

ENVIRONMENTAL PROCEDURES



modern moulds associates ltd

**LIGHTSFIELD
OAKLEY
BASINGSTOKE
HAMPSHIRE
RG23 7BY**

ENVIRONMENTAL PROCEDURES

1.1 ENVIRONMENTAL MANAGEMENT

The purpose of the company's environmental management procedure is to minimise our impact to both our immediate and global environment by constant review. It is also key to review existing projects to see if their impact can be reduced. Wherever possible the company complies with and adheres to the requirements of ISO 14001.

The key areas for attention are as follows:

1. Reduction of the electrical power we use.
2. Removal of harmful, regulated or banned substances used in our customers products.
3. Reduction of wasted packaging, secondary activities or transport.
4. Rework of scrap and reject parts from production.

This list is not exhaustive and any additional requirements should be added with the approval of a company director.

1.2 ENVIRONMENTAL POLICY

Modern Moulds Associates Ltd is a well established company with an enviable reputation within the plastic injection moulding industry, our valued staff have many years experience of providing tooling, moulds and supplying injection moulded parts and assemblies to a wide variety of industry sectors.

We provide a friendly, efficient and prompt service in response to all our clients' requirements. Modern Moulds Associates Ltd as a company offers total commitment to meeting the expectations of our customers while providing a cost effective and flexible manufacturing and supply capability that is second to none.

Protection of the environment in which we live and operate is part of Modern Moulds Associates Ltd values and principles and we consider it to be sound business practice. Care for the environment is one of our key responsibilities and an important part of the way in which we do business.

- In this policy statement we commit our company to:
- Complying with all relevant environmental legislation, regulations and approved codes of practice;
- Protecting the environment by striving to prevent and minimise our contribution to pollution of land, air, and water;
- Seeking to keep wastage to a minimum and maximise the efficient use of materials and resources;
- Managing and disposing of all waste in a responsible manner;
- Providing training for our staff so that we all work in accordance with this policy and within an environmentally aware culture,
- Regularly communicating our environmental performance to our employees and other significant stakeholders;
- Developing our management processes to ensure that environmental factors are considered during planning and implementation;
- Monitoring and continuously improving our environmental performance.

The policy statement will be regularly reviewed and updated as necessary. The management team endorses these policy statements and is fully committed to their implementation.

Signed on Behalf of the Company:
(Director)

Date:

1.3 COMPANY ENVIRONMENTAL ACHIEVEMENT RECORD

ITEM	CONCERN or REQUIREMENT	ACTION	DATE
1	Use of Cadmium Pigments in yellow products for nylon.	Sourced an alternative pigment, same cost.	2005
1a	Transport reviewed.	Use hauliers for long distances not own transport. Cost and Fuel saved.	2004
2.	Large quantity of polypropylene used >15t pcm. Much used for "disposable" products	Sourced a reprocessed plastic from Luxus made from post industrial and post consumer sources. Saved also £200 pmt	2005
3.	FR ABS and FR PCABS products reviewed to ensure no banned substances	All ok	2006
4.	Packaging to long term local customer changed to plastic bins	Customer free issued bins. Saved 20 cartons per weeks. Passed on saving to customer	2006
5.	Site Wide review by the Carbon Trust to review company polycys and activities to reduce carbon emmissions	Appropriate recommended measures implemented. Except upgraded lighting which will be phased in as and when existing units fail. (Lighting now completed in 98% of factory)	2006/7 (2011)
6.	ABS mirror backs to be marked >ABS<	Free of charge to customer, carried out when tools are set up and run.	2006/7
7.	Procurement of materials in one monthly batch.	Cuts down on suppliers transport, transport costs and reduction in cost to us. Requires advance notice from our customers of upcoming orders.	2007
8.	Waste paper and cardboard	Have now sourced a local company to recycle plastic bags, cardboard and paper. We now have saved 50% going to landfill	17/8/2010
9.	Rework of scrap and reject parts from production.	Ongoing	2008
10.			
11.			
12.			

1.4 MATERIAL DECLARATIONS

There are a number of EU directives which affect the materials we use in our finished parts and in their creation. We have compiled this declaration to show our continued compliance with these directives and recommendations.

1.5 RoHS

The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of the chemicals listed below.

Producers shall ensure that new electrical and electronic equipment put on the market on or after 1st February 2008 does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in quantities exceeding the following maximum concentration value levels

- (a) 0.1% by weight in homogeneous materials for lead;
- (b) 0.1% by weight in homogeneous materials for mercury;
- (c) 0.1% by weight in homogeneous materials for hexavalent chromium;
- (d) 0.1% by weight in homogeneous materials for polybrominated biphenyls;
- (e) 0.1% by weight in homogeneous materials for polybrominated diphenyl ethers; and
- (f) 0.01% by weight in homogeneous materials for cadmium.

