

NAIMA'S Health and Safety Partnership Program



NAIMA
NORTH AMERICAN INSULATION
MANUFACTURERS ASSOCIATION

For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

The Health and Safety Partnership Program (HSPP) is a cooperative, voluntary program for worker protection developed jointly by the North American Insulation Manufacturers Association (NAIMA), the U.S. Occupational Safety and Health Administration (OSHA), the National Insulation Association (NIA) and the Insulation Contractors Association of America (ICAA). Formally adopted by OSHA in May, 1999, the Program is a voluntary effort by industry to promote enhanced work practices among insulation manufacturers, insulation contractors and other users of fiber glass, rock wool and slag wool products, also known as synthetic vitreous fiber (SVF) products.

NAIMA believes that a commitment from manufacturers and contractors to follow the HSPP will assure greater worker protection. By taking advantage of the training opportunities and informational literature provided through the HSPP, employers will benefit from an educated and knowledgeable work force. NAIMA believes that each contractor/installer should make a commitment to support the HSPP and encourage workers to follow the suggested guidelines set forth in the Program. The HSPP will provide further benefits to employers such as increasing worker comfort, reducing the number of worker compensation claims, and helping to protect against any legal liability or government enforcement action.



NAIMA
NORTH AMERICAN INSULATION
MANUFACTURERS ASSOCIATION

For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Origins of the Health and Safety Partnership Program

OSHA Identifies SVFs as a Priority Workplace Issue

To facilitate the increased cooperation of industry in the regulatory process, OSHA developed a list of issues that it deemed in need of attention either because of the seriousness of the topic or the number of workers potentially exposed.

In particular, OSHA was interested in identifying issues to which it had not yet devoted significant regulatory attention and resources. The preparation of that priority list came to fruition in December 1995 when OSHA officially announced a list of 18 work-related issues which it viewed as priorities for either rulemaking or voluntary intervention by the private sector.

Voluntary Standard Proposed For Certain Workplace Issues

OSHA recognized, however, that it lacked the resources to conduct formal rulemaking on all 18 sub-

stances, as any regulatory rulemaking consumes a tremendous amount of time and significantly reduces available monies. Therefore, OSHA agreed that 13 of those 18 substances should develop a voluntary standard without the burden of a formal rulemaking.

SVFs Identified as a Priority Workplace Issue

Synthetic mineral fibers, or synthetic vitreous fibers (SVFs), which include fiber glass, rock wool and slag wool, constituted one of the workplace issues identified by OSHA as a priority and one of the 13 that should develop a voluntary standard. The reason for listing SVFs as a priority stems from OSHA's conclusion that currently over 225,000 workers are exposed to SVFs. Furthermore, OSHA notes that the projections indicate the total number of workers handling SVFs in the coming years will increase.



(Continues)

NAIMA'S Response to Call for Voluntary Standard

As an industry committed to worker protection and quality products, NAIMA and its member companies acted with dispatch after the December 1995 announcement of OSHA's Priority List by informing the officials within OSHA that NAIMA sought an opportunity to address OSHA's questions.

NAIMA Identifies Opportunities for Participating with OSHA

NAIMA determined that engaging OSHA in a dialogue with respect to the work place environment for employees handling SVFs would, among other advantages, permit the industry to educate OSHA about the existing worker programs.

Another advantage of participating in a voluntary capacity with the gov-

ernment is the elimination of any potential stigma that might be attached to SVFs because the substance appeared on a federal government priority list. By addressing any reservations on the part of OSHA, NAIMA sought to achieve the deletion of SVFs from the Priority List.

NAIMA Develops Health and Safety Partnership Program

Pursuant to OSHA's invitation, NAIMA developed a voluntary Health and Safety Partnership Program (HSPP) in cooperation with OSHA officials and staff, the leadership of NIA and ICAA, and other organizations representing insulation contractors and other workers. The Program was formally adopted by OSHA in May 1999, and SVFs were officially removed from the Priority List.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Recommended PEL

1 f/cc PEL for SVFs is Appropriate Exposure Limit

NAIMA and its member companies believe that a 1 f/cc PEL is an appropriate and protective exposure limit. The 1 f/cc PEL represents an effort on the part of the industry to establish an assurance and confidence among workers that exposures are well within the comfort and safety zone. Moreover, NAIMA has identified a 1 f/cc PEL as the appropriate exposure level to significantly reduce potential irritation to throat and eyes.

