

Update from the National Construction Center

NORA Construction Sector Council Meeting

November 28, 2023

Chris Trahan Cain and Jessica Bunting

CPWR – The Center for Construction Research and Training

Research Programs

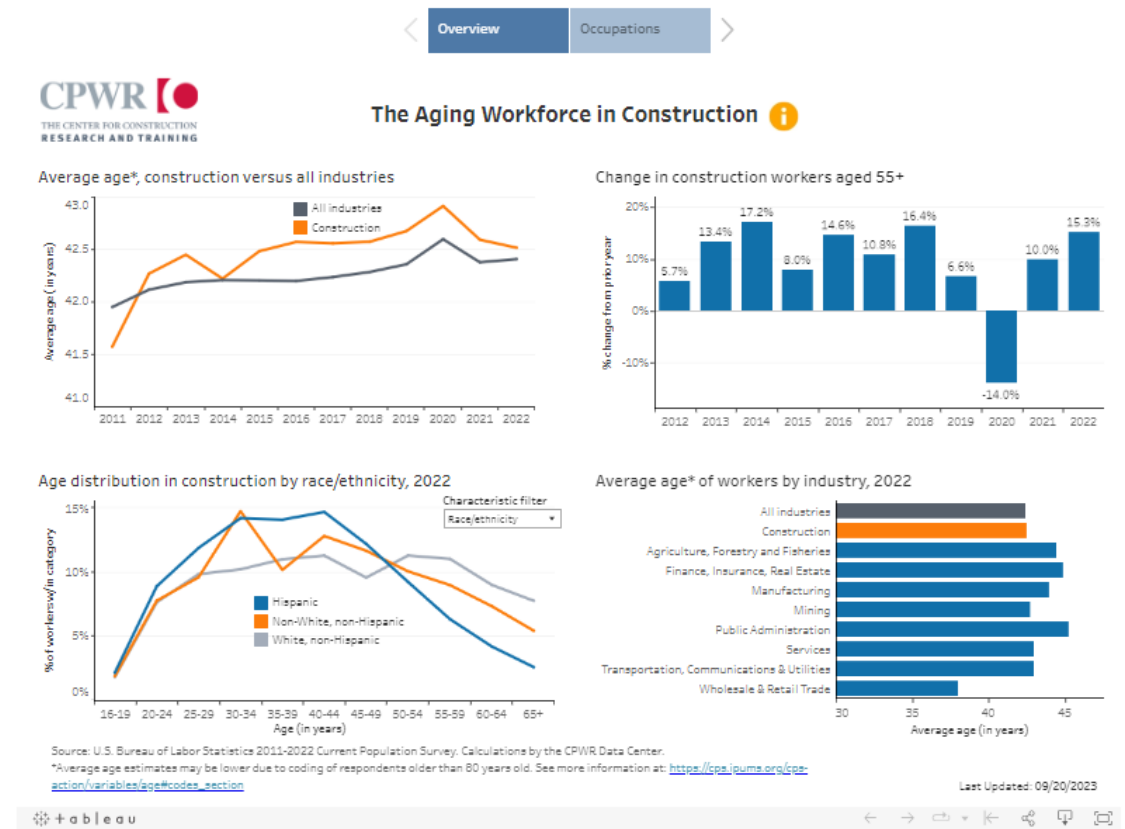
- Communications
- **Data Center**
- **Research to Practice (r2p)**
- **Best Built Plans Evaluation**
- Exoskeletons in Construction
- **Nanomaterials**
- OSHA 10 Evaluation
- **Pre-Task Planning**
- PTD Diffusion
- **Reactive Chemicals**
- Residential Falls
- Women in the Trades
- Safety Climate - Safety Management Information System
- **Suicide and Opioid Overdose**

Data Center: [2023 Data Bulletins](#)

- **November 2023 (NEW):** *Safety Practices Reported Among Construction Contractors*
- **September 2023:** *Labor Force Characteristics in Construction and All Industries, 2011-2022*
- **July 2023:** *Employment Costs in Construction*
- **May 2023:** *Women in Construction: Employment, Business Owner, and Injury Trends*
- **March 2023:** *Fatal and Nonfatal Focus Four Injuries in Construction*
- **January 2023:** *Leading Causes of All Deaths Among Current, Retired, and Former Construction Workers*

Data Center: 2023 Data Dashboards

- (NEW) Aging Workers
- (NEW) Nanomaterials in Construction
- Focus Four Injuries
- Leading Causes of Death
- Temporary Workers
- Health Insurance
- Women in Construction
- Labor Force Characteristics

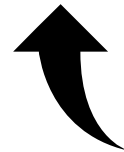


Recommended Citation: CPWR-The Center for Construction Research and Training. [2023]. [Aging Workers in Construction \[dashboard\]](#).

