

Chapter 2

Immediate Decon

Immediate decon techniques are initiated by the individual soldier, without command, once he is aware he has contamination on his bare skin. The individual soldier uses his personal M291 or M258A1 skin decon kit to decontaminate exposed skin. Next, he must decontaminate his hood, mask, gloves, and weapon, using the M280 DKIE (decon kit, individual equipment) or with an

additional M291/M258A1 Kit. Use these items for chemical and biological contamination removal only.

Radiological contamination hazards affect you differently, but the principle is the same. Remove radiological contamination from equipment and personnel by brushing and/or using soap and water, respectively.

Skin Decontamination

If chemical agents contact your skin, you must take immediate action to decontaminate yourself. Start the skin decon technique within 1 minute of becoming contaminated because some toxic chemical agents, especially nerve agents, are rapidly absorbed by the skin and can kill in minutes.

Chemical

Individual decon kits (IDK), M291 or M258A1 (see Figure 2-1) provide the best means of skin decon. Instructions and procedures are in four areas on the outside of the kit itself, on the individual packet within the kit, in the Soldier's Manual of Common Tasks (STP 21-1 SMCT), and in Soldier's Manual (STP 3-54B10).

The solutions in the M258A1 kit are caustic. Keep them out of eyes, nose, wounds, and mouth. Use water to wash toxic agent or decon solution out of eyes or wounds and seek medical treatment. Familiarize yourself with the operating instructions for both kits because of the dif-

ferences in the M258A1 and M291 Kits. The M258A1 uses a moist towelette with a decon solution, whereas the M291 uses a powder. Although you cannot see liquid contamination in the dark, you must be prepared to decontaminate during darkness. The M258A1 wipe packet has an identifying tab that you can feel in the dark.

Warning

Solution in the M258A1 decon kit are flammable and unstable in storage at temperature above 110°F (43°C) or for long periods in sunlight. Also, protect from freezing temperatures. Used at 32°F (0°C) or below, the solution may cause frostbite.

If you do not have a skin decon kit, chemical contamination may be pinch-blotted from the skin with a cloth and the area flushed with water from your canteen. Pinch-blotting is better than rubbing because it limits the

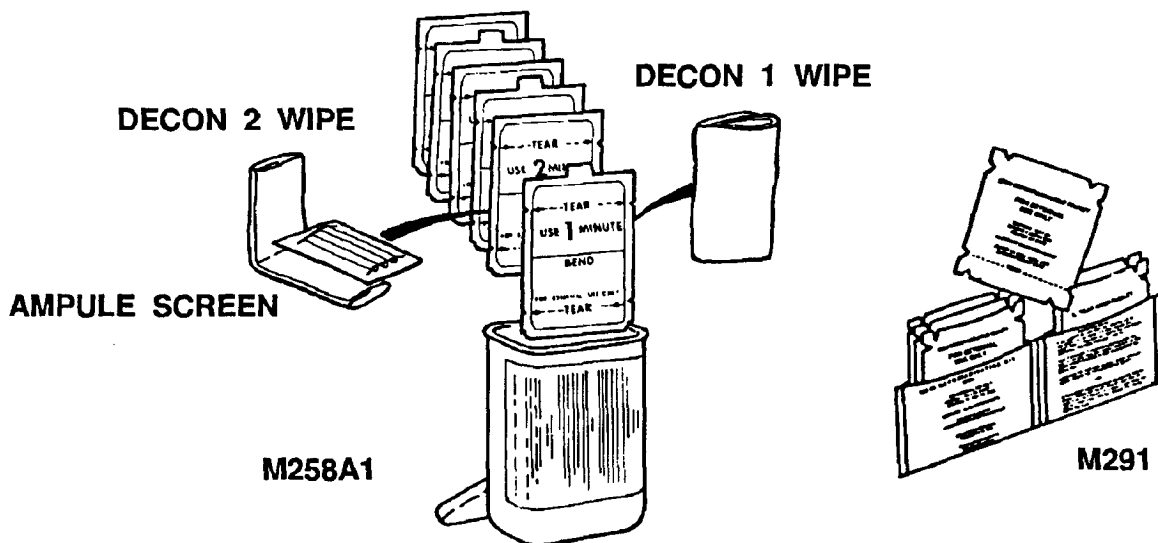


Figure 2-1. Skin decontamination kits.

spread of the contamination. Soap, if available, can also be used to wash the agent from the skin. Washing with soap and water (or hot water) is the next best method for toxic agent decon if M291 or M258A1 decon kits are not available, but this method is not as effective as using the decon kits.