Many of the chemicals mentioned in the banned list above have never been used in the plastic parts manufactured by the injection moulding plastics industry. The chemicals relevant to the plastics industry are the PBE and PBDE which were a constituent part of flame retardant additives in early FR rated plastics. These haven't been used in UK sourced materials for many years but have been present until recently in the lower quality end of the Asian imported goods and Asian sourced parts. Cadmium is used in some colour pigments to stabilise the colour at higher temperatures for the use in technical polymers.

1. The virgin grades of plastics MMA source contain none of the banned substances listed above so they comply with the requirements of RoHS.
2. All pigments used in the colouration of parts for the electronics industry do not contain any of the banned substances. Therefore they comply with RoHS
3. MMA dont add any of the banned substances in the production of our parts for the electronics industry therefore they will comply with RoHS.

1.6 REPROCESSED PLASTICS

We regularly purchase reprocessed plastics for the manufacture of various components for a variety of industries. The use of these plastics is obviously deemed very environmentally friendly as it makes use of industry and post consumer waste.

However the reprocessors of these plastics cannot 100% guarantee that there will never be any of the banned substances in the finished material. For them to test every batch of recycled plastic which are sourced from many areas of industry and post consumer waste would be too prohibitive financially and stop this valuable recycling effort. This is essentially what WEEE (see below) is all about.

What they do to show due diligence is random sampling of finished product on a monthly basis. If any of the banned chemicals are present they can take appropriate action. Any chemicals which may be present have not "been intentionally introduced" or "deliberately utilised in the formulation of a material or component where its continued presence is desired in the final product to provide a characteristic, appearance or quality. The use of recycled material as feedstock for the manufacture of new products, where some portion of the recycled

materials may contain amounts of regulated elements, is not to be considered as intentionally introduced" (extract from Luxus Ltd Compliance Declaration)

If this statement is of concern or not deemed compliant enough for your industry or customer then please advise us so we can recommend suitable alternative materials for the manufacture of your parts.

1.7 BANNED SUBSTANCES

In addition to the substances banned under RoHS there are several chemicals and substances which are also commonly banned or restricted in their use. Many of these have never been used by the plastics industry. The following substances are not used in parts manufactured by MMA.

Asbestos excluding Chrysotile [-]

Dioxin and dibenzofurans [-]

Chlorofluorocarbons (Specified) (CFC-11, 12, 113, 114, 115) [75-69-4, 75-71-8, 76-13-1, 76-14-2, 76-15-3]

Halon-1211, 1301, 2402 [353-59-3, 75-63-8, 124-73-2]

CFC-13, 111, 112, 211, 212, 213, 214, 215, 216, 217 [□]

Carbon Tetrachloride [56-23-5]

1,1,1-trichloroethane [71-55-6]

HBFC [-]

Bromochloromethane [74-97-5]

Polychlorinated Biphenyls (PCB) [1336-36-3]

Polychlorinated Naphthalenes (with more than 3 chlorine atoms) [70776-03-3]

Hexachlorobenzene [118-74-1]

Aldrin [309-00-2]

Dieldrin [60-57-1]

Endrin [72-20-8]

DDT [50-29-3]

Chlordane [57-74-9]

Bis(tributyltin)oxide [56-35-9]

N,N'-ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine and N,N'-dixylyl-p-phenylenediamine

[27417-40-9, 28726-30-9, 70290-05-0]

2,4,6-tri-tert-butylphenol [732-26-3]

Toxaphen [8001-35-2]

Mirex [2385-85-5]

Lucifers [7723-14-0]

Benzidine [92-87-5, -]

4-Aminobiphenyl [92-67-1, -]

Amosite [12172-73-5]

Crocidolite [12001-28-4]

4-Nitrobiphenyl [92-93-3, -]

Bis(chloromethyl)ether [542-88-1]

β -Naphthylamine [91-59-8, -]

Rubber cement including benzene (>5%) [-]

Heptachlor [76-44-8]

Triphenyl polychloride [61788-33-8]

Perfluorooctane Sulfonates (PFOS) [1763-23-1]

Perfluorooctanoic acid (PFOA) [335-67-1]

1.7 REPORTABLE SUBSTANCES

The reportable substances listed below are not yet banned but there is a desire to monitor their use. MMA don't currently use any of the substances below unless noted but if this changes then their use will be reported to the customer.