Research to Practice (r2p): Support for NORA Workgroups & Other Joint Initiatives

Official Campaign/Stand-Down websites:

- Struck-by: <https://cpwr.com/struck-by-hazards>
- Falls: <https://stopconstructionfalls.com/>



Currently being updated!

Struck-by Work Group: Pilot Planning Program

Addresses all types of struck-by hazards:

- Falling objects
- Flying objects
- Rolling objects
- Swinging objects

Includes:

- **Background** on the importance of planning to prevent struck-by incidents
- **Guiding questions and resources** to help identify risks present on each jobsite
- Pre-Job plan **worksheet**
- **Nudges** to support daily/pre-task planning

CRANE AND LIFT ZONE SAFETY

PLANNING FOR A SAFE LIFT

Hold a lift planning meeting before any work begins. Identify a lift director or person in charge of the lift, and include properly licensed or certified operators, riggers, signal persons, and any others involved with the lift.

- Make sure all workers are properly trained and licensed or certified, if appropriate
- Plan for the items that will be moved – their weight, dimensions, contents, pick points, and center of gravity
- Review the lifting capacities of the crane and rigging, as well as lifting points, methods of attachment, sling angles, boom and swing angles, and crane orientations
- Ensure the crane and rigging are properly inspected and maintained
- Discuss how the crane operator and signal person will communicate during the lift, a back-up plan if communication is lost, and an emergency stop procedure
- Determine possible impacts of weather, terrain, or other environmental factors
- Set up barricades and post warning signs around the lift zone
- Identify nearby obstacles the crane could strike (e.g., overhead power lines, structures, below ground hazards)

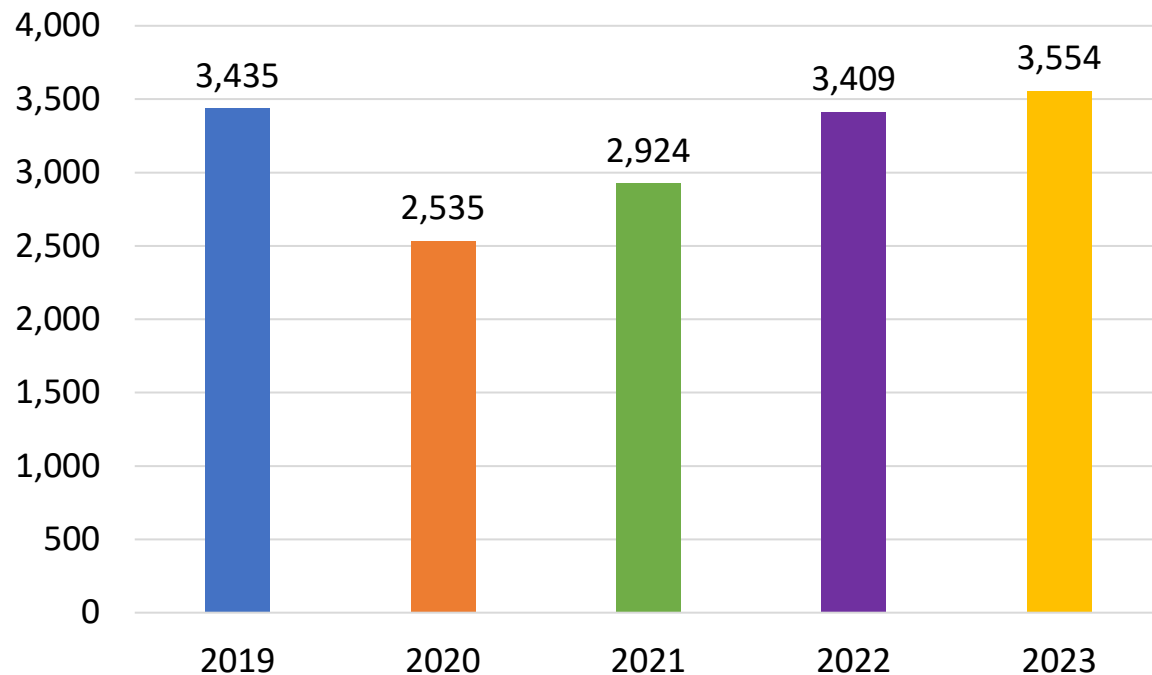
Logos: CDC, NIOSH, OSHA, CPWR (The Center for Construction Research and Training)