NOTE: The M291 skin decon kit replaces the M258A1 skin decon kit.

However, there will still be a period of time when the two kits are available in the field.

Biological

Currently, no means exists of detecting biological agents. You probably will not know immediately when you have become contaminated. Most biological agents, except toxins, pose their primary threat through inhalation or ingestion. The skin is an effective barrier against most biological agents — if it has no cuts or scratches.

Unit surgeons know the types and levels of natural infection for the area of operations. They monitor these levels. If a given disease reaches a high level, they decide whether or not a deliberate biological attack has occurred.

Personal Wipedown

The personal wipedown technique is most effective when done within 15 minutes of being contaminated.

Every soldier wipes down his mask, hood, gloves, and other essential gear. (An exception is when thickened agent is globbed on the overgarment.) For chemical and biological decon, soldiers use their skin decon kits. Radiological contamination may be brushed away.

Do not attempt to remove chemical contamination from your protective overgarment. The garment's special protective properties minimize hazards from chemical agents. However, brush off radiological, biological, or frozen chemical agents contamination from your overgarment. See FM 3-4 for detailed information on your overgarment's protective qualities.

If radiological contamination is not removed, your radiation exposure will increase over time.

Chemical

There are two main primary types of chemical protective overgarments in use at this time, with different protection times. The first is chemical protective overgarment. It provides at least 6 hours of protection from liquid contamination. The second type of overgarment is the battledress overgarment (BDO). It provides protection for 24 hours after becoming contaminated with liquid chemical agents. For further information, see FM 3-4.

The stocks and handgrips of individual weapons also tend to absorb chemicals agents. Once absorbed, they may present a vapor hazard for days. To reduce this penetration and vapor hazard, decontaminate individual equipment using the M291 and/or M258A1 kits. You

The best biological defense is to take action before you are attacked. Keep immunizations up to date, observe basic sanitary precautions, and keep skin breaks covered. Treat minor cuts or abrasions by ordinary first aid measures (iodine, Zephiran, or Merthiolate). Washing with soap and water removes nearly all biological agents from the skin. If possible, frequent showering or bathing lessens chances of infection and disease. A 0.5 percent sodium hypochlorite (household bleach) solution is also an effective biological decontaminant. Appendix F tells how to make this solution.

Radiological

Because no immediate life-threatening hazard is caused by radiological contamination, no immediate skin decon is required. However, wash exposed areas of your skin when possible. If your skin is contaminated by radiological contamination, use operational decon techniques as soon as possible. (See MOPP gear exchange, Chapter 3, for a detailed discussion on reducing radiation levels from radiological contamination.)

must decontaminate gloves, hood and mask, helmet, and weapon if they are contaminated. Perform personal and equipment wipedown within 15 minutes after being exposed to liquid contamination. Additionally, wearing your kevlar helmet protective cover will prevent or reduce the absorption of any liquid chemical agent.

If agent is globbed on your overgarment, you may scrape it off with a stick or other object. Otherwise, do not attempt to decontaminate chemical agents on your overgarment. This will provide little, if any, extra protection and you probably will not have enough M291 and M258A1 decon wipes to do so.

Decon wipe 1 works better against G-type nerve agents, but can burn your skin. Decon wipe 2 works better against VX-type nerve agents and blister agents. Additionally, decon wipe 2 is not as caustic to skin and should help to neutralize some of the caustic compounds in wipe 1. When M291 and M258A1 decon wipes are not available, field expedient methods, such as, washing with soap, water, and bleach solution, are partially effective (see Appendix F).

Biological

If you know or suspect toxins or other biological agents are present, remove the contamination with soap and water. If water is not available, use M258A1 decon wipes in the same manner as described for chemical agent decon.

Radiological

Radiological contamination can readily be detected and located with monitoring equipment. Remove the contamination and you reduce the hazard. Brush the dust off your load-bearing equipment and mask carrier. If you are contaminated with a dry contaminant, such as fallout, shake your clothing and gear. Wash exposed areas of your skin. Use M258A1 decon wipes if soap and water are not available. Pay particular attention to your hair and fingernails. Avoid breathing the dust you shake off

by wearing a piece of cloth over your face. If you were contaminated by a wet radiological contaminant, you must conduct a MOPP gear exchange (See Chapter 3) as soon as possible because brushing or shaking will not remove the contamination or its hazard. Wipe off your mask, hood, helmet, gloves, footwear covers, and other personal equipment with warm, soapy water. If warm, soapy water is unavailable, use rags or damp paper towels. Ensure contamination is not spread to clean areas.

