

# PaintHealthy CollisionRepair



## Frequently Asked Questions

### **What are isocyanates?**

Isocyanates are a family of highly reactive chemicals found in two-part polyurethane paint systems. Examples of isocyanates found in automotive paints include 1,6 hexamethylene diisocyanate (HDI) and isophorone diisocyanate (IPDI). Isocyanates are predominantly found in the clear coat formulation (catalyst or hardener) but may also be found in primers and sealers. Read the MSDS sheet of all your products to find those that contain isocyanates.



### **Why should I be concerned about isocyanate exposure?**

Isocyanates affect your lungs. When you are healthy, it is easy to take your lungs for granted. You need your lungs to carry groceries up a flight of stairs, do yard work, keep up with the family on leisure outings, or hike to your favorite fishing hole. Most workers who become sensitized and develop asthma to isocyanates must stop working around automotive paints. Asthmatic workers can retrain for another trade and continue to lead a healthy life once the exposure to isocyanates stops.

Both short-term intense exposures (such as a spill or spray to the face) and on-going long term exposures can lead to immune sensitization, reduced lung function, and occupational asthma. Isocyanates are irritants that can make the eyes, nose, throat and skin feel dry, itchy, or irritated. Workers who experience persistent or recurring cold-like symptoms, coughing, shortness of breath, wheezing or chest tightness should see a doctor knowledgeable in work-related health problems. Though rare, isocyanate-exposed workers have died from asthma attacks.

### **How am I exposed to isocyanates?**

In the collision repair industry, exposure to isocyanates happens both through inhalation and by skin contact. Painters are exposed through paint mixing, spray painting, gun cleaning, and contact with uncured isocyanate-contaminated surfaces. Collision technicians may be exposed if they are near spray painting, or when sanding primer, unmasking vehicles, or buffing vehicles. Once isocyanate products are fully 'cured', the chemical reaction is complete and exposure is no longer harmful. Partially cured products may still lead to isocyanate exposure.

### **We recently switched to waterborne paints. Do I still need to worry about isocyanates?**

Yes. While waterborne paints themselves do not contain isocyanates, they are typically used in conjunction with clear coats. At this time, all clear (top) coats contain isocyanates. It is the cross-linking properties of the isocyanates that give the clear coat its scratch and chip resistance. Waterborne paints need the final protective coat similar to solvent-based paints.