For more information on preventing struck-by incidents, visit: <https://bit.ly/3aWmJ>

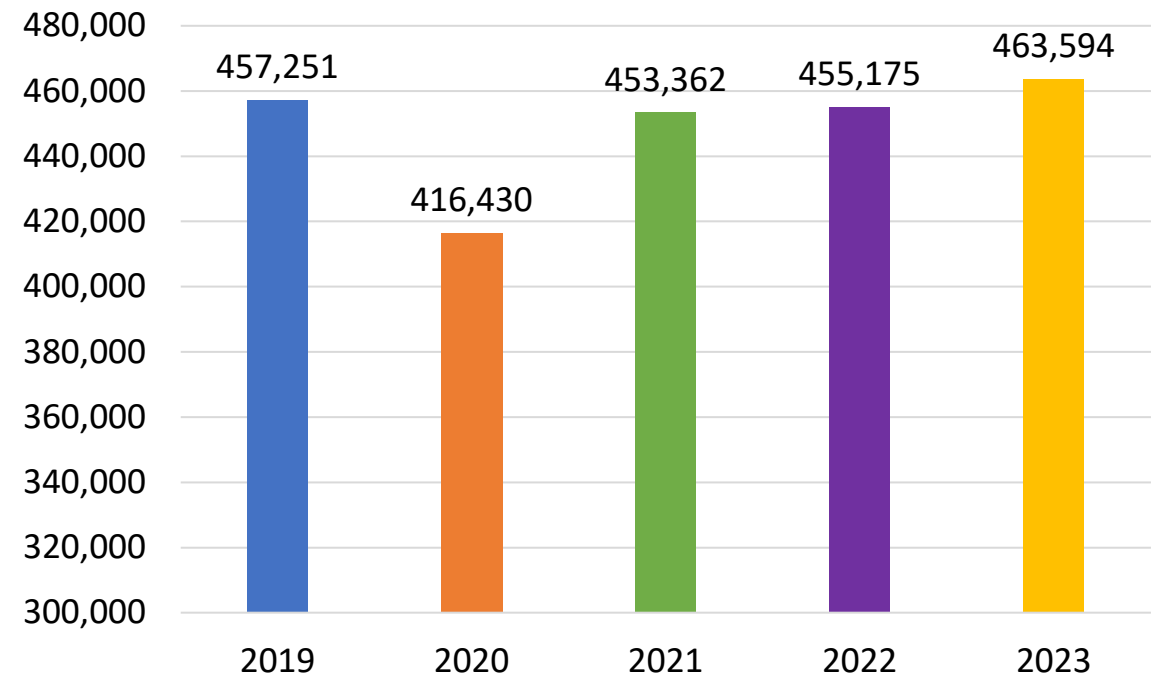
Falls Work Group: Stand-Down Success

- Based on data from the OSHA Certificate of Participation form, respondents **held 3,554 Stand-Down events** and **reached 463,594 workers**.

