

CHAPTER 15 ASBESTOS AND ARTIFICIAL MINERAL FIBERS

C15.1 SCOPE

This chapter contains criteria to control and abate threats to human health and the environment from asbestos and artificial mineral fibers (AMFs), and describes management of asbestos and AMFs during removal and disposal.

Policy requirements for a comprehensive Occupational Health and Safety program are not addressed in this Chapter. To protect U.S. personnel from asbestos exposure, refer to DoDI 6055.1, "DoD Occupational Safety and Health Program," DoDI 6055.5, "Industrial Hygiene and Occupational Health," and concomitant service instructions.

C15.2 DEFINITIONS

Adequately wet. Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Artificial Mineral Fibers (AMFs). AMFs are continuous fibers, mineral wool, ceramic fibers, micro fibers, whiskers, and polycrystalline fibers. AMFs are used as building materials, often as replacements for asbestos.

Asbestos. Generic term used to describe six distinctive varieties of fibrous mineral silicates, including chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any other of these materials that has been chemically treated and/or altered.

Asbestos-containing material (ACM). Asbestos-containing materials are:

- asbestos-containing substances and preparations;
- asbestos-containing products during use of which dust containing asbestos may be released;
- substances and mixtures that contain asbestos as an impurity (e.g., many types of talc);
- mixtures to which asbestos has been specifically added (e.g., sprayed asbestos);
- products (e.g., asbestos-containing brake linings, asbestos cement products) that have been produced from asbestos, asbestos-containing substances, or asbestos-containing preparations or have parts containing asbestos (e.g., thermal storage heaters, machines equipped with seals containing asbestos); and
- asbestos cement products that are prefabricated, cement-bound products with an asbestos content less than 15 percent (%) by weight and a gross density of more than 1,400 kilograms per cubic meter (kg/m³).

Asbestos Fiber. An asbestos fiber has the following dimensions: length greater than 5 micrometer (µm), diameter less than 3 µm, and the ratio between the length and the diameter greater than 3:1.

Demolition work. Demolition work is work that includes pulling down structural installations, breaking up vehicles including ships, dismantling installations or equipment, and the associated secondary work.

DIN. *Deutsches Institut für Normung, e.V.* German Institute for Standardization, registered association.

Experts. Persons who, due to special training and experience, possess sufficient knowledge or professional competence with regard to handling ACM. Such persons are familiar with the relevant national regulations relating to protection, regulations relating to accident prevention, guidelines, and other generally recognized technological rules so that they are in a position to assess the protective measures that are required during the handling of ACM. Proof of expert knowledge or professional competence is provided by maintenance of current certification or registration as well as successful participation in an officially recognized training course on the handling of ACM. Successful participation in the training course is proven by means of an examination.

Friable asbestos. Any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.

Local national employee. A DoD employee hired under German employment conditions.

Maintenance work. Maintenance work is work that includes all of the measures required to preserve a desired state (i.e., routine and preventative maintenance), to determine and assess the actual state (i.e., inspection) and to re-establish the desired state (i.e., repair), including the reinstatement of products containing asbestos where necessary. Maintenance work also includes the necessary secondary work and temporary measures according to the meaning of the asbestos regulations such as, for example, coating, repairing damage, and closing gaps. DIN 31 501 "Maintenance, concepts and measures" provides additional explanation of the term maintenance work.

Other asbestos products. Other asbestos products that are neither weakly bound nor asbestos cement products.

Reconstruction work. Reconstruction work is work that includes the removal of asbestos-containing materials and, if necessary, their replacement with asbestos-free material, as well as the coating or spatial separation of weakly bound asbestos products, including the necessary secondary work in order to eliminate the risk of an undesired release of fibers.

Secondary work. Secondary work is work that includes the activities that may be conducted as part of abatement, for example:

- inspecting rooms contaminated by asbestos dust;
- sampling (bulk material sampling, air monitoring);
- clearing out rooms contaminated by asbestos dust;
- preparation work to set up building sites with specific exclusion zones (i.e., areas where the release of asbestos fibers cannot be prevented);
- cleaning rooms or objects contaminated by asbestos dust/fibers; and
- on-site (i.e., within the facility) transportation and storage of ACM.

