SHELF LIFE AND STORAGE OF PPI PRODUCTS – GUIDELINES AND INFORMATION

In order to **maximise** the shelf life of an adhesive product, it is internationally recommend that the product is stored in its original packaging in a cool, dry place away from direct sunlight and under the following ***ideal conditions***;

23 deg. C +/- 2 deg. C (73 deg. F +/- 4 deg. F) and 50 % Relative Humidity +/- 2 % RH

As this level of control is not always possible or adhered to strictly, storage between 16'C to 26'C and 45% to 60% Relative Humidity is needed to ensure that our products to you function correctly – storage outside of this voids our guarantee.

We give a 6 month shelf-life guarantee for all products supplied and stored under the above conditions – exceptions to this will be stated when ordering the product, when that product has a shorter shelf life according to its chemical ingredients or stability.

We recommend a FIFO Inventory system at our customers premises ie a First In/First Out rota.

Our tape performance is not expected to alter even after the shelf life expires but we do suggest that all tapes are used prior to that date.
A retest of a roll tape from you can be arranged if the need arises after a shelf life expires.

All adhesive tapes are based on viscoelastic polymers, which have been applied onto a film, foil or paper substrate. If adhesive tapes are stored out side the recommended range then a variety of effects can be noted as follows :

STORAGE TEMPERATURE VARIANCE

Storage at Low Temperatures

Due to the viscoelastic nature of the adhesive, as the ambient temperature drops then so does the instant adhesion / tack of the tape. Therefore if tape has been stored at low temperatures (less than 10 deg.C) it is always recommendable to return the tape to the recommended ideal conditions above (23'C / 50% RH) firstly, before use, for a period of no less than 24 hours. This generally returns the properties to the tape.

Storage at High Temperatures

Again due to the viscoelastic effects of the adhesive polymer, storage at high temperatures can have particular effects on the tape. Predominately, a greater degree of adhesive oozing at the roll edges can be noted. Adhesive oozing is a normal effect and for this reason we supply all our product with silicone coated paper rings that protect the ends of the rolls. In addition to oozing, it is most noticeable that the roll unwind strength of the tape may also increase after heat exposure. This can, in extreme cases, cause adhesive delamination and / or adhesive transfer on the roll. Understandably the greater the storage time and temperatures involved then the greater the degree of adhesive edge oozing and roll unwind-force will be.
Returning the tape to ideal conditions after excessive heat exposure will not return their properties in many cases.

STORAGE HUMIDITY VARIANCE

Storage at High Humidity / Effects of Moisture Exposure

The majority of the products in the PPI product range have excellent resistance to water however some of our products are sensitive to moisture exposure as the following explains :

Nomex (Du Pont)

Nomex is an aramid (aromatic polyamide) polymeric paper material that inherently tends to absorb water / moisture from its environment. This water absorption characteristic can obviously affect the electrical insulation properties of the tape and in some cases the surface appearance of the tape.
Also the width of the roll may increase / decrease with moisture levels fluctuations.

Polyvinyl Alcohol based Tapes

We have some water soluble tapes in our range. These products are designed to be water soluble and therefore they do exhibit changes if exposed to different moisture levels. Accordingly we take precaution to ensure that these products are packed with “moisture absorbing gel packs” and then are sealed within plastic bags to reduce any “moisture effects” that might occur.

Metal Foil based Tapes

Many metal foil based tapes have a nature tendency to discolour / tarnish / oxidize. The actual degree of oxidation is directly related to the relative humidity in the environment and the sensitivity of the specific type of metal foil. Obviously copper foil will discolour more noticeably than a more resistant aluminium foil grade. Needless to say this effect would also be promoted if the tape was exposed to a corrosive chemical environment (e.g. salt spray, etc).

Tapes with Silicone Paper Liners

Paper as we all are aware also does have a tendency to absorb humidity from the environment. In excessive cases this effect may lead to deformation / wrinkling of the silicone paper liner which can lead to impression lines on the substrate that it is attached to.

To limit the potential for any negative effect during transportation and storage before the customer uses our tape, we in PPI pack such products in a sealable polyethylene bag.
Please do not remove these products from their bags until needed for use and return to the bags if only partially used.

If a tape should become wet/damp through incorrect storage or transportation, then please allow the tape to dry out fully before use. Contact us for further guidance as heating the tapes to drive moisture out is not always an option.

UV Exposure

We recommend that all of our products are stored in their original packaging and away from direct sunlight. This recommendation is made because some of our products (typically rubber based adhesives) are sensitive to UV light exposure. If exposure to excessive UV light, these tapes can discolour (yellowing) or even loose their adhesion properties completely.

CARRAIGE OF GOODS

We also advise that goods be transported as quickly as possible to their final destination, as, more often than not temperatures outside of our recommended range are reached especially during sea-freight from Europe to Asia over longer time periods. This is especially valid for self wound tapes on sea-freight for up to 2 months during the summer months.