Total Stand-Downs Held

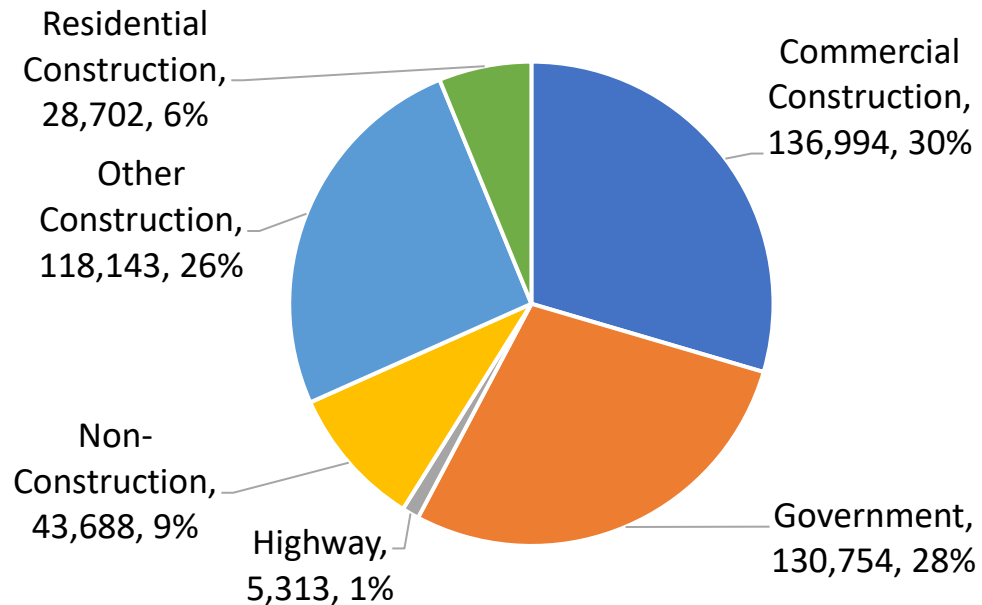


Total Workers Reached

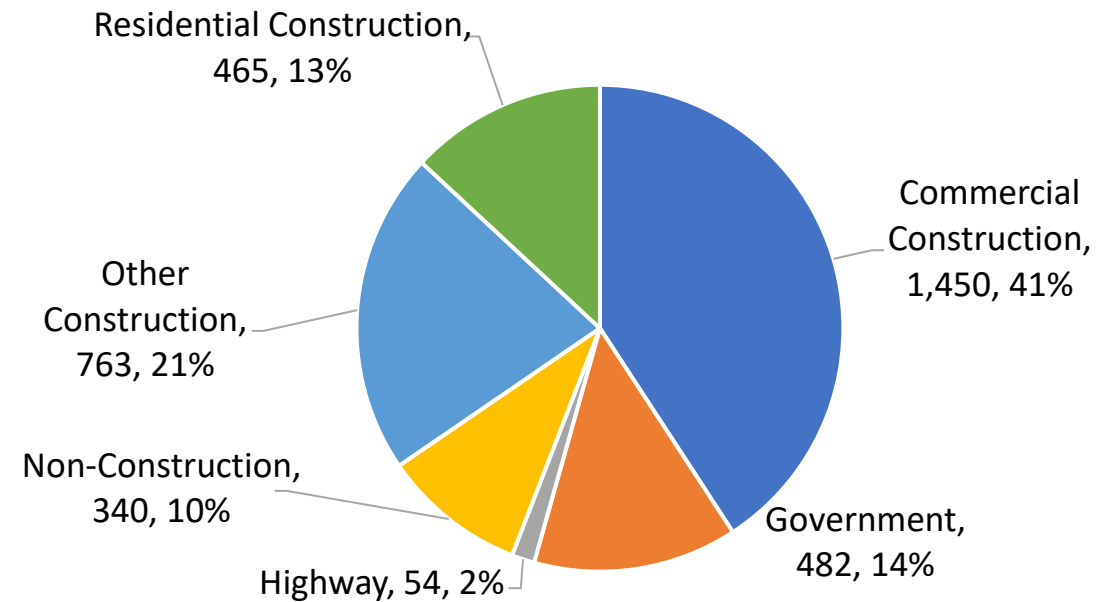


Falls Work Group: Stand-Down Success

Workers Reached by Type of Construction



Stand Downs Held by Type of Construction



- **Top sectors for participation:** commercial construction, government, and other construction
- **Priority sector:** residential construction

r2p: Heat Illness Prevention Resources

- Finalized two checklists:
 - Heat Illness Prevention Program checklist
 - Daily Heat Illness Prevention checklist
- Webinar on ***Outdoor and Indoor Heat-Related Hazards in Construction: A Q&A Session on OSHA's National Emphasis Program***

July 12, 2023

Chris Trahan Cain, CIH, Executive Director, CPWR

Gary Orr, PE, CPE, Health Scientist, Directorate of Enforcement, OSHA

[Play Recording](#) [Play Spanish Interpretation Recording](#)

[Download Presentation](#) [Additional Resources](#)

June 2023


HEAT ILLNESS PREVENTION PROGRAM CHECKLIST


According to OSHA, employers are responsible for providing workplaces free of known safety and health hazards, including heat-related hazards. Use this checklist to make sure your Heat Illness Prevention (HIP) program is up to date and follows best practices, aligning with heat abatement recommendations made by OSHA and promoted through their 2022 [National Emphasis Program on Outdoor and Indoor Heat-Related Hazards](#). To help execute the measures identified in this list on the job, see [CPWR's Daily HIP Checklist](#).