Small-scale work. Small-scale work is work that meets all of the following conditions:

- the work is performed with the employment of no more than two workers;
- the duration of the work, up to its conclusion, including any required secondary work, but without clearance measurements that are possibly performed, does not exceed 4 hours; and
- the airborne asbestos fiber concentration is below 150,000 fibers per cubic meter (f/m³). Examples of this type of work include work on weakly bound asbestos products and work on asbestos cement products in the open air.

State of the art of technology. The current state of the art of technology is the developmental stage of advanced processes, installations, or modes of operation that makes the practical suitability of a measure for the protection of workers' health appear assured. When determining the state of the art of technology, particular consideration is to be given to comparable processes, installations, or mode of operations that have been tested successfully in practice.

Supervisor. A reliable person, appointed in writing by the employer, who is familiar with demolition, reconstruction, and maintenance work, the dangers associated with the work, and the necessary protective measures. The supervisor must be an expert and shall possess at least one year's practical experience in handling hazardous substances containing asbestos.

Weakly bound asbestos products. Asbestos-containing products, e.g. sprayed asbestos, light sheets containing asbestos, asbestos boards, packing cords, with a gross density below 1,000 kg/m³.

Work involving low exposure. Work is considered work involving low exposure if the asbestos-fiber concentration in the workplace is below 15,000 f/m³.

C15.3 REQUIREMENTS

C15.3.1 ASBESTOS PROGRAM MANAGEMENT

C15.3.1.1 Installations will appoint an asbestos program manager to serve as the single point of contact for all asbestos-related activities.

C15.3.1.2 Installations will prepare and implement an asbestos management plan. As a minimum, the plan will include the following.

C15.3.1.2.1 An ACM inventory, conducted by sample and analysis or visual determination, that must also include the urgency of abatement.

C15.3.1.2.1.1 The urgency of abatement will be determined based on the Asbestos Guideline using a standard form. The risks are assessed by criteria such as asbestos type, surface structure, location of the asbestos product, and use of the area/room. Classification points are assigned to each criterion. The sum of these classification points yields the urgency of reconstruction as follows:

- ≥ 80 points: Urgency Level I:
immediate abatement required;

- 70 to 79 points: Urgency Level II: medium-term reassessment required (< every 2 years);
 - < 70 points: Urgency Level III: long-term reassessment required (< every 5 years).
- C15.3.1.2.1.2 If the asbestos assessment yields Urgency Level I, immediate abatement is required, because a concrete hazard is present. In case the immediate complete abatement is not possible, immediate measures to reduce the release of asbestos fibers have to be taken.
- C15.3.1.2.1.3 If the asbestos assessment yields Urgency Levels II or III, the need for abatement is only required when subsequent reassessments result in Urgency Level I.
- C15.3.1.2.2 A notification and education program to tell workers, tenants, and building occupants where potentially friable ACM is located, and how and why to avoid disturbing the ACM; all persons affected should be properly informed. Additional requirements for demolition, renovation, and maintenance activities are included in C15.3.3.1.
- C15.3.1.2.3 Regular ACM surveillance to note, assess, and document any changes in the ACM's condition.
- C15.3.1.2.4 Work control/permit systems to control activities which might disturb ACM.
- C15.3.1.2.5 Operations and maintenance (O&M) work practices to avoid or minimize fiber release during activities affecting ACM.
- C15.3.1.2.6 Record keeping to document O&M activities related to asbestos identification management and abatement.
- C15.3.1.2.7 Training for the asbestos program manager as well as custodial and maintenance staff.
- C15.3.1.2.8 Procedures to assess and prioritize identified hazards for abatement.
- C15.3.1.2.9 Procedures to prevent the use of ACM in new construction.
- C15.3.2 REQUIREMENTS FOR DEMOLITION, RENOVATION, AND MAINTENANCE (DRM) WORK INVOLVING ASBESTOS-CONTAINING MATERIAL**
- C15.3.2.1 A determination whether an ACM is to be handled during the planned or anticipated work activities must be made prior to initiation of such work activities. If there is any doubt about whether an ACM is involved, a sample of the suspect material must be collected and analyzed.
- C15.3.2.2 Prior to the demolition or renovation of a facility that involves removing or disturbing friable ACM, a written assessment of the action will be prepared and furnished to the installation commander. A copy of the assessment will also be kept on permanent file.

