For particularly dirty atmospheres or where access is difficult, the best choice would be dust-proof or dust-tight luminaires, ventilated luminaires that are designed to use air currents to keep them clean, or lamps with internal reflectors. Even the most protected luminaires, e.g. dust-tight luminaires, will collect dirt on their external surfaces. Therefore even these luminaires will need cleaning regularly.

The appropriate cleaning interval for luminaires and the lamps they contain is a basic design decision. The factors that need to be considered are the cost and convenience of cleaning at a particular time and the illuminance at that time in relation to the design maintained illuminance. As a general guide, luminaires should be cleaned at least once a year but for some locations this will not be sufficient.

A wide range of materials is used in luminaires. Table 21.1 summarises the most suitable cleaning methods for different materials. Additionally, equipment manufacturers provide useful information on the most appropriate cleaning methods, or guidance can be obtained from specialist cleaning product suppliers.

Table 21.1 Methods for cleaning materials used in luminaires

Materials	Cleaning methods
Anodized aluminium	Surfaces should be cleaned with a non-abrasive cloth or sponge using a neutral detergent in warm water which does not leave a residue and then allowed to air dry. Ultrasonic cleaning techniques. Severe staining or contamination should be removed first by metal polish.
Stainless steel	Surfaces should be cleaned with a non-abrasive cloth or sponge using a neutral detergent in warm water and then the surface dried with a clean cloth, following the grain of brushed finishes where applicable. Surface lustre may be restored by applying an oil-based cleaning compound with a cloth and wiping off all surplus.
Galvanized steel, natural aluminium	Surfaces should be cleaned with a neutral-based detergent and wiped dry.
Enamel paint finish, polyester powder coat	Surfaces should be cleaned with a non-abrasive cloth or sponge using a neutral detergent in warm water and the surface dried with a clean cloth. Solvent-based cleaners should not be used.
Glass	Surfaces should be cleaned with a non-abrasive cloth or sponge using a neutral detergent in warm water that does not leave a residue, then wiped and allowed to air dry.
Acrylic, polycarbonate, glass-polyester, reinforced plastic	Remove loose dirt and dust with a vacuum cleaner. Surfaces should be cleaned with a non-abrasive cloth or sponge using a neutral-based detergent that does not leave any residue, then rinsed and wiped dry with warm water containing an anti-static solution. Solvent-based cleaners should not be used under any circumstances. Ultrasonic cleaning techniques.