it is visible through the wall of the box (we have taped it at the front). If the upper square on the indicator strip turns pink it is time to dry out the silica gel.

## Regenerating the silica gel

Some museums and labs may be able to regenerate the gel for you (there may be a charge for this service). Silica gel bags can be dried out in an electric oven at about 110–120 °C for up to several hours, depending on the quantity of the gel and the amount of moisture the bag has absorbed. If you weigh the bags before and after heating, you can tell when the bags are not losing any more weight, and have dried out.

## Health and Safety

**KEEP SILICA GEL BAGS AWAY FROM SMALL CHILDREN.**

Silica gel bags may have a drying effect on the skin. The cloth bag will minimise any dust hazard from the gel, but if the bag bursts or is accidentally opened, the loose gel should be swept up (avoid raising dust), sealed in a polythene bag and thrown away.

\*see the chart in *First Aid for Finds*, p23, if you need to calculate the weight of silica gel to use for different sized containers.

## Safe storage for metal finds

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Each dry box cost c. £15 in materials alone (excluding jiffy foam and labour).

Our Suppliers were:

Item	price (2004)
<b>1 airtight polythene box</b>	<b>£4.80</b>

Stewart Plastics Ltd, Stewart House, Waddon Marsh Way, Croydon, CR9 4HS  
Tel: 0208 6862231 , Order cat. no. 1780008, minimum order c.50 boxes.

Small quantities are available from:

Azpack Limited, 12 Kernan Drive, Swingbridge Trading Estate,  
Loughborough, Leicestershire LE11 5JF. Tel: 01509 261256 Fax: 01509 610650  
Email [sales@azpack.ltd.uk](mailto:sales@azpack.ltd.uk), website [www.azpack.ltd.uk](http://www.azpack.ltd.uk)

<b>Mini-grip write-on polythene bags</b>	
<b>50 of size 3.5 x 4.5 inches c. 2p ea</b>	<b>£1.00</b>
<b>15 of size 7.5 x 7.5 inches c. 3p ea</b>	<b>£0.45</b>
York Box (01904 610651)	

<b>1 roll of 4mm jiffy foam (75mx1m)</b>	<b>£44.40</b>
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Professional Paper Supplies (01904 787834)

(You can cut the jiffy foam to the right size so it fills the bag completely leaving no gaps for small fragments to fall into, and perforate the bags adequately to allow air to circulate, or you might find a local firm who would be able to do this by arrangement. This could cost c10-15p per bag depending on the supplier and the order size. So ready-filled bags will add £2-3 to the box price)

<b>6 x 100g silica gel sachets</b>	<b>£3.30</b>
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Silica gel bags (non-indicating cloth bags 100g)

Geejay Chemical Ltd

16 Gosforth Close, Sandy, Beds SG19 1RB

Tel: 01767 692409 Fax: 01767 692409 email: [sales@geejaychemicals.co.uk](mailto:sales@geejaychemicals.co.uk)

<b>1 humidity indicator card</b>	<b>£1.38</b>
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Cat no. IN20A – Humidity Indicator cards 38x108mm available in packs of 10

[www.conservation-by-design.co.uk](http://www.conservation-by-design.co.uk)

The position of the lavender section indicates the relative humidity of the surrounding air.

<b>1 pair powder-free nitrile gloves</b>	<b>£0.18</b>
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Cat No. 3S-HRGN83W-C Medium: £9.00 per box of 100, white

York Glassware Tel: 651493, Fax: 01904 611932

<b>1 permanent black marker “Artline” pen</b>	<b>£0.96</b>
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MBF Artline pens Tel: 0161 4067722

<b>15 spun bonded polythene labels</b>	<b>£0.33</b>
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“Tyvek” labels 85mm x 50mm no holes

IML Sheffield Tel: 0114 246 5771

**Please note:** The inclusion of a supplier in this fact sheet does not imply endorsement by the PAS of the product or service. You are therefore urged, in your own interests, to ensure that any product or service is appropriate to your needs. Remember, businesses sometime change their specifications and alter their products and most suppliers have minimum order numbers.