C15.3.2.3 Prior to beginning work, medical monitoring, PPE determination, and health issues related to potential ACM exposure will be addressed to the appropriate DoD medical authority.

C15.3.2.4 Prior to the start of demolition work, products containing asbestos must be removed according to the state of the art of technology and disposed of properly. In the case of reconstruction work, as far as necessary, products containing asbestos must be removed and disposed of properly prior to the commencement of work.

C15.3.2.5 Instruction Sheet and Awareness Training for Handling Asbestos-Containing Materials.

The following requirements apply when local national employees perform DRM activities.

C15.3.2.5.1 An instruction sheet, specific to a particular workplace and the associated ACM must be provided to workers. The instruction sheet must be written in a comprehensible manner, in the language of the employees, and posted at a suitable location at the workplace. The instruction sheet must draw attention to the dangers to human health and the environment associated with the handling of ACM. At a minimum, the instruction sheet shall address personal protective measures and procedures, the proper disposal of generated hazardous wastes, emergency procedures, and first aid measures.

C15.3.2.5.2 Female workers of child-bearing age must be informed about the possible risks and work restrictions relating to expectant and breast-feeding mothers.

C15.3.2.5.3 An informative session (i.e., awareness training) for workers handling ACM in the workplace must be provided prior to initiating work activities and at least once a year thereafter (for long duration work activities). The awareness training may be given verbally and must include specific reference to the workplace (i.e., the particular locations and types of ACM present). The contents of the awareness training and the time the training was conducted must be recorded in writing and confirmed by the instructed persons by means of their signature. The proof of training/instruction must be kept for a period of at least 2 years.

C15.3.2.5.4 The instruction sheet and the verbal awareness training must be organized according to, and address, the following topics:

- work areas and workplace activities;
- dangers to man and the environment;
- protective measures, procedures, and hygiene measures;
- emergency procedures;
- first aid measures; and
- proper disposal procedures.

C15.3.2.5.5 If a work plan is required for the work activities involving ACM (see C15.3.2.6 that follows), the contents of the work plan must be addressed in the instruction sheet and the awareness training.

C15.3.2.6 Work Plan for Demolition and Reconstruction Activities.

C15.3.2.6.1 A work plan must be developed prior to undertaking demolition and reconstruction work on structural installations and prior to removing ACM from buildings, equipment, or ships.

C15.3.2.6.2 The work plan must be submitted to the appropriate German authority together with the associated notification of demolition and reconstruction work.

C15.3.2.6.3 The work plan must address the following information:

- the type and expected duration of the work;
- the place and execution of the work;
- the planned work methods and the planned protective measures;
- information on personal protective equipment;
- installations for the protection and decontamination of the workers and other persons employed in the danger area; and
- information regarding the proper disposal of generated wastes.

C15.3.2.7 Requirements for Demolition and Reconstruction Activities.

C15.3.2.7.1 A determination of whether the asbestos fiber concentration is below 15,000 fibers per cubic meter (f/m³) in the workplace must be made.

C15.3.2.7.2 Measurement results for comparable work activities may be considered for the purpose of the determination as long as:

- the work area analysis, the measurement method, and the measurement results have been documented;
- the protocol is available to the employer;
- the method of work is comparable; and
- the method of work is detailed in a work plan or instruction sheet.