Manufacturers Recommended 1 f/cc PEL Beginning in 1992

The recommendation of a 1 f/cc PEL is not a new development nor did the recommendation originate with the voluntary HSPP. Manufacturers have been recommending a 1 f/cc PEL since 1992. In June 1992, OSHA proposed to amend permissible exposure levels for air contaminants in the construction, maritime and agriculture industries. As part of that air contaminants standard,

OSHA specifically proposed a PEL of 1 f/cc for SVFs. The industry and labor supported OSHA's proposed PEL of 1 f/cc. Due to a decision from the U.S. Court of Appeals for the Eleventh Circuit concerning other substances included in the same rulemaking, OSHA was required to withdraw the proposed PEL standard.

NAIMA's Respiratory Protection Program follows the requirement of OSHA's recently adopted Respiratory Protection Standard. OSHA indicates in the preamble to that Standard that in most circumstances disposable respirators provide a protection level equal to that of the more costly respirators. OSHA's Respiratory Standard therefore allows for the use of disposable respirators.

Mirrors Industry Recommendations

The industry, however, continued to recommend a 1 f/cc PEL in its literature, on company material safety data

"Industry and labor support OSHA's recommendation of 1 f/cc"

Permissible Exposure Limit

1 Fiber per Cubic Centimeter



(Continues)

sheets (MSDS) and promotional material. Therefore, recommending the 1 f/cc in the HSPP is consistent with what the industry has supported since 1992.

Industry Establishes a Clear Message on Appropriate Protection Level

NAIMA also recommends a 1 f/cc PEL to add a voice of unity to: OSHA's proposed 1 f/cc PEL of 1992; the American Conference of Government Industrial

Hygienists' (ACGIH) adoption of a 1 f/cc Threshold Limit Value (TLV) in 1997; and the State of California's Air Contaminant Advisory Committee's recommendation of a 1 f/cc PEL in 1997. By supporting the recommendations of these governmental and professional bodies, the industry establishes a clear message on the appropriate protection level. A consistent and unified message eliminates confusion and uncertainty about what is really the proper protection level.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Overview of the Health and Safety Partnership Program

A Cooperative, Voluntary Program For Worker Protection



The HSPP applies to manufacture, fabrication, installation, removal and other work settings where workers are subject to comparable exposures to SVFs. The Program is in compliance with all applicable provisions of the Hazard Communication Standard as already required by law. While NAIMA members are responsible for compliance with these voluntary guidelines in their own operations, NAIMA and its member companies will undertake the activities described here to educate and encourage compliance with these guidelines by other employers and their workers within the scope of this proposal.

Recommended PEL

Perhaps the most significant feature of the HSPP is the establishment of a voluntary permissible exposure limit (PEL) for fiber glass, rock and slag wool. This provision of the Program is important for several reasons. First, OSHA itself

cited the absence of a formally recognized PEL for SVFs as one of the deficiencies under current regulations. The adoption of a voluntary one fiber per cubic centimeter (1 f/cc) PEL simply reaffirms the exposure limit that has been recommended by industry and government and various authoritative bodies for several years.

Comprehensive Work Practices

The HSPP commits NAIMA's members to use product design, engineering controls, work practices, respiratory protection or a combination of any or all of these measures to bring fiber exposure to the voluntary 1 f/cc PEL. To strengthen these control measures, the HSPP specifies comprehensive work practices for those working with SVFs. Part of the HSPP duties assumed by NAIMA is the sponsorship of training sessions to help educate workers and employers about the consolidated work practices. NAIMA will provide



(Continues)

educational tools such as video tapes and literature to further explain the recommended work practices.

Recommended Respiratory Protection

A fundamental aspect of the recommended work practices deals with when and where to use respiratory protection. The HSPP recommends respiratory protection whenever exposures on a job exceed the 1 f/cc 8-hour time-weighted average (TWA) PEL. The type of respirator mandated by the HSPP is an N95 series dust respirator certified by NIOSH. In addition to those tasks that traditionally exceed the TWA PEL, specific jobs have been designated as necessitating respiratory protection because of the possibility of exposures above 1 f/cc. These particular requirements may be revised if further research and evidence demonstrates a consistent pattern of low exposures.

