

# HAZARD ALERT



# PRODUCTS CONTAINING ISOCYANATES



## What Are Isocyanates?

Isocyanates are highly reactive chemicals that are used in many construction products, such as paints, glues, and spray polyurethane foams (SPF or spray foam insulation). If you have ever applied SPF roofing systems, foam insulation, or coatings on floors, bridges, or steel structures, you may have been exposed to these chemicals.

According to the National Institute for Occupational Safety and Health (NIOSH), these chemicals are dangerous if you breathe in the vapors, mists, or smoke and if they come in contact with your skin.

**You are at risk if you work directly with or near products containing these chemicals.**



Workers applying SPF.  
PHOTO COURTESY OF RESEARCHERS AT UMASS LOWELL

## Why Are Isocyanates Dangerous?

Isocyanates can irritate your eyes, nose, throat, lungs, and skin. Some workers can develop an allergy (called sensitization) when exposed to isocyanates. The most common type of allergy is asthma — even for workers that have never had it before. Workers can also develop a skin rash.

After a worker becomes sensitized, any exposure to these chemicals, even small amounts, can cause an asthma attack or skin rash. Serious reactions can result in lost work days, disability, and even death. Some isocyanates may also be linked to cancer.

**Be aware of these symbols:**



Respiratory Sensitizer



Irritant/Skin Sensitizer

ILLUSTRATIONS: ISTOCK.COM/ALESSANDRO0770

## What Are the Health Symptoms?

- ▶ Wheezing
- ▶ Chest tightness
- ▶ Cough
- ▶ Shortness of breath
- ▶ Skin rash or irritation

Symptoms can occur quickly or several hours later. If you experience these symptoms, on or off the job, talk with your doctor.

## When Working With Isocyanates...

### 1 Wear Personal Protective Equipment (PPE)

Individuals working directly with or near products containing isocyanates should:

- ▶ Wear coveralls, chemical-resistant gloves, and eye protection.
- ▶ Use a NIOSH-approved:
  - supplied-air respirator when spraying **inside**, particularly in crawl spaces.
  - air-purifying respirator (APR) with an organic vapor cartridge (OVC) and P100 particulate filter, or a powered air-purifying respirator (PAPR) with OVC and P100 when spraying **outside** or **working nearby**.

The Occupational Safety and Health Administration (OSHA) requires employers to provide respirators for their employees and have a Respiratory Protection Program in place.

### 2 Practice Good Housekeeping and Personal Hygiene

- ▶ If you come in contact with isocyanates, wash your skin immediately with soap and water.
- ▶ Wash your hands before eating and drinking and remove protective clothing before taking breaks and going home.
- ▶ Clean up your work area and make sure products are properly stored.

### 3 Use Engineering Controls and Be Proactive

- ▶ Use engineering controls, such as ventilation when using products containing isocyanates.
- ▶ Ask your employer for training. OSHA requires employers to train their employees about the chemicals they will be exposed to, give them safety data sheets, and label the products.
- ▶ Ask your employer to use products that do not contain isocyanates. If you are not working directly with the product, avoid working nearby or use PPE.
- ▶ Do not remove your respirator immediately after spraying and while in the area where the spraying is being performed.

### Learn more about isocyanates:

- ▶ **OSHA**  
<http://bit.ly/OSHA-Isocyanates>
- ▶ **NIOSH**  
<http://bit.ly/NIOSH-Isocyanates>

**If you think you are in danger:**

Contact your supervisor.  
Contact your union.  
Call OSHA

**1-800-321-OSHA**

To receive copies of this Hazard Alert and cards on other topics call **301-578-8500** or visit [www.cpw.com](http://www.cpw.com)



8484 Georgia Avenue, Suite 1000  
Silver Spring, MD 20910  
301-578-8500  
[www.cpw.com](http://www.cpw.com)