

Miller, Diane M. (CDC/NIOSH/EID)

From: GZimmermann@SperianProtection.com
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To: NIOSH Docket Office (CDC)
Subject: Docket 148A Comments air fed suit ensembles
Attachments: Docket 148A comments.doc

Please find our comments to the proposed standard generation for air fed ensembles.

Tks

Bacou-Dalloz becomes



GARY ZIMMERMANN
NA Business Development Manager
Delta Protection/Bacou-Dalloz

Cell.: +1.514.236.5036
Fax: +1.514.282.8871
gzimmermann@bacou-dalloz.com

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Monday, October 19, 2009

**Comments Regarding "Concept for NIOSH Certification of Air fed Ensembles
NIOSH Docket 148-A Air Fed Ensembles"**

There was much information presented at the meeting of September 17, 2009. I would like to thank NIOSH and its members for continuing to support the development of this important project. Sperian Protection Clothing feels strongly that standards development of air fed ensembles should offer a classification structure, In that way the end user purchasing the products would be able to select which product best fits into it's required category. This applies to both single use and multiple use air fed suit ensembles. The suits should be certified according to the respirator type used. We have a few comments which we would like to share with you regarding the presentation material. They are as follows.

- 1) CO2 machine testing should insure that a full mannequin is in the suit, thus conveying reality to the measurement. Also, we believe that CO2 levels should be certified to levels which are <1% CO2 concentration by volume. The allowance of higher numbers will have a negative affect on escape time, as well as conventional unplug activities which are often performed by workers with suit systems. CO2 levels should be certified for worst case situations. Verification of performance should be done via manned testing in an environmental chamber with exercises.
- 2) We believe that a flammability requirement should be addressed, considering that the majority of air fed suit used, is in a challenging environment involving powders and radioactive particulate risk which requires the fabric to be flame resistant. We highly recommend the European standard, however, an appropriate test is to insure that the fabric does not support combustion over 2 seconds, and does not drip would be acceptable.
- 3) Physical Properties of the suit should be classified, as to allow the user to determine which product best meets with the health and safety of the task at hand. In this way the user can automatically assume that the suit with the highest strength characteristics may be appropriate for reuse. In general, because of the applications where suits of this nature are used, the management of contamination is vital, and will represent whether the suit is reused or not. This is typically determined by the specific use of the suit. End users will be looking for supplier track records of use in order to determine if the suits are applicable for the application. We believe that certain physical properties of the suits such as abrasion resistance, puncture, tear, and flammability are important but should be classified. In addition, for more challenging liquid and chemical applications, material permeation, as well as liquid penetration is appropriate.



- 4) We do not see the need to test for internal CO2 levels in the suit while having a puncture or abrasion is performed to the suit. What we do encourage is that if a puncture or a hole is created in the suit, there should be a minimum requirement so that the suit continues to offer a minimum level of protection. The question is how to determine what size the tear etc is acceptable. Our experience has been that with a 2 cm. tear in the breathing zone a PF was obtained well above 1000 as an example.
- 5) Visors should be tested for object impact, but be aware that flexible visors are typically offered on disposable type suits, and that a reasonable test should be applied.
- 6) In a re-use mode, users typically follow our users instructions and perform a visual inspection, as well as a plug in to verify suit system performance prior to entering the work environment. We have a video that we can share with you regarding this.
- 7) Storage and temperature concerns are part of the Users Instructions supplied with the suit.

Please feel free to contact us at any time to discuss this general response to your proposals. We would be more than happy to conduct discussions, as well as visit you for more detailed discussions on the above topics if required.

Sincerely,

Gary Zimmermann
Business Development Manager
Sperian Protection Clothing