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RECOMMENDED HEALTH SAFETY PRACTICES

For Handling And Applying Thermal Insulation Products Containing Asbestos



INTRODUCTION

The modern mass production of hundreds of natural and synthetic materials, such as asbestos, has brought the need to protect workers from certain health risks, known or suspected.

Manufacturers of Thermal Insulation Products containing asbestos have for years been taking protective measures to eliminate excessive exposures to inhalation of dusts that may be injurious.

Based on the fact that all materials can be handled safely, the National Insulation Manufacturers Association recommends the following practices for handling and applying Thermal Insulation Products containing asbestos and/or other potentially injurious materials to protect the worker.

Insulation contractors and applicators are urged to study these recommended practices carefully and to see that they are observed by all workers handling insulation materials. As with Safety Regulations, it is in the interest of both employer and employee to see that health protection practices are strictly observed.

Prepared By
COMMITTEE ON SAFETY AND HEALTH

NATIONAL INSULATION
NIMA
MANUFACTURERS ASS'N.

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FOR HEALTH SAFETY'S SAKE

Three major points to keep in mind in the handling and use of materials containing asbestos:

- *Take every precaution to keep dust to a minimum.*
- *Wear U.S. Bureau of Mines-approved Respirators when exposed to excessive dusts. (See Page 15)*
- *Maintain good housekeeping at all times.*

HOUSEKEEPING

An organized housekeeping program should be maintained in all areas and on all operations at all times.

A major source of excessive airborne dust is from loose materials, scrap and debris distributed throughout the job area and disintegrated by trampling on, running over, etc. Much of the airborne contamination can be eliminated by exercising simple good housekeeping practices.

Specific standards and practices designed for providing safe, clean and orderly working conditions should be defined.

Efficient supervisory control, planning of systematic cleaning plus day to day follow-up are the basic requirements for dust control and injury prevention.

PIPE AND BLOCK INSULATIONS

Warehousing, Storage and Handling

Under normal conditions, the handling, storage and warehousing of undamaged cartons of pipe and block insulations, containing asbestos, present no health safety problems. If cartons are broken or materials damaged while insulation is being handled, the following steps should be taken:

1 If spillage occurs, debris should be cleaned up immediately. Repack usable materials.

2 Care should be taken to avoid generating dust when piling, stacking or placing pieces into containers.

3 When cleaning spillage, vacuum equipment is recommended for picking up dust and small particles.

4 If large quantities of spillage occurs and cleaning involves sweeping and/or shoveling that could create excessive airborne dust, *Respirators should be worn.

5 Only usable material should be returned from the job site to the warehouse.

6 When returning material from the job site, clean dust and debris off cartons. Repack odd lot pieces. Close cartons.

*Bureau of Mines-approved respirators. See page 15.

Fabrication In Warehouse and Job Site Shops

1 Open and remove the material from cartons with care.

2 Handle and stack pieces of material in a manner that will avoid generating dust and breakage.

3 Mechanical dust collecting systems adequately designed to remove dust at the source should be installed on power-operated, fixed and portable equipment in the warehouse shop and/or in the job site shop.

4 All machines should be furnished with suitable waste containers for the collection of scrap and waste to prevent the material from falling on the floor and generating dust.

5 Shop-fabricated pieces of Thermal Insulation such as fittings, segments, etc., should be placed in containers. Care should be taken when handling these pieces during piling, stacking and packing.

6 Containers should be closed after packing and remain closed until the material is used.

Application Procedures

1 Unpacking and application of the material should be done in a manner that will minimize airborne dust.

2 Avoid dropping, throwing or unnecessary rough handling of insulation materials.

3 Keep floors and surfaces clean of scrap, shavings and debris. Put unusable material into waste containers immediately.

4 Hand sawing, cutting, jacket stripping, etc. should be done in a manner that will create minimal airborne dust. Use of proper methods and tools will help considerably towards dust abatement.

5 When working in confined spaces, portable dust collectors or exhaust blowers should be provided to remove dust from the source.

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Application Procedures (Cont'd)

6 If conditions prevent collecting or exhausting dust from the source, use exhaust blowers to provide general room air changes.

7 Avoid exhausting into other working areas.

8 In confined spaces, if mechanical exhaust equipment cannot be used, *Respirators should be worn.

9 When wiring or banding insulation and applying jackets or facings, care should be taken to avoid generating excessive dust, using the precautionary measures described above.

10 Surplus usable materials should be placed in cartons, which should be closed and returned to the warehouse.

*Bureau of Mines-approved respirators. See page 15.

CEMENTS

Warehousing, Storage and Handling

Handling and storage of closed bags containing cements do not present health safety hazards provided bags are unopened and not broken.

1 When unloading railroad cars and trucks, if there is excessive loose material resulting from opened or broken bags, *Respirators should be worn during clean-up and unloading.

2 Spillage should be cleaned up and open or broken bags repacked, resealed or discarded immediately to prevent distribution of dust into other areas.

3 If bags are damaged and spillage occurs in the warehouse, material should be cleaned up immediately to prevent distribution into other areas. Vacuum equipment is recommended for this cleaning.

4 If large quantities of spillage occurs and cleaning involves sweeping and/or shoveling that could create excessive dust, *Respirators should be worn.