C15.3.2.7.3 Asbestos fiber concentration measurement results in the workplace must be recorded and kept for at least 60 years.

C15.3.2.7.4 If contracts to perform asbestos fiber concentration measurements are placed externally, the contracts are only to be awarded to those external measurement organizations that are listed in the register of the Federal Minister of Labor and Social Affairs (published in the Federal Labor Gazette).

C15.3.2.8 Licensing.

C15.3.2.8.1 Contracted demolition and reconstruction work that is carried out on or in existing installations, buildings, or vehicles containing weakly bound asbestos products may only be conducted by organizations that have been licensed to carry out this work by the appropriate German authority.

C15.3.2.9 Notification.

The following requirements apply when local national employees perform DRM activities.

C15.3.2.9.1 At least 14 days prior to any local national employees commencing work involving the handling of ACM, the appropriate German authority must be notified.

C15.3.2.9.2 If, in the case of urgent work, the 14-day notification period cannot be adhered to, the appropriate German authority may agree to shortening this period.

C15.3.2.9.3 The notification, at a minimum, must include the following information:

- the identity, properties, and quantity of the ACM;
- a description of the work method;
- the protective measures that have been taken and, if intended, the type and quality of the protective equipment that are to be use;
- the number of workers handling the ACM;
- the type and extent of exposure to the ACM, in particular, measurement results or the results of the determination of the asbestos-fiber concentration as available; and
- the method and location of waste disposal.

C15.3.2.9.4 In the case of DRM work activities conducted on and in existing facilities, installations, vehicles (with the exception of road vehicles), buildings, or equipment that involve ACM, the notification must also include proof that the organization has the appropriate personnel and safety equipment for the work. The duty to furnish proof also applies to waste disposal.

C15.3.2.9.5 In the case of demolition and reconstruction work, a work plan must be submitted together with the notification.

C15.3.2.9.6 Copies of the required notifications must be provided to affected workers or a member of the works council for their information.

C15.3.2.9.7 A notification must be made in the case of a change in the working location as well as significant changes in the working method, protective measures, or number of workers handling the hazardous substance.

C15.3.2.9.8 Where small-scale DRM work is performed on asbestos cement surfaces of up to 100 m², information on the time and place of the work that is to be performed must be provided to the appropriate German authority prior

to commencement of the work. This does not apply to the removal of individual asbestos cement sheets.

C15.3.2.10 Restrictions on Exposure, Use, and Substitutes.

Except as described in this section, workers must not be exposed to ACM.

C15.3.2.10.1 The handling of ACM is prohibited. This prohibition is not applicable to:

- demolition work;
- reconstruction or maintenance work performed on existing facilities, vehicles, buildings, installations or equipment; or
- waste disposal.

C15.3.2.10.2 Equipment that removes the product surface by means of abrasion, cleaning with high or low pressure, or brushing is not permitted for use on asbestos products.

C15.3.2.10.3 It is not permitted for roof areas comprised of uncoated asbestos cement products to be cleaned.

C15.3.2.10.4 In the case of replacement during reconstruction and maintenance work; ACM must be replaced, according to the current state of the art of technology, by substances, preparations or products that pose a lower health risk.

C15.3.2.11 Responsible Person.

C15.3.2.11.1 Each organization that performs DRM work or disposes of asbestos-containing wastes must have an expert who is responsible for these activities. The responsible person must ensure that all legal requirements are met.

C15.3.2.12 Supervisor.

C15.3.2.12.1 The supervisor must ensure that the workers:

- are instructed in accordance with the instruction sheet;
- are re-examined within the framework of medical surveillance; and
- are instructed with regard to the use of respiratory protection equipment.

C15.3.2.12.2 The supervisor must always be present at the site during DRM work activities.

C15.3.2.12.3 In the case of work involving low exposure and secondary work, it is sufficient for one expert to be responsible for supervising individuals in spatially separate workplaces.

C15.3.2.13 Precautionary Measures.

