USACHPPM
Readiness thru Health

65-044-0503

Just the Facts...

Paints - Individual

GENERAL INFORMATION	The hazards associated with paints will very with the type of paint used. Today's paints fall into three main types: water based, oil based and Chemical Agent Resistant Coating (CARC paint). The hazards from paint will very with the type of solvent and colors used. Paint has long been associated with lead poisoning. But this problem has been eliminated with the current formulations. Today lead is a hazard only during the removal of old lead based paints.
ROUTINE USES IN THE DEPLOYED SETTING	Paint is used to protect wood and metal surfaces, to provide camouflage and to enhance appearance.
PERSONAL PROTECTIVE EQUIPMENT and COUNTERMEASURES FOR DEPLOYED PERSONNEL	FOLLOW THE PACKAGE INSTRUCTIONS. PAINT HAZARDS WILL VERY BY THE SOLVENT AND COLOR USED! The primary exposure is through inhalation. Inhalation of paint vapors can be controlled with local exhaust ventilation, general ventilation (an open area with moving fresh air), or an appropriate respirator (not the M-40 mask). Many paints should not be used in confined areas without respiratory protection as the vapor level may become extremely high. Eye contact from splashed paints can be prevented by the use of safety glasses, goggles, or a face-shield. This is especially important during spray painting. Although occasional skin contact with most paints will not result in harmful effects, repeated skin contact should be prevented by the use of gloves. Exposed skin areas in should be washed with soap and water, and well-dried. DO NOT USE SOLVENTS TO WASH PAINT OFF OF SKIN!
EXPOSURE LEVELS HISTORICALLY ENCOUNTERED	**DATA IF AVAILABLE** Painting in enclosed spaces (like the inside of vehicles), or spray painting can produce high exposure levels of exposure. The size of area painted, the amount of paint used, the amount of ventilation, and the painting method (by brush or spray painting) determine the level of exposure. Painting of small surface areas or in open spaces should not produce significant exposures. Touch up painting in areas with fair to good ventilation should keep exposures well within safe ranges.
AVAILABLE EXPOSURE DATA	**DATA IF AVAILABLE** Be sure to mention to your healthcare provider you experienced symptoms while you were painting. Also tell the provider any protective equipment you may have used, especially respirators. If you have been working with CARC paint remember to mention this. If painting is a normal part of your job, you are probably already in a monitoring program. Report to your healthcare provider if Preventive Medicine Personnel did exposure monitoring in your area.

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COMMON ACUTE AND CHRONIC HEALTH EFFECTS	Acute effects (short-term exposures): • Water based paints are unlikely to produce any symptoms from field use. • Oil based paints are associated with skin and eye irritation and allergic skin reactions. The other possible effect would be from solvent exposure. Clinical findings vary from solvent to solvent; however high levels exposures can be associated with; disorientation, giddiness, dizziness, euphoria, and confusion progressing to unconsciousness, paralysis, convulsions, and death from respiratory or cardiovascular arrest can occur. • CARC paint uses isocyanates and can cause irritation of the conjunctiva, respiratory distress, and is associated with sensitization-type reactions. Inhalation of isocyanates vapors can produce asthma like symptoms including constricted airways, difficulty breathing, and a dry irritant cough. Chronic effects (short-term and long-term exposures): • Sensitization to isocyanates can produce severe symptoms with re-exposure. If you have asthma like respiratory symptoms when you work with CARC paint, you should be further evaluated by a pulmonologist.
REVERSIBILITY OF HEALTH EFFECTS	After stopping exposure, both skin and respiratory symptoms generally disappear. You should feel much better soon after inhalation exposure is stopped and you are moved to fresh air. The effects of inhalation exposure may take several hours to completely go away. While rare, if you are sensitized to isocyanates, symptoms may reoccur with future exposures with increased severity.
TREATMENT REQUIRED/AVAILABLE FOR TOXIC EFFECTS	The immediate treatment for any exposure is to stop the exposure (irrigate eyes, rinse skin, move to fresh air) when effects occur. For acute situations, symptomatic treatment is usually all that is needed. After the immediate symptoms are taken care of, reducing the intensity or eliminating exposure altogether is the appropriate goal. If you are truly sensitized, future exposure must be avoided. Generally, there is no medical treatment required for past routine exposure.
LONG TERM MEDICAL SURVEILLANCE REQUIREMENTS OF HEALTH EFFECTS MONITORING	If symptoms are due to solvent exposure, levels can be measured in the body during and shortly (within a few days) after exposure. There is no long-term medical follow-up for routine solvent exposure. In very rare cases where chronic CNS or PNS, or respiratory sequelae are suspected, neuropsychological testing/evaluation, or pulmonary testing/evaluation, respectively, is recommended. If sensitization is suspected, pulmonary testing/evaluation is needed.
SPECIAL RISK COMMUNICATION ISSUES	Most exposures to commonly used military paints result in no effects or in mild conditions that readily reverse with prevention or treatment. In rare cases, where exposure resulted in significant respiratory problems, sensitization is a concern. Planned follow-up after severe or recurrent respiratory symptoms is necessary.

Reference: Textbook of Military Medicine, Part III, Disease and the Environment, Volume 2, Occupational Health, Office of the Surgeon General, Department of the Army, United States of America, 1993.