*Bureau of Mines-approved respirators. See page 15.

Application of Cements

Opening, dumping and discarding of bags should be done with the utmost care to avoid generating excessive dust.

1 Open the bag wide enough to empty without shaking.

2 When dumping, keep bag on the mortar box mixing level to avoid dropping.

3 Do not shake bags.

4 Place empty bags in a container, wet down contents, and discard.

5 Mixing area should be well ventilated but free from heavy drafts that will cause dry material to become airborne.

6 Material should be mixed in a mortar box, pail or tub and not on the floor.

7 Wet the material and mix into a slurry as quickly as possible.

8 When mixing cement in a confined space where proper ventilation is inadequate, *Respirators should be worn.

Cleaning

1 Bag breakage, cleaning up dry cement and discarding bags at the mixing area should be done in the same manner as recommended under *Warehousing, Storage and Handling.*

2 Wet down tools, mortar boxes, wheelbarrows, mixing containers, and any spillage before scraping and cleaning.

3 Cements should be handled wet whenever possible. Wet material will create no dust problem.

*Bureau of Mines-approved respirators. See page 15.

SPRAYING OF THERMAL INSULATION

Spraying Areas

Spraying of Thermal Insulation Products containing asbestos requires special precautionary measures. Refer to the Sprayed Mineral Fiber Manufacturers Association for Sprayed Fiber Application Practices.†

1 The equipment and machinery to be sprayed should be shielded by adequate wind breaks and, where practicable, drop cloths to prevent excessive dust and contamination in adjacent areas.

2 Workers not engaged in the spraying operations should wear *Respirators when entering an area within 15 feet of the spraying machine, nozzle or equipment.

3 Where Sprayed Fiber Application Practices cannot be followed and excessive airborne dust is generated, it is recommended that portable mechanical exhaust ventilation be used to remove airborne dust. Exhaust must be located to avoid contamination of other occupied areas.

Application

1 All personnel in the immediate area engaged in the machine feeding and spraying operation should wear *Respirators, whether in confined or open areas, ventilated or not ventilated.

2 *Respirators should be worn after the spraying operation has been concluded and until the generated dust concentration has cleared.

†For copy of Practices, write to Executive Secretary, Sprayed Mineral Fiber Manufacturers Association, P.O. Box 487, Westfield, New Jersey 07090

*Bureau of Mines-approved respirators. See page 15.

Other Workmen

All personnel not involved with the machine feeding and spraying operation should be kept from the spraying area until the generated dust concentration has cleared.

Cleaning

1 Spillage and excess spraying materials should be cleaned up immediately after spraying operations have been completed.

2 Settled dust and fly material should be removed from all surfaces to avoid airborne contamination. Vacuum cleaning is recommended for this purpose.

3 Scrap spray material should be wet down and placed in closed containers for disposal.

4 Tools, ladders, etc. should be cleaned wet.

5 Avoid brushing, sweeping and shoveling dry material whenever possible.

6 *Respirators should be worn during clean-up.

*Bureau of Mines-approved respirators. See page 15.

STRIPPING OF THERMAL INSULATION

Stripping Area

Careful work methods, use of proper tools, and wetting down will minimize excessive dusts in stripping operations.

1 The area in which stripping takes place should be confined by means of curtains, portable partitions, etc., to prevent excessive dust contamination in adjacent areas.

2 If area cannot be confined, only workmen engaged in stripping should be permitted in the work location.

Stripping and Tearing Off

1 All personnel in the stripping area engaged in tearing off, handling, cleaning and disposing of material should wear *Respirators.

2 Where circumstances permit, materials should be wetted down prior to and during removal.

3 Where applicable, portable mechanical exhaust ventilation should be used to remove airborne dust.

4 Avoid unnecessary re-handling of scrap.

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*Bureau of Mines-approved respirators. See page 15.

Stripping and Tearing Off (cont'd)

5 Locate truck, dumpster bucket or final disposal equipment as close to stripping site as possible.

6 Wet down scrap material before shoveling, hauling or dumping.

7 Do not permit accumulation of scrap and debris on floor and other surfaces.

8 Vacuum equipment is recommended for cleaning up during and after stripping.

Other Workmen

1 Personnel not involved in the stripping and tearing off operation should not be permitted in the stripping area.

2 If it is essential for other workmen to be in the work area, *Respirators should be worn by them.

*Bureau of Mines-approved respirators. See page 15.

RESPIRATORY EQUIPMENT

Only U.S. Bureau of Mines-approved respiratory equipment is recommended for use with asbestos, silica and other pneumoconiosis-producing dusts. Approved respiratory equipment must be used at all operations where dust control is not sufficient to maintain airborne dust concentration within allowable limits for asbestos and other pneumoconiosis-producing dusts, as established by governmental and professional agencies.

The efficiency and effectiveness of respiratory equipment is dependent upon proper care, cleaning and maintenance. A systematic procedure should be established to assure that this is done.

Lists of currently approved respiratory equipment can be obtained from:

Bureau of Mines
United States Department of the Interior
Nineteenth and E Streets, N.W.
Washington, D.C. 20240

American Industrial Hygiene Association
14125 Prevost
Detroit, Michigan 48227