C15.3.2.13.1 The following measures must be taken when handling ACM in the workplace:

- C15.3.2.13.1.1 The number of workers in the affected work areas is to be kept to the minimum required to perform the work.
- C15.3.2.13.1.2 Work areas in which ACM are handled must be clearly separated from other work areas and only made accessible to those workers who have to enter them to perform their work or specific tasks. Unauthorized persons must be forbidden access using the sign "**STOP, ACCESS PROHIBITED**" ("HALT, ZUTRITT VERBOTEN") in conjunction with the additional warning "**ASBESTOS FIBERS**" ("ASBESTFASERN").
- C15.3.2.13.1.3 Work areas must be so designed that they may be cleaned at all times. All work areas and equipment must be cleaned regularly.
- C15.3.2.13.1.4 Closed-off work areas in which ACM are handled must be identified using suitable warning and safety signs as well as by means of the sign bearing the phrase "**EATING, DRINKING, AND SMOKING PROHIBITED**" ("ESSEN, TRINKEN UND RAUCHEN VERBOTEN").
- C15.3.2.13.1.5 Asbestos-containing wastes must be stored, kept, and transported in accordance with Chapter 6, Hazardous Waste.
- C15.3.2.13.1.6 The employer must ensure that asbestos fibers cannot enter other workplaces, asbestos-free areas, or the outside air.
- C15.3.2.14 Weakly Bound Asbestos Products, Extensive Work.
- The following requirements apply to extensive work involving weakly bound asbestos.
- C15.3.2.14.1 Extensive work occurs whenever buildings or structural elements are disposed of, or are reconstructed on a large scale. The following are examples of extensive work:
- the removal of weakly bound asbestos products from roof trusses, walls, ceilings, and similar items, and
 - the consolidation and coating of weakly bound asbestos products.
- C15.3.2.14.2 Safety measures must be aimed at achieving an asbestos-fiber concentration below 1,000 f/m³ in the white areas (i.e., in the areas with no asbestos contamination) and in the vicinity of the work area.
- C15.3.2.14.3 By means of a sufficiently dimensioned room ventilation system with exhaust-air filter it must be ensured that:
- the work area is sufficiently ventilated in order to reduce the asbestos-fiber concentration; and
 - a sufficient negative pressure is maintained if dust-proof partitioning cannot be constructed.
- C15.3.2.14.4 Material decontamination installations (i.e., material locks) must be in such a way that objects and materials can be transported, cleaned, packaged and stored on an interim basis without difficulty.

- C15.3.2.14.5 Working methods employing to the state of the art of technology must be used so that as few asbestos fibers as possible are released.
- C15.3.2.14.6 Non-absorbent materials that either contain asbestos or are contaminated by asbestos must be processed or packaged in the work area in such a manner that, from the point of origin up to landfilling or transfer to a central processing plant, the release of asbestos fibers is prevented. The shredding of ACM is not permitted.
- C15.3.2.14.7 Asbestos-containing water generated during work activities must not be discharged into drains. Such water must be collected using a high-performance vacuum suction device or industrial vacuum cleaner and properly disposed.
- C15.3.2.14.8 Voice communication between the work area to the outside must be available.
- C15.3.2.15 Weakly-bound Asbestos Products, Small Scale Work.
- C15.3.2.15.1 Small-scale work (see Definitions section) on weakly bound asbestos products includes:
- the removal of asbestos boards under window-sills;
 - the removal of seals, e.g. on gas burners or doors;
 - the coating of partitions, e.g. for example, at the points where cables, ventilation ducts or smoke tubes pass through;
 - the coating by roller application of weakly bound, asbestos-containing sheets which are in good condition; and
 - the weight-reduction of thermal storage heaters.
- C15.3.2.15.2 Work areas must always be separated in a dust-proof manner and ventilated using an exhaust ventilation device to maintain negative pressure. If possible, work must be performed in moist conditions. A type-tested vacuum cleaner must be used for cleaning activities.
- C15.3.2.15.3 During demolition and reconstruction work, partitioning of the work area is not required if:
- openings to adjacent rooms remain closed;
 - non-workers do not enter the work area prior to completion of the work (including cleaning and ventilation);
 - on completion of the asbestos-handling work, the work area is cleaned carefully using a type-tested vacuum cleaner and wet-wiped; and
 - a 30-fold change of air is subsequently carried out.
- In these cases, clearance measurements can be eliminated.
- C15.3.2.15.4 In rooms with a floor covering that cannot be wet-wiped, the floor must be covered securely in a fiber-proof manner so that the covered floor can be wet-cleaned after completion of the work and prior to reuse. After