Place a check next to each measure you plan to implement as part of your HIP program on this specific jobsite:

| | |
|--------------------------|--|
| <input type="checkbox"/> | Identification of a competent person to ensure a HIP program is in place and operational. |
| <input type="checkbox"/> | Procedures for pre-task heat stress hazard analyses for tasks that could cause heat-related illness |
| <input type="checkbox"/> | A site-specific, written HIP plan, shared with all employees, that incorporates methods to reduce exposure, including unlimited access to water, scheduled rest breaks, access to shade and cooling solutions, scheduling adjustments (e.g., earlier start), buddy systems, and other best practices |
| <input type="checkbox"/> | An acclimatization plan included in the written HIP program to closely supervise and adjust work schedules and work practices for workers newly exposed to heat, temporary or contract workers, pregnant workers, those new to the region or returning from extended leave, and during periods of significantly higher heat conditions. The plan should include specific monitoring of workers who are acclimatizing. Special attention should be given to regional heat waves, physical demands of the work, and changing PPE that may increase heat effects. |
| <input type="checkbox"/> | Established trigger conditions for implementation of HIP plan (e.g., local or national heat index alerts) |
| <input type="checkbox"/> | Employee training on risk factors, protection against heat-related illness, the importance of hydration, recognizing and reporting signs and symptoms, administering first aid, and contacting emergency personnel |
| <input type="checkbox"/> | A method to monitor temperature and relative humidity whenever workers are exposed to heat, both outdoors and indoors, as well as a method to monitor and factor in levels of work exertion |
| <input type="checkbox"/> | A response and rescue plan in the event of heat-related illness |

If you left boxes unchecked or think there may be room to improve on a checked box, visit CPWR's Working in Hot Weather webpage for additional information and guidance or consult OSHA's generic template for a Model Heat Illness Prevention Plan at <https://bit.ly/3ZIX10G>.

 CPWR: Working in Hot Weather www.cpw.com/heat

 OSHA National Emphasis Program: Outdoor & Indoor Heat-Related Hazards <https://bit.ly/3Hm1WPt>

 **alliance** CPWR  THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

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Best Built Plans/r2p: New Resources

- 3 New Infographics
- Look Back Worksheet
- Pre-Job Checklist
- Updated Contractor Training Program
- 4 New Toolbox Talks (*in progress*)

BEST BUILT PLANS
BUILD SAFETY INTO EVERY JOB

Materials Handling: Plan Your Route

Before lifting and moving any material, plan the safest route and eliminate slip, trip, and fall hazards.

- ✓ Clean up or plan your route around water, oil, and loose dirt
- ✓ Cover or guard holes so you don't fall through. Label with "Hole" or "Cover" to warn others.
- ✓ Clear your path of materials, cords, and debris
- ✓ Prop doors open

REMEMBER: ✓ Use lifting equipment or ask a coworker for help when materials are oversized or weigh 50 pounds or more.

CPWR's Toolbox Talk on Lifting & Carrying Materials:
https://bit.ly/lifting_tbt

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bestbuiltplans.org

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Nanomaterials: New Resources


- [New SDS Tool](#)
- [eLCOSH Nano](#)
(updated weekly)
- [New Data Dashboard](#)


Nano Safety Data Sheet Improvement Tool


Safety Data Sheets (SDSs) are a crucial part of helping construction workers and employers understand risks from products they use. Currently, the SDSs for many nanomaterial-containing products are not as effective as they should be in conveying this information. This tool is designed to help manufacturers, distributors, and importers of these products evaluate their SDSs and improve them.


[Evaluate your SDS](#)

FAQ


How do I use this tool and what information is it based on? 

What are nanomaterial-containing products? 

Why is it important for SDSs to convey hazard information on nanomaterials? 