Exposure Database

The HSPP commits NAIMA to provide an exposure database to help contractors and workers determine the level of potential exposure to fiber glass, rock wool or slag wool for a given task. Exposure monitoring and an exposure database are closely related to the respiratory protection guidelines and offer

contractors a way to determine whether respiratory protection is necessary for a particular job. This will not only help contractors follow the HSPP, but may also greatly reduce the burdens that contractors would otherwise incur under the now existing Respiratory Protection Standard. NAIMA also has committed to supplement the database with additional information from exposure studies conducted during the implementation and compliance phase of the HSPP.

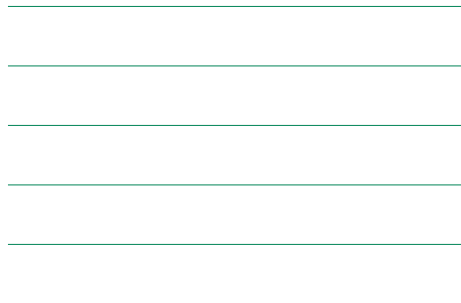
Obligations to be Borne Solely by NAIMA and Its Members

The HSPP obligates NAIMA and its members with a number of undertakings. These include continuation of medical monitoring at manufacturing facilities and regular reporting to OSHA on the progress and success of the HSPP. NAIMA and its members also have augmented the industry's already expansive product stewardship program to include discreet tasks designed to measure the impact of the HSPP on worker behavior and the work place environment. As already stated, these duties are exclusive to NAIMA and its members and there should be no inference that other entities have similarly pledged such activities to OSHA or any other organization.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>



Comprehensive Work Practices

Updated Work Practices Demonstrate Industry's Commitment to Product Stewardship



NAIMA has developed, and will help implement, comprehensive work practices for those working with SVFs. This includes updating its work practices in both video and written format. The work practices will also include recommendations for cost effective engineering controls (when applicable), proper respirator use, use of protective clothing and work place guidelines. These work practice recommendations demonstrate the industry's product stewardship commitment to identify the best work practices and promote the continuous improvement of the appropriate handling and use of SVF products.

Enhanced Work Practices Are More Specific

Previously, NAIMA's recommended work practices focused on rather broad worker safety guidelines. While these earlier recommendations provided helpful tips on protecting workers against irritation and excessive exposure to fibers, the enhanced work practices in

the HSPP provide specific suggestions on how to minimize dust generation, when and how to obtain proper ventilation, the selection of appropriate work clothing, the proper use of personal protective equipment and how to remove fibers from the skin and eyes. In addition, the HSPP recommendations outline safe work practices for different applications of SVFs. For example, specific guidelines are provided for blown SVFs in attics, cavity fill insulation, boiler and pipe insulation, removal activities, and many more.

Consolidation of Work Practices From Around the World

In preparing the HSPP, NAIMA reviewed suggested work practices from foreign countries, labor unions and individual synthetic vitreous fiber companies. NAIMA also sought and incorporated comments from contractors and other entities knowledgeable about SVF work practices.

(Continues)

The investigation of different work practices revealed that in recent years additional suggested guidelines have been added to what NAIMA has historically presented as safe work practices. Therefore, NAIMA and its members wanted to amass all relevant and appropriate guide-

lines into one comprehensive document. NAIMA's expanded work practices represent a collection of work practices from throughout the world. Most of these work practices are common sense suggestions of proper precautions for a safe working environment.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Recommended Respiratory Protection

NIOSH Certified N95 Respirator Recommended

NAIMA's Respiratory Protection Program follows the requirement of OSHA's recently adopted Respiratory Protection Standard. OSHA indicates in the preamble to that Standard that in most circumstances disposable respirators provide a protection level equal to that of the more costly respirators. OSHA's Respiratory Standard therefore allows for the use of disposable respirators.

While NAIMA recommends a higher quality disposable respirator than some workers may be accustomed to using, the recommended respirator is still very affordable and only slightly differs in price from the routine dust masks.

NAIMA is recommending a NIOSH Certified N95 half piece mask for most applications faced by contractors. Unique applications or unusual circumstances may require a different respirator.