wet-cleaning, the secure covering must be removed and the flooring material cleaned with a type-tested approved vacuum cleaner.

C15.3.2.16 Clearance.

C15.3.2.16.1 Established protective measures can only be discontinued once the handling of asbestos and other ACM has been concluded. After extensive work, the protective measures in the work area may only be discontinued if:

- it has been confirmed by means of visual inspection that visible asbestos particles are no longer present;
- if, by means of measurement, it has been determined that the asbestos-fiber concentration in the ambient air is below 500 f/m³; and
- the upper limit of the 95% confidence limit for the asbestos-fiber concentration as calculated according to Poisson distribution amounts to less than 1,000 f/m³ (the maintenance of negative pressure in the measurement area must cease during this measurement).

C15.3.2.16.2 This does not exclude any clearance testing which may be required under other DoD or component policy.

C15.3.2.17 General Requirements for Maintenance Work.

C15.3.2.17.1 Maintenance work must be planned so as to avoid, as far as possible, the release or carry-over of asbestos fibers. As a matter of principle, work must be performed in a non-destructive manner. If this is not possible, the asbestos-containing parts must be moistened as far as possible (e.g. by using penetrating liquids).

C15.3.2.17.2 The use of machines operating at high speeds, such as grinders and drills, is not permitted. Any asbestos fibers that may be released are to be vacuumed off using type-tested vacuum cleaners. Any dust that is generated is to be transported in dust-proof containers. The transfer of container contents is not permitted.

C15.3.2.18 Maintenance Work on Brake Systems and Clutches.

C15.3.2.18.1 During the disassembly of worn friction linings, friction dust must be vacuumed off using a type-tested vacuum cleaner. Dust-binding wet cleaning is also possible if the cleaning agent does not impair the efficiency of the brake. The use of compressed air to blow the dust away is not permitted.

C15.3.2.18.2 In the case of maintenance work on clutches, similar procedures must be followed.

C15.3.3 RESPONSIBILITY FOR ASSESSMENT AND ABATEMENT

C15.3.3.1 It is the responsibility of the Installation Commander to perform the required assessment and abatement measures.

C15.3.3.2 Abatement must be performed in accordance with section C15.3.2.

- C15.3.3.3 Building components that are abated using coating or spatial separation have to be labeled as follows:

“Vorsicht bei Arbeiten an diesem Bauteil!
Enthält Asbest.

Gesundheitsgefährdung beim Einatmen von Asbestfasern.
Sicherheitsvorschriften beachten!”

”Caution while working on this building component!
Contains asbestos.

Health hazard by inhaling asbestos fibers.
Follow health and safety regulations”

C15.3.4 DISPOSAL OF ASBESTOS WASTE

- C15.3.4.1 When disposing of asbestos-containing waste, installations will adequately wet the waste, seal it in a leak proof container, and properly dispose of it in a landfill in accordance with Chapter 6, Hazardous Waste. Containers will be labeled with the following statement in the English and German languages:

”DANGER - CONTAINS ASBESTOS FIBERS - AVOID
CREATING DUST -
CANCER AND LUNG DISEASE HAZARD.

ACHTUNG ENTHÄLT ASBEST -
GESUNDHEITSGEFÄHRDUNG BEI EINATMEN VON
ASBESTFASERN - SICHERHEITSVORSCHRIFTEN
BEACHTEN - BEHÄLTER GESCHLOSSEN HALTEN.”

