Objective
To provide guidance on the safe handling and storage of adhesives and sealants.

Background
Adhesives and sealants come in different forms. They can pose safety risks to workers in the form of fires and explosions, or health risks due to their chemical properties.

Risk control measures

Hygiene
• The consumption and/or storage of any food or beverages should be prohibited in areas where adhesives are handled or used.
• Do not store any food or drink in designated chemical storage areas.
• Certain adhesives emit dust or toxic vapours which can be a health hazard. Refer to the Safety Data Sheet (SDS) for Personal Protective Equipment (PPE) requirements such as dust masks, respirators, protective clothing, eye protection and/or adequate ventilation.
• Skin contact should be minimised. Refer to the manufacturer’s recommendations on barrier and cleansing creams appropriate for their products.

Spillage and waste disposal
• Spillages of any type must be attended to immediately.
• Refer to the SDS on spillage procedures. Generally an inert material can be used to soak up the spillage, which can then be placed in a suitably closed container for safe disposal.
• For solvent-based adhesives, care must be taken in the disposal of full or empty containers to avoid a latent explosion and/or fire hazard.
• The empty containers should be either carefully punctured or left open to eliminate/minimise solvent vapour-air expansion and internal pressure build-up when subject to high ambient temperature.

Note: Aerosol packages are pressurised and must not be punctured unless all internal pressure has been relieved.

Storage
• The storage of adhesives and sealants should be restricted to ‘no smoking’ areas, as even non-flammable adhesives can emit vapours which may be converted to toxic products by a burning cigarette.
• All flammable adhesives should be stored in suitable flameproof areas.
• All adhesives and sealants should be stored in dry conditions and within the temperature range as recommended by the manufacturer or the SDS. Typical temperature range is 5°C to 30°C.
• Warm drums of solvent-based adhesives should be opened slowly and carefully to allow gradual release of internal pressure.
• To ensure that the useful shelf life of adhesive products is not exceeded, strict rotation of stock should be observed.
• In all cases, the manufacturer’s instructions and directions printed on both the SDS and the label should be observed.

Usage
• Use adhesives and sealants in well-ventilated areas, and avoid inhaling the vapours.
• Avoid contact with the skin.
• Removal of adhesives from the skin should be done with suitable antiseptic cleaning agents rather than straight solvents.
• When handling low-viscosity adhesives, suitably approved goggles or face shields should be worn to protect the eyes from splashes.
• Avoid build-up of solvent vapours in the work atmosphere (hot spots) by ensuring adequate ventilation and the use of flameproof exhaust fans where necessary. If this is not practicable, then suitable breathing apparatus, such as respirators, should be worn.
**Hot melt adhesives**
- Hot melt adhesives in molten form present the greatest hazards during use or application.
- Suitable protective clothing must be worn to prevent severe burns arising from skin contact.
- Suitably approved eye and face protection should also be used if molten adhesive is being used or transferred, or if there is a danger of splashing.
- Hot melts may emit fumes during operation. The vapours given off are not normally considered to be toxic, but they should not be inhaled and suitable forced draught ventilation should be provided.
- Hot melt adhesives should be used at the recommended operating temperatures. If overheating occurs there could be a fire risk, as the vapours evolved might be ignitable by a spark.
- If a fire does start, a dry powder extinguisher should be used. Under no circumstances should water be allowed to come into contact with the molten adhesive.

**Powder adhesives**
- Powder adhesives cover a wide range of products – from powdered starch and animal glues, which are relatively innocuous, to the more hazardous synthetic resin powders.
- Under certain circumstances dust can present an explosion hazard. This risk can be avoided by good housekeeping and maintaining low dust levels.
- Inhalation of dust is another potential hazard. Exposure should be minimised with suitable respirators being worn where necessary.
- Some powdered glues may cause dermatitis. Refer to the SDS and strictly follow the manufacturer’s recommendations. As a general precaution, pay particular attention to personal hygiene and avoid direct handling. The use of barrier creams and/or protective gloves is recommended.
- Some powder adhesives may contain caustic or acidic material. Approved eye protective goggles must be worn when handling these products.