Antimony and its compounds [7440-36-0]
Arsenic and its compounds [7440-38-2]
Azo-Based Chemicals [-----]
Beryllium Oxide [1304-56-9]
Other forms of Beryllium [7440-41-7]
Bismuth and its alloys [7440-69-9]
Brominated Flame Retardants (note: suppliers must report use of brominated flame retardants and provide CAS number or ISO 1043-4 code) *SEE NOTE*
Magnesium and its alloys [7439-95-4]
Nickel and its compounds [7440-02-0]
Phthalates
Polyvinyl chloride (PVC) [9002-86-2]
Any radioactive substance
Selenium and its compounds [7782-49-2]
Tributyl tin & compounds [688-73-3]
Triphenyl tin & compounds [668-34-8]

The flame retardant additives in ABS we source and use may contain Brominated Flame Retardants.

1.8 SUBSTANCES of VERY HIGH CONCERN (SVHC)

There are a number of substances which environmentally are undesirable in finished goods and their production. MMA do not use any of these in the finished goods or production of the finished goods unless noted.

1,3-Butadiene or Buta-1,3-Diene [106-99-0] *SEE NOTE*
DEHP (Bis(2-Ethylhexyl) Phthalate or Di-(2-Ethylhexyl) Phthalate) [117-81-7]
Anthracene CAS no. 120-12-7
4,4' diaminodiphenylmethane CAS no. 101-77-9
Dibutyl phthalate(DBP) CAS no. 84-74-2
Cyclododecane CAS no. 294-62-2
Cobalt Dichloride CAS no. 7646-79-9
Diarsenic pentaoxide CAS no. 1303-28-2
Diarsenic trioxide CAS no. 1327-53-3
Sodium Dichromate,Dihydrate CAS no. 7789-12-0
Hexabromocyclododecane(HBCDD) CAS no. 25637-99-4

Bis(tributyltin)oxide(TBTO) CAS no. 56-35-9
Lead Hydrogen Arsenate CAS no. 7784-40-9
Triethyl Arsenate CAS no.15606-95-8
Benzyl Butyl phthalate(BBP) CAS no. 85-68-7
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) CAS no. 81-15-2
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) CAS no. 85535-84-8

The ABS and other impact modified styrenic compounds we source and use may well contain Butadiene.

1.9 WEEE

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment, by increasing re-use and recycling and reducing the amount of WEEE going to landfill. It seeks to achieve this by making producers responsible for financing the collection, treatment, and recovery of waste electrical equipment, and by obliging distributors to allow consumers to return their waste equipment free of charge.

The Waste Electrical and Electronic Equipment (WEEE) Directive was agreed on 13 February 2003, along with the related Directive on Restrictions of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS).

We do not manufacture any electrical or electronic equipment so this directive does not directly affect our business. However we manufacture both plastic enclosures and other parts for electronic equipment for our clients so we take on our role in assisting our client to ensure their product is as recyclable and reusable as practical.

The list below although not comprehensive is indicative of some of the considerations we regularly raise to our customers when assisting in designing new parts of equipment or continuing to supply existing part.

1. Ensuring the part complies with RoHS regulations with regard to banned substances.
2. Can the part be marked with a recycling logo to show the material used in its construction ie >ABS<. This will enable it to be easily recycled at the end of its life.
3. Can the part be manufactured from a recycled grade of material.
4. Does the part need the logo indicating to not 'bin' the part.
5. Does the part need the products manufacturer engraved / printed on it to ensure it can be returned to them for correct disposal or recycling.

1.10 REACH

REACH is a new EU regulation concerning the Registration, Evaluation, Authorisation and restriction of CHEMicals. It came into force on 1st June 2007 and replaces a number of European Directives and Regulations with a single system.

It is intended that all chemicals in excess of 1t imported from outside the EU will be registered by the importer or manufacturer so they can continue importing them.

MMA do not currently have any obligation under REACH as we do not manufacture or convert chemicals. However we are in a position where if our suppliers of Raw materials have not registered the chemicals that they import from outside the EU we could potentially be unable to supply our customers as we would have no raw materials. To this end we have received confirmation from all our major suppliers of raw materials that they have or will have advanced registered the materials and will then fully register the materials they supply with the enforcing authority.

We also dual source 95% of our raw materials so in the unlikely event that one of the manufacturers / suppliers gets let down then we can source elsewhere.

ISSUE	AMENDMENT	AUTHORISED	DATE
1	First Issue	Steve Whiles	3/9/2007

2	RoHS, WEEE, REaCH and SVHC sections added	Steve Whiles	16/10/2008