Permanent records documenting the transport and disposal action and site will be maintained at the DoD installation.

- C15.3.4.2 Wastes containing asbestos must be collected, stored, and disposed of in suitable, sealed, leak-proof containers.
- C15.3.4.3 The co-mingling or combining of asbestos-containing wastes with non-asbestos-containing wastes prior to landfilling is not permitted. One exception to this requirement is the co-mingling of asbestos cement pipes with non-asbestos-containing waste as this is at times unavoidable. If asbestos cement pipes are to be co-mingled with non-asbestos containing wastes, it must be done in a manner that ensures that no asbestos fibers are released.
- C15.3.4.4 Asbestos-containing wastes are to be collected at the workplace in such a manner that the transfer of waste between containers and/or enclosures is minimized to the maximum extent practical so as to minimize the potential for asbestos fibers to be released.
- C15.3.4.5 When collecting and preparing asbestos-containing waste for transportation, the release of dusts is to be prevented by means according to the current state of the art of technology (e.g. exhaust ventilation, consolidation, moistening, covering).
- C15.3.4.6 Asbestos-containing wastes in storage must be kept moist or covered using suitable materials, or kept in sealed, leak proof containers and secured to prevent the access of unauthorized persons.

C15.3.4.7 Asbestos-containing wastes must be secured for transportation in such a manner that no asbestos fibers are released during transportation and loading/unloading.

C15.3.4.8 Asbestos-containing wastes must be disposed of at authorized landfills in such a way as to avoid the release of asbestos fibers. During landfilling containers must not be destroyed prior to compaction, covering must take place, and compaction is only undertaken after covering.

C15.3.5 DODD SCHOOLS

C15.3.5.1 DoDD schools will comply with applicable requirements 15 U.S.C. 2643(l) and implementing regulations in 40 CFR Part 763, Subpart E. In doing so, DoDD schools will ensure that all of the following are accomplished.

C15.3.5.1.1 Identify friable and nonfriable ACM in elementary and secondary schools.

C15.3.5.1.2 Sample all suspect materials that are not confirmed to be ACM.

C15.3.5.1.3 Analyze samples by appropriate techniques.

C15.3.5.1.4 Have an accredited DOD inspector provide a written analysis of all friable, known or assumed, ACM in school buildings.

C15.3.5.1.5 Select and implement in a timely manner appropriate response actions sufficient to protect human health and the environment.

C15.3.5.1.6 Ensure all maintenance and custodial persons, who may work in a building containing ACM receive awareness training regarding asbestos, its uses and forms, locations in school buildings, and recognition of ACM.

C15.3.5.1.7 Devise an asbestos management plan for each school, including all leased or owned facilities.

C15.3.6 ARTIFICIAL MINERAL FIBERS (AMFs)

C15.3.6.1 An AMF inventory should be conducted by sample and analysis or visual determination.

C15.3.6.2 The AMF exposure limit on construction sites is 500,000 fibers per cubic meter (f/m^3).

C15.3.6.3 The remediation or removal of AMF products prior to renovation or demolition work is not mandated; however, when AMF products are removed, such products may not be re-installed (except in the case of inspection activities).

C15.3.6.4 Work plans must be submitted to the Staatliches Amt fuer Arbeitsschutz und Sicherheitstechnik and the Berufgenossenschaft for approval at least 14 days in advance of demolition and reconstruction activities involving AMFs. Any subsequent changes in work procedures, safety measures, or the number of workers requires new approval. An exception to the requirement to submit a work plan is made for minor work activities (no longer than four hours per shift or 40 hours per year).

C15.3.6.4.1 Work plans should include the following: a delineation of the AMF products (including measurements and quantities), potential danger or category of hazard, description of area(s) where abatement is to be

performed, safety and personal protection measures, replacement products, number of workers, expected exposure, and any associated laboratory test results.

Figure C15.F1 Asbestos Label