Fit-Testing Should Be Part of Program

NAIMA's HSPP recommends that workers wearing a respirator be properly fit-tested using a qualitative or quantitative fit test. Most respirator manufacturers provide fit-testing procedures on the package label. These instructions should be followed. Fit-testing does not have to be conducted by a certified industrial hygienist. Normally an employee can be trained on the procedure for performing a proper fit-test. Therefore, if the contractor has employees wear respirators, fit testing should be part of the company's Respiratory Protection Program.

HSPP Mirrors OSHA's Respirator Standard

The HSPP essentially mirrors OSHA's Respirator Standard. Therefore, even without NAIMA's HSPP, contractors would be required to comply with the elements of NAIMA's respirator



(Continues)

program because it encompasses the OSHA Standard. As an added bonus, NAIMA is providing guidance on the selection and use of respirators in its training seminars and in the *Play It Smart, Play It Safe* video and literature. Thus, NAIMA's voluntary HSPP is aiding the contractor by informing him of the legal requirements for respirator use. NAIMA is also providing a service to OSHA by promoting and advertising the new Standard.

HSPP Can Help Guide Companies Setting Up Respiratory Protection Programs

Each company, if required by law, must enact a respiratory protection program. This relatively simple pro-

gram must be designed specifically for each company in order to address unique circumstances not routinely found in most industrial or construction settings. NAIMA's HSPP education material will help guide companies to establish such programs, and certainly, the HSPP and its educational material may be incorporated into the respiratory protection program to satisfy different elements of the program.

So, even though NAIMA's respiratory program cannot substitute for OSHA's mandated respiratory protection program, the information and training provided in the HSPP literature and video may be incorporated as part of the program, making the task of preparing the program much easier.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Exposure Database

Determines Level of Potential Exposure to SVFs For Specific Tasks



With the establishment of a voluntary 1 f/cc TWA PEL for application of SVF products, the question naturally arises about how contractors will know if their workers are exposed to fibers in an amount above or below the recommended level. Many contractors are understandably concerned about any requirement to conduct exposure monitoring for different job or task scenarios. While some contractors may choose to conduct their own exposure monitoring, the HSPP provides a mechanism that exempts contractors from the expense and time of exposure testing.

NAIMA Creates Exposure Database

To help contractors and workers determine the level of potential exposure to fiber glass, rock or slag wool for a given task, NAIMA has established an exposure database containing existing information about exposure levels categorized by product type and specific

work task. NAIMA is committed to maintaining and updating this database.

Foundation of Database

The foundation of the database is a compendium of exposure test results submitted to National Institute for Occupational Safety and Health (NIOSH) in 1990.

NAIMA has analyzed exposure data involving typical exposure levels for many common jobs, and the majority of these jobs currently can be completed without exceeding the exposure limit of 1 f/cc TWA. The NAIMA database currently includes exposure data collected from a variety of sources, including manufacturers, contractors, academic institutions and third-party organizations. The exposure database is being maintained at Arizona State University, where it will be updated twice a year (April and October) and downloaded to CDs periodically for dissemination. NAIMA member companies will continue to evaluate exposures and examine product improvements to reduce exposure potential.

(Continues)



Contractors Can Rely on NAIMA Database

The HSPP specifically states that contractors are not required to conduct exposure monitoring themselves. Rather, contractors can rely on the information contained in the NAIMA database to determine potential exposure levels for a given task and the need for respiratory protection.

Using the Database

Information may be extracted from the database by contacting NAIMA in writing or by telephone for the specific type of information needed. NAIMA is confident that its database is large enough to address most exposure scenarios.

NAIMA is also making sections of the database available to OSHA, unions and contractors at no charge. This information will enable contractors and union representatives to ascertain the exposure level for a given work setting.

The database is organized in product specific categories, and lists exposure information from manufacturing, fabrication, installation and removal operations.

Database Will Help Contractors Comply with OSHA Standard

NAIMA's exposure database will not only help contractors follow the HSPP, but will also help them comply with the Respiratory Protection Standard and in most cases alleviate the need to conduct exposure monitoring. OSHA has authorized reliance upon such a database.

Manufacturers' Exposure Results To Be Included

NAIMA's member companies are committed to contributing exposure monitoring results obtained from manufacturing, fabrication and installation activities in order to update the database.

