

Isocyanates

List products on your site that contain isocyanates.

Explain dangers

Isocyanates are a class of reactive chemicals commonly found in paints, varnishes, and urethane spray foam insulation. They can also be found in glues, coatings, and lacquers.

Isocyanates are considered to be **sensitizers**—substances that can cause an allergic reaction upon repeated exposure. Dermal sensitizers can cause reactions on the skin, while respiratory sensitizers affect your breathing and respiratory system. Some health effects associated with exposure to isocyanates include:

- Irritation of the nose and/or throat
- Eye irritation
- Rashes
- Reddening, blistering of the skin
- Dermatitis
- Occupational asthma

The most common types of isocyanates you may come across in the field include:

- MDI - Methylene diisocyanate
- TDI - Toluene diisocyanate
- HDI - Hexamethylene diisocyanate

Operations involving heat (such as welding and torch cutting), as well as the sawing and crushing of products containing isocyanates can release this chemical into the air, thus exposing the worker(s) carrying out the operation. Spraying operations, such as the application of urethane-based insulation, also increase the risk of exposure to isocyanates.

Identify controls

To determine if the product you are working with contains isocyanates, refer to its Safety Data Sheet (SDS). This information is listed on the SDS in Section 3: Composition/Information on Ingredients.

- Maximize ventilation when using isocyanate-based products indoors. Open windows, doors, garage doors, etc.
- Wear appropriate eye protection (sealed goggles) when using products containing isocyanates, as they can irritate the eyes.
- Consult your isocyanate-containing product's SDS to ensure you wear the right type of gloves for working with it. Latex gloves do not provide adequate protection against isocyanates.
 - Change your gloves often. Isocyanate vapours and liquids can penetrate glove material over time, decreasing your gloves' protection.
 - Change your gloves if they become contaminated, stretched, ripped, or torn.
 - Wash your hands (and any exposed skin, such as your face) often—especially before eating and drinking.
- Notify your supervisor if you have symptoms of dermatitis (skin irritation) after working with isocyanate-based products. Dermatitis symptoms include:
 - Redness
 - Scaling
 - Swelling
 - Blistering

Demonstrate

With your crew, identify if any of the materials used on the jobsite contain isocyanates. Review the controls in place to prevent exposure.

Go over the signs and symptoms of dermatitis. Consider showing pictures of skin that has dermatitis for reference.