Operator's Spraydown

After you have decontaminated yourself and your personal equipment, you may need to decon other mission essential portions of your equipment before continuing your mission. This can occur if you are operating a vehicle, a crew-served weapon, or some other piece of equipment. To ensure you do not pickup contamination from these items, decontaminate those surfaces you or your crew must touch while operating the equipment. This decon is called the operator's spraydown and is most effective when done within 15 minutes after personal wipedown. Starting this technique later is not as effective; contamination, especially chemical agents, will probably have spread and then will be more difficult to remove by this technique.

necessary, use nonstandard decontaminants discussed in Appendix F.

Biological

A bleach solution is the preferred decontaminant for biological contamination; however, if bleach is not available, use hot, soapy water. Apply with brushes and scrub the surface well. Rinse surface after scrubbing (30-minute wait is not required). DS2 or STB is also effective against most known biological contamination, but because of their caustic nature are not preferred. Other nonstandard biological decontaminants are described in Appendix F.

Chemical

Decontaminate those surfaces you must touch to do your job. Use an onboard portable decon apparatus (such as M11 or M13) (see Figure 2-2). Spray DS2 onto those surfaces you must touch to do your mission.

Scrub the DS2 into the surface with brushes. Wait 30 minutes, then wash off. If a decon apparatus is not available, use field expedient resources available to apply DS2 or supertropical bleach (STB) from bulk containers. If

Warning

Use extreme caution at all times when handling DS2. DO not mix DS2 and STB because it will cause a fire. Do not allow DS2 to spray on personnel or protective clothing. DS2 is a combustible solution. Severe chemical burns can result if personnel fail to observe all safety precautions. DS2 can severely injure eyes and skin and, if inhaled, can cause illness. DS2 can damage the NBC protective overgarment. Long-term contact with DS2 can damage the NBC protective gloves, hood, and overboots.

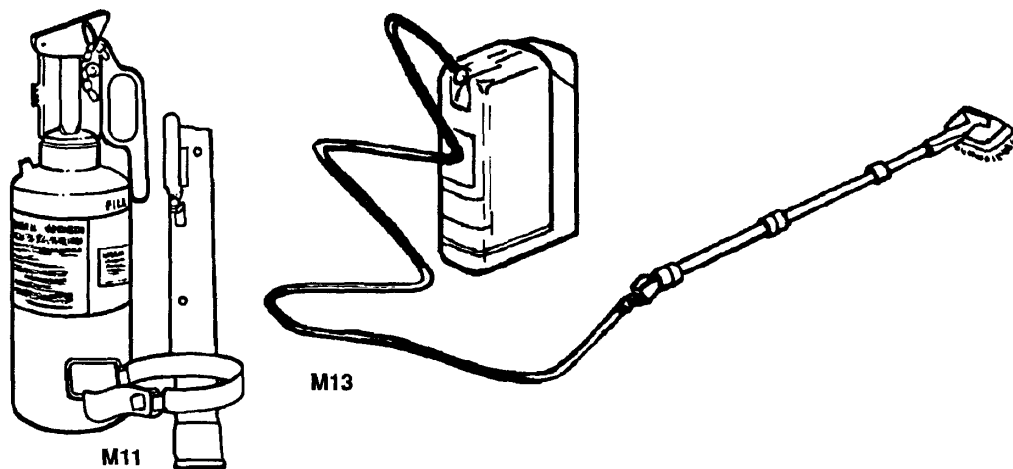


Figure 2-2. Portable Decon Apparatus.

Radiological

If you are contaminated by fallout, rain-out, neutron-induced contamination, or any type of radiological agent, use your monitoring equipment to help locate contamination. Then decontaminate as required. If detection equipment is not available and you suspect you are contaminated — decontaminate.

Radiological contamination can usually be removed by brushing or scraping (use brooms or tree branches).

Water is effective for flushing away radiological contamination. Control the runoff by using drainage ditches that flow into a sump. Remember, you have not destroyed the contamination, just moved it. The runoff will still be hazardous. If you have time, brushing or scooping away the top inch of soil from your fighting position will also lower the amount of radiological contamination hazard affecting you.