

# DERMATITIS

## BACKGROUND

Dermatitis is a term used to describe skin irritation. It is a common condition that can have many causes and can occur in many forms. When proper PPE is not used when handling metalworking fluids, contact with the fluid can be inevitable. This form of dermatitis is called contact dermatitis.

Contact dermatitis typically forms red, itchy rashes on the skin where it comes in contact with a substance that irritates the skin or causes an allergic reaction. As each individual is affected differently to certain substances, for example, metalworking fluid, these conditions could be minimal in most and more apparent in others.

## FACTORS

There are factors that could increase the potential for contact dermatitis from metal working fluids and these are:

- Higher than expected concentration
- Metals such as nickel, chromium, cobalt, and zinc
- Contaminants such as chips, fines, foreign oils or fluids

## PREDISPOSED FACTORS

Environmental factors such as extremely dry air, raw, bitter-cold weather, and fluctuations in temperature and humidity, may predispose the skin to an outbreak of dermatitis. Also, frequent washing of the hands and the use of chemicals can predispose the skin to irritation. Once cracks in the skin are formed, any additional contact with a foreign substance can increase the potential for dermatitis.

## PREVENTION

The best prevention for contact dermatitis from metal working fluids is to wear the proper PPE when handling. This will ensure that the fluid has minimum contact with the skin. Some other preventative measures could also be taken such as:

- Wear protective clothing. Gloves, pants, and long sleeved shirts and shirts that cover the neck will help minimize the contact of the fluid with the body.
- Monitor concentration and control contaminants. Keep concentration levels to within the specified limits of the system and minimize contaminants into the system.
- Minimize splashing. Ensure proper flow rates are maintained are proper levels are kept.
- Promote proper personal hygiene. The use of creams can help keep the skin from cracking and also protect the skin from foreign contact.

For most individuals, infrequent exposure to cutting and grinding fluids, followed by proper personal hygiene, should decrease the potential for dermal issues. In instances where operators are working with metal working fluids heavily, they may be more susceptible to dermatitis. Fortunately, when sensible measures of protection and prevention are followed, the vast majority of these dermal issues can be avoided.

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