NAIMA's member companies periodically conduct exposure monitoring of non-manufacturing work sites. When such exposure data becomes available, NAIMA's member companies are committed to providing those exposure results to NAIMA for inclusion by Arizona State University in the exposure database. These results will be used to augment the existing storehouse of knowledge, but they do not represent the sole source of new information.

NAIMA's Own Exposure Data To Be Included

NAIMA itself conducts studies on such operations as removal of SVFs. Any NAIMA study or test that addresses exposure levels will be added to the exposure database.

International Exposure Data Invited

NAIMA will also obtain exposure data from trade allies in Europe, Canada, Australia, Japan and other regions of the world. In addition, labor unions, trade associations for contractors and individual companies are all invited to contribute any exposure data, which they believe would expand the overall quality and substance of the exposure database.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>



Implementation and Communication

Implementation of HSPP Begins Immediately

As to timing of the Program's implementation and applicability, the HSPP grants NAIMA and its member companies a period of three years to plan, prepare and arrange all Program components. Implementation of the HSPP began immediately following its May 1999 adoption and is being phased in over a three-year period. After completion of the three-year implementation period in May 2002, the initiation of the Program's recommendations and guidelines will commence.

During the three-year implementation period and the first five years of compliance, NAIMA will submit annual reports to OSHA on the Program's performance. At the close of the three-year implementation and five-year compliance periods, NAIMA will consider further voluntary partnerships with OSHA.

This same time frame is set forth in NIA's letter to OSHA explaining NIA's voluntary adoption of a Contractor Health and Safety Partnership Program (CHSPP).

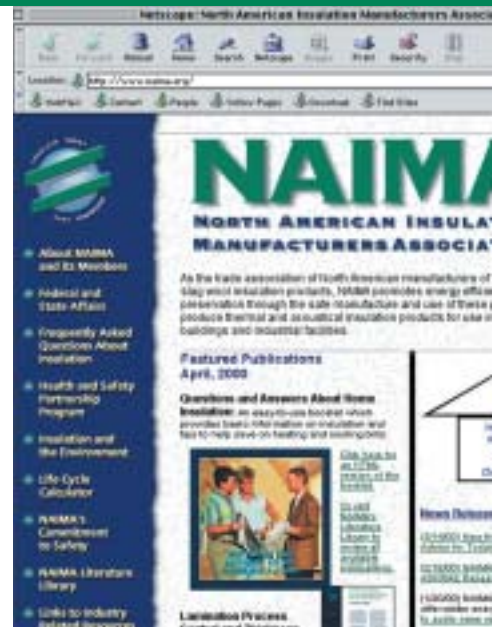
Communication

■ Video

NAIMA has prepared an HSPP video to impart detailed and helpful information on working safely with SVFs. The *Play It Smart, Play It Safe* video is educational and presents work practice recommendations in an entertaining and concise manner. It is available free of charge in both English and Spanish.

■ Literature

In addition to the video, NAIMA is committed to preparing and distributing literature that further explains and illustrates the various components of the safe work practices and the respiratory protection program. The *Working Smart with Fiber Glass, Rock Wool and Slag Wool Products* brochure contains complete details on all work practice recommendations contained in the HSPP, as endorsed by OSHA. The brochure is provided in both English and Spanish.



(Continues)

■ Literature at Trade Shows

NAIMA literature related to the HSPP will be available at appropriate trade shows. Contractors and labor unions may request multiple copies of the literature from NAIMA. Individual workers are also invited to request literature from NAIMA.

■ Literature on the Internet

NAIMA's website features information related to the Health and Safety Partnership Program at www.naima.org. Information includes the actual agreement, OSHA's letter of endorsement, work practices, questions and answers about HSPP, NAIMA's letter to OSHA, news releases and more.

■ Training Sessions

The HSPP commits NAIMA to offering training seminars on a yearly basis. NAIMA is planning yearly training seminars in different regions of the country. In addition, NAIMA will also hold training seminars at trade shows, conventions

and other events where contractors and their employees are likely to congregate. These formally scheduled sessions will be publicized in advance via the NAIMA website, direct mail, trade show schedules, advertising and other means.

Communications Program

NAIMA is committed to developing a communications program to promote and advertise the training seminars and other training opportunities. These training notices will appear in journals and magazines that reach contractors and their employees.

In addition, key organizations, such as NIA and ICAA, will be provided with a formal announcement of upcoming training opportunities. NAIMA will also produce and distribute a publication describing the entire HSPP, including the training commitments made by the industry. Regular updates on training seminars will also be available via NAIMA's web page.



