

ASARCO

Department of Environmental Sciences

December 7, 1978

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The enclosed set of "Recommendations for Safe Working with Asbestos-Cement Products" was recently sent to D.O.E.S. from the Environmental Control Committee of the Quebec Asbestos Mining Association. Mr. M. O. Varner suggested that I send this material on to you for your possible use.

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RECOMMENDATIONS FOR SAFE WORKING WITH ASBESTOS-CEMENT PRODUCTS

1 - PRODUCTS COVERED BY THESE RECOMMENDATIONS

All building materials and their ancillaries made of Asbestos-Cement such as :

slates, siding
corrugated sheets
flat sheets
pipes for every use
moulded and extruded products

2 - BASIC REQUIREMENTS FOR SAFE WORKING WITH ASBESTOS AND ASBESTOS-CEMENT PRODUCTS

Effects on health from working with ASBESTOS arise from inhaling harmful quantities of fine asbestos dust. At the present time, most countries regard concentration of 2 fibres per millilitre of asbestos dust, as the level above which exposure over a working period must be avoided. The effectiveness of control measures is normally assessed by measuring the average amount of such dust over a working period. For practical purposes, such measurements may be taken for part of a working day (e.g. one hour) if this can be regarded as representative of the full period.

By exception and for a short working time, where concentration above such level are unavoidable by technical improvement, operatives should be provided with personal protective equipment.

In the case of ASBESTOS-CEMENT products the normal Asbestos content of the material is around 10-13 per cent and this asbestos is tightly locked in the binder. The hard product does not release free respirable fibre under normal handling conditions. The only occasion when such fibres may be released into the atmosphere in significant numbers is when severe high speed cutting or other abrasive action is carried out over a period in an enclosed space.

3 - OPERATIONS TO WHICH THESE RECOMMENDATIONS MAY APPLY

Working ^{on} ~~up~~ Asbestos Cement products :

Cutting and machining
Sanding
Drilling
Filing

4 - RECOMMENDED PROCEDURE FOR THE CONTROL OF DUST IN THE USE OF ASBESTOS CEMENT PRODUCTS

Remember the two main rules for this control :

- avoid creating dust and use tools producing sand, clipping, pieces ... rather fine dust (manual tools - slow speed tools ..
- avoid scattering dust produced by abrasive and high speed tools, and use vacuum cleaning equipment or water to capture this dust.

4.1. Trade, stocking, handling, carrying ... manufacturer's standard Asbestos-Cement products do not need special precautions.

4.2. Work under Factory or Workshop Conditions



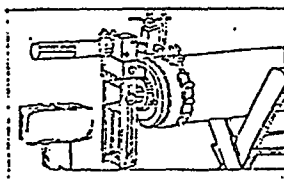
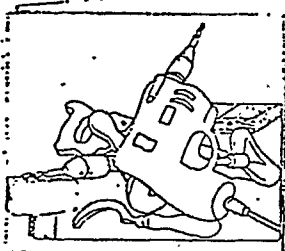
- 4.2.1. High velocity low volume dust extraction equipment should be fitted to every power sawing, drilling, sanding ... machine, to eliminate loose swarf and dust created by machining.
- 4.2.2. All loose swarf and dust should be removed from the work piece by vacuum cleaning.
- 4.2.3. Preferably boards should be cut singly. If pack cutting methods are used, boards must be passed singly after cutting through vacuum brushing equipment to remove dust forced between the layers during the former operation.
- 4.2.4. There will be some operations such as maintenance of dust filters etc. where it is necessary for personnel to be provided with protective clothing and respirator protection. Detailed recommendation as to type of respirators and clothing, for training in use, for laundering and for changing and storage accommodation is contained in the special AIA publication covering this matter.

4.3. Site Work

4.3.1. Asbestos Cement sheets, boards and pipes are generally used without machining - as standard products on site work.

4.3.2.

For hand operations, or short time and intermittent machining in the open air, precautions are not normally required.

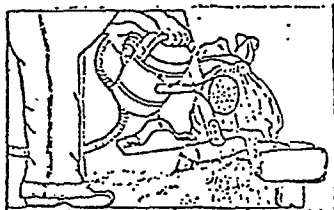


4.3.3.

When long continuous runs are carried out extraction equipment should be used with the machines, like in workshop conditions. Sometimes, tools for wet machining must be used.

4.3.4.

Working areas should be kept free from cutting dust by utilising the cleaning attachment available for use with the exhaust ventilating equipment, or using portable industrial vacuum cleaning machines.



In the event of these not being available on sites, floor should be thoroughly wetted and/or spread with damp sawdust prior to sweeping.

5 - SUITABLE EQUIPMENTS

Dust extraction
Vacuum cleaning
Specialised tools
Personal protective equipment

Full details of suppliers of suitable equipment which have been tested for use with products together with advice on the design and specification of such equipment are contained in the AIA Guide N° ...

Associations members whose address is contained elsewhere in this publication will be pleased to supply names and addresses national suppliers of such equipment.

6 - WASTE DISPOSAL

Trimnings and off cuts of Asbestos-Cement material will not produce harmful quantities of dust but to avoid unnecessary anxieties and criticism and in some countries to comply with legal requirements, where such waste materials occur in quantity, they should be collected in containers and disposed of in such a manner that they do not create dusty conditions.

7 - GENERAL

Further information on any of the points referred to in this guide or with any other aspect of safe working with asbestos will gladly be supplied by this Association by reference to the address quoted below or by reference to any one of the Association members whose address is contained elsewhere in this publication