

To: Carl Rechin

I believe
the attached
information
will be
helpful.

JNW

P.S. This
is the
only
information
I have
on UK
Lead
content
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See
last
page

01-582 1185



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LEAD IN PAINT

Current Regulations

Until recently the only general legal restrictions on lead paints in the UK were the Lead Paint Regulations 1927. These required lead paints to be labelled as such and imposed restrictions on their use ie. for interior spraying or dry rubbing down of films.

For the purposes of these regulations a lead paint was defined as one in which the pigment yielded more than 5 per cent of soluble lead compounds when extracted under specified conditions with hydrochloric acid.

These regulations have now been superseded by the Control of Lead at Work Regulations 1980 [SI 1980: No.1248]. These require that in all cases involving the use of lead or its compounds an "assessment of lead work" needs to be carried out. The Approved Code of Practice which provides practical guidance in respect of the regulations itemises "types of lead work where there is liable to be significant exposure to lead" and specifically excludes:

- (i) painting with materials which contain less than 1% on the dry film
- (ii) work with low solubility lead compounds in paint.

The lead content of paints used on children's toys was restricted by The Toys (Safety) Regulations 1974 [SI 1974: No.1367] to 0.25% measured as total lead in the dry film.

As expected the restrictions on lead in paints on pencils and graphic instruments are more stringent and The Pencils and Graphic Instruments (Safety) Regulations 1974 limit the amount of lead to 0.025%. However this is defined as the soluble lead content of the dry film ie. lead which is extractable under specified conditions using hydrochloric acid.

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Future Regulations

In its Directive on the Classification Packaging and Labelling of Paints [Commission Directives 81/916/EEC and 83/265/EEC adapting and amending Commission Directive 77/728/EEC respectively] due to be implemented in the UK this year, the Commission require that all paints containing 1% soluble lead or more on the total paint be considered harmful and signified by the St. Andrews Cross symbol on the label and the phrase 'Contains Lead'.

In addition, paints containing more than 0.5% total lead should have on the label the phrase 'Contains lead. Should not be used on surfaces liable to be chewed or sucked by children'.

Note Current and future UK regulations define the lead content of paints both in terms of total and of soluble lead. There are arguments for and against both methods of definition. From the point of view of the analyst total lead is preferable since this value is unambiguous and can be determined precisely and reproducibly by different laboratories.

However medical authorities will argue that the amount of soluble lead is the really important parameter. This poses the problem of how to define soluble since the quantity of soluble lead which can be extracted from a dried paint film depends upon the composition of the solvent (in this case hydrochloric acid) the size of the paint particles, the temperature and duration of the extraction stage, the method of dispersing the particles in the solvent and the way in which the insoluble material is separated from the solution. Unless an analytical method defines all these parameters it is very unlikely that it will give good interlaboratory replication.

Voluntary restrictions in the UK

With increasing awareness of lead hazards it was considered that more stringent control should be placed on paints containing lead which were available to the general public. Accordingly in 1963 an agreement was reached between the Ministry of Health and the PAGB by which its Members undertook to label paints containing more than 1.5% total lead in the dry film with the phrase "Do not apply on toys, furniture or interior surfaces which might be chewed by children".

Again in 1973 the Home Office this time and the PAGB reviewed this level and agreed to lower it so that the warning label would appear on paints containing more than 1% total lead in the dry film.

[Note: This level of 1% total lead in the dry film is approximately equal to the EEC level of 0.5% total lead in the paint].

British Standards were drawn up to implement this agreement and provide reference and rapid test methods [BS 3900: B4 and BS 4310].

In practice the effect of this voluntary agreement is that almost all decorative paints are now formulated so as not to require the cautionary labelling.

The EEC

Regulations on the use of lead paints in Germany were implemented in 1930. A lead paint was defined as one containing more than 2% of lead compounds calculated as total lead. Detailed conditions were laid down as to how old lead paint could be removed and low lead paints could be sprayed.

In France, the manufacture of white lead has been forbidden since 1909. The use of white lead, lead sulphate and leaded linseed oil in building paints has been forbidden since 1938.

As a result of these two example of Continental legislation against lead compounds, our EEC partners offered strong resistance both at Government and Industry levels to the UK proposals to include the child warning phrase based on the UK Voluntary Labelling Scheme in the EEC Paints etc. Directive. They claimed to have no cases of child poisoning from leaded paints. It seemed to be purely a British[and American] disease.

In the long protracted negotiations at EEC level the other Member-states offered to label paints containing more than 2% soluble lead in the paint with the St..Andrews Cross symbol (Harmful) but subsequently agreed to reduce this level to the 1% level. It was only after persistent pressure that the child warning phrase was accepted to be applied to paints containing more than 0.5% total lead as well.

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There is now a new situation created by the Royal Commission Lead in the Environment viz. the recommendation that paints containing much less than 0.5% total lead should be subject to cautionary labelling as a result of mental retardation in children from small amounts of lead.

Bearing in mind the difficulties experienced in persuading other Member-States to accept the 0.5% level appearing in the Paints Directive and the fact that the evidence for mental retardation in children from small amounts of lead is by no means universally accepted, it will be extremely difficult to persuade the EEC that a lower lead limit should be now adopted.

Our industry is so international with that of Europe in general to render it impossible for the UK to act unilaterally in this respect.

British Standards

Toys and Playthings

BS 3443: 1968

This Code of Practice recommends safety aspects of design and performance of children's toys and playthings. It does not deal with sports equipment. Account is taken of The Toys (Safety) Regulations relating to toxic metal content eg. for total lead 0.25% in the film.

Safety of Toys

BS 5665:

The Parts of this Standard so far written deal with materials construction and design requirements for the mechanical and physical properties of toys and the categories of flammable materials not to be used in the manufacture of toys.

It is anticipated that future Parts will be drafted and that this will lead to a revision of The Toys (Safety) Regulations in that the soluble lead criterion will be used for paints in place of total lead as at present. When this happens BS 3443 will be withdrawn.

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Play Equipment for permanent installation outdoors

BS 5696: 1979

These recommendations are for the design of outdoor equipment to minimise potential hazards to children. They give recommendations also for installation and maintenance purposes including guidance on siting and lay-out. They recommend that non-toxic metals be used in coatings without specifying non-toxic levels.

This supersedes BS 3178: 1959

Fixed playground equipment for schools

BS 3191: 1959

The eight parts of this BS specify general requirements in respect of materials, workmanship finishes, assembly and maintenance of rope and steel tubular equipment for erection in enclosed school premises for use by school children up to the age of 12 years.

WEGM/NC
10 AUGUST, 1983

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