For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>

Respirator Fit Testing:

Available Options On Getting Fit Tested



Introduction

This North American Insulation Manufacturers Association (“NAIMA”) publication identifies options for obtaining respirator fit testing. This publication is not a summary of the Occupational Safety and Health Administration’s (“OSHA”) Respiratory Protection Standard or the fit testing requirements for N95 series respirators. NAIMA urges all employers to consult the requirements set forth in the Respiratory Protection Standard (29 CFR Part 1910.134) and any supplemental amendments to that Standard.

The OSHA Standard

Some U.S. standards and regulations governing respirator use require respirators to be fit tested by the employer, but these government standards and regulations allow the employer a choice among OSHA’s acceptable fit test methods. (OSHA Instruction Directive No. CPL 2-0.120, “Inspection Procedures for the Respiratory Protection

Standard.”) Administration of these fit test methods accepted by OSHA may be available through various companies, consultants, or self-testing kits.

With issuance of the Respiratory Protection Standard in 1998, OSHA simplified respiratory protection compliance requirements by standardizing regulations in all industries, including construction workplaces. The revised OSHA Standard (29 CFR Parts 1910.134 and 1926) applies to respirators worn to protect workers from exposures to air contaminants above a specified exposure limit or otherwise necessary to protect worker’s health. The OSHA Standard also applies when the employer, not OSHA’s rules, mandates respirator use. Additionally, the OSHA Standard applies when the employee voluntarily wears a respirator (for comfort or any other reason) even though neither OSHA regulation nor the employer requires workers use respiratory protection.

(Continues)

A fit test is a procedure to either quantitatively or qualitatively evaluate the fit of the respirator. NAIMA urges all employers to consult the requirements set forth in the Respiratory Protection Standard and supplemental amendments to that Standard.

NAIMA'S Health And Safety Partnership Program And Respirators

NAIMA and its member companies recommend respiratory protection where exposure may exceed 1 f/cc and for specific tasks identified in NAIMA's Health and Safety Partnership Program ("HSPP"), a voluntary program for worker protection developed jointly by NAIMA, OSHA and key contractor groups. (See HSPP material at www.naima.org/hspp.) The appropriate respiratory protection to wear while working with respirable fibers at concentrations up to 10 fibers/cc is a NIOSH certified half face piece respirator (certified N95 or higher).

Whenever respirators are used on the job, a respirator protection program must be in place. There are numerous elements in a respiratory protection program. Under the new OSHA Standard, the requirements state very simply that if employers require respirators, then all elements of a respiratory protection program must be in place. The revised standard also describes requirements for voluntary use, and while these requirements appear less onerous than the full program, the OSHA Standard imposes responsibilities on the voluntary user.

More About The N95 Series And Proper Fit Tests

For voluntary use of "dust masks" (also known as "filtering face piece respirators"), the OSHA Standard exempts

workers from complying with certain requirements. Specifically, workers who voluntarily wear dust masks need only be provided with the information that normally would be presented in a training session and a copy of Appendix A of the Standard. Another exemption allows voluntary users to forego fit testing. Employers should determine if skipping fit testing procedures remains compatible with the purposes of affording individual employees comfort, and then the employer may be content with no fit testing. If, however, the potential exposure situation differs from merely seeking comfort, fit testing should be required even for voluntary use.

Since all respirators have the potential to leak based upon facial configuration, model respirator and working conditions, a fit test is a procedure to either qualitatively (pass/fail) or quantitatively (compute an actual numerical value derived from a measured contaminant leakage) evaluate the fit of the respirator.

Qualitative fit testing relies upon responses from the individual being tested, specifically, if they can detect an odor or leak. Although it is a somewhat subjective examination and does not require a lot of test equipment to administer, there are very specific protocols outlined by OSHA. For N95 filtering face pieces only the "sweetener" (saccharin) or "bitter" (Bitrex™) aerosol qualitative fit tests can be used.

Quantitative fit testing provides very specific indications of the efficiency of the respirator on the individual and

does not rely on subjective responses. Quantitative fit testing of N95 respirators with elastomeric face pieces may be conducted with an assortment of testing equipment. This includes an ambient particle counting fit test (Portacount™) and controlled negative pressure test (Fit Tester 3000). Quantitative fit testing of N95 filtering face pieces can only be done with specific test equipment, the Portacount N95 companion fit tester.

Fit Testing Options

Most employers are allowed to choose which fit testing method is best for them. Each test method has detailed fit testing procedures and requires a level of knowledge ranging from basic to technical. There is no officially recognized certification for persons who perform respirator fit testing.

This information sheet does not contain the actual fit testing procedures but rather where proper fit testing may be obtained.

No official list of fit testing services is available, but a varied selection of options is offered for consideration.

■ The qualitative fit tests are not difficult to perform. Many manufacturers sell either the saccharin or Bitrex™ qualitative fit test kits for around \$125. These kits contain everything necessary to perform several hundred tests along with detailed instructions. The OSHA respiratory protection standard does not include any requirement that

individuals who perform fit testing be certified or have any specific training. This may be a viable option to obtain fit testing.

■ Businesses who identify themselves under consultative services as “occupational health services” often provide quantitative or qualitative fit testing services for all types of respirators worn by employees working in every conceivable job. Typically fit testing services are easily conducted in field operations. The costs associated with fit testing vary depending upon the scope of testing performed. The range of fees for conducting a fit test is approximately \$15 to \$35 per test. Such companies generally offer a professional staff trained and knowledgeable about technical and regulatory requirements of a proper fit test. This type of company would include fit testing and consulting services for employees wearing any of the N95 Particulate Respirators. Most health service companies advertise and can be, in most instances, found in the Yellow Pages and other directories. The American Industrial Hygiene Association (“AIHA”) has compiled a list of Respiratory Protection/PPE consultants on its website (www.aiha.org).

■ Some respirator manufacturers offer fit testing and training programs instructing employers on developing and managing a respiratory protection program, including written and audio-



visual materials that cover the requirements for fit testing procedures. In many instances, the training materials offered by the respirator manufacturers satisfy the requirements for training employees in proper fit testing procedures. The names and locations of the respirator manufacturers that belong to the International Safety Equipment Association (ISEA), may be accessed from that Association's website (www.safetysite.org).

■ Some insurance companies also offer respiratory fit testing and industrial hygiene air monitoring as part of an overall "loss control" program for client employers.

■ The next option may not be widely available, but when and where colleges and universities include facilities focused on educating students in the occupational health professions, often respirator fit testing services are offered to local employers. In some cases, the local educational institutions offer the services as part of their curriculum. Therefore, the cost may be minimal. Check local colleges and universities for available programs.

■ Any medical clinic which advertises itself under "occupational health" may have the capabilities of providing respiratory fit testing in addition to other occupational examinations (audiograms, physical capacity, etc.).

About NAIMA

NAIMA is the association for North American manufacturers of fiber glass, rock wool, and slag wool insulation products. Its role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool, and slag wool insulation, and to encourage the safe production and use of these materials.

In May 1999, NAIMA began implementing a comprehensive voluntary work practice partnership with the U.S. Occupational Safety and Health Administration (OSHA). The program, known as the Health and Safety Partnership Program, or HSPP, promotes the safe handling and use of insulation materials and incorporates education and training for the manufacture, fabrication, installation and removal of fiber glass, rock wool and slag wool insulation products.

NAIMA Member Companies

CertainTeed Corp.
Valley Forge, PA
Evanite Fiber Corp.
Corvallis, OR
Fibrex Insulations, Inc.
Sarnia, Ontario
Isolatek International
Stanhope, NJ
Johns Manville Corp.
Denver, CO
Knauf Fiber Glass
Shelbyville, IN
Owens Corning
Toledo, OH
Rock Wool Manufacturing Co.
Leeds, AL
Roxul, Inc./Roxul (West) Inc.
Milton, Ontario
Sloss Industries Corp.
Birmingham, AL
Thermafiber, Inc.
Wabash, IN
USG Interiors, Inc.
Chicago, IL



NAIMA
NORTH AMERICAN INSULATION
MANUFACTURERS ASSOCIATION

For additional information, contact:

NAIMA
44 Canal Center Plaza
Suite 310
Alexandria, VA 22314
Tel: 703-684-0084
Fax: 703-684-0427
E-mail: insulation@naima.org
Website: <http://www.naima.org>