What research has been conducted to evaluate the quality of SDSs for nanomaterial-containing products? 

Do I need to register to use this tool? 

Where can I find resources to help implement the recommendations provided by this tool? 

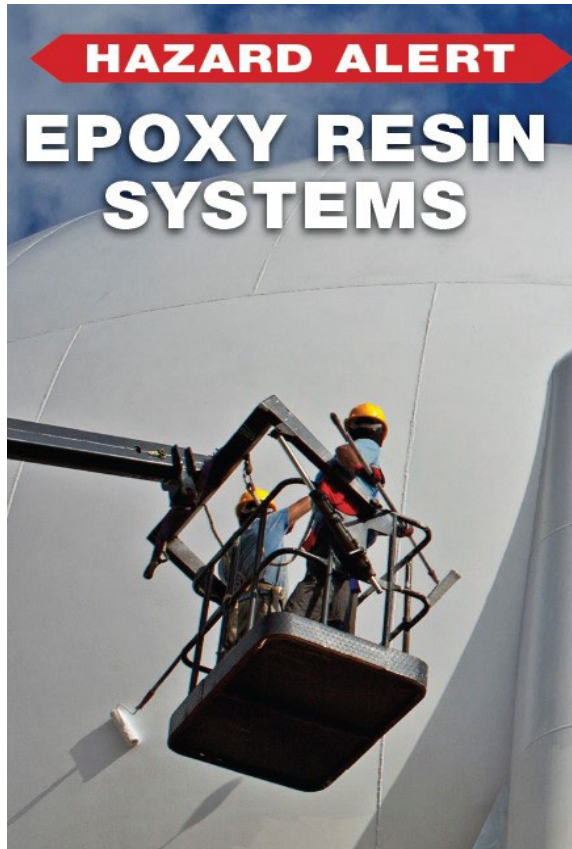
Webinar: <https://youtu.be/KOdRTMIHBSQ>

Pre-Task Planning: Guidelines & Resources

- Pre-Task Planning (PTP) is a process performed before each task starts to discuss the steps of work, the hazards, and available controls. This process may also be known as job hazard analysis (JHA), job safety analysis (JSA), morning huddle, or other terms.
- To help contractors design, implement, assess, and continuously improve their PTP process, [CPWR has developed a comprehensive PTP package.](#)
- To obtain individual checklists and tools included in the full package, select from this list:
 - [Sample Completed Pre-Task Planning \(PTP\) Form](#)
 - Blank Pre-Task Planning (PTP) Form ([PDF](#), [Word](#))
 - [Post-Job Review Checklist: An End-of-Shift Assessment Tool](#)
 - [Pre-Task Planning \(PTP\) Assessment: Management Checklist](#)
 - [Pre-Task Planning \(PTP\) Assessment: Worker's Perspective](#)

Webinar: <https://youtu.be/YF9yBzODhzc>

Reactive Chemicals: New Hazard Alert



HAZARD ALERT

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What are Epoxy Resin Systems?

Epoxy resin systems (or epoxies) are a chemical mixture widely used in the construction industry because of their strong adhesion to surfaces, durability, and anticorrosive properties. They are used in many different trades. Among painters, epoxies are often used for protective coatings of steel structures, such as bridges, storage tanks, and wind turbines. Epoxies are dangerous if they come in contact with your skin or you breathe in the vapors, mists, or particles when spraying them.

What are the Health Effects?

Exposure to epoxies can cause different types of **dermatitis** (skin inflammation). Irritant contact dermatitis can cause a **painful or itchy skin rash** that typically appears on areas of exposure (such as your hands, forearms, and face). Some workers also develop an **allergy** (called sensitization). Once a worker becomes sensitized, they can have an allergic reaction each time their skin is exposed to these chemicals, even in small amounts.

Other health effects include **asthma, lung inflammation, and a decline in lung function**. Certain chemicals in epoxies may also interfere with our body's hormones. If you are experiencing symptoms, on or off the job, talk with your doctor.

Be aware of these symbols:

Employer Requirements

The Occupational Safety and Health Administration (OSHA) requires your employer to protect you from exposure to epoxies by:

- ▶ Having a written hazard communication program,
- ▶ Training you about the Hazard Communication Standard, chemical hazards you will be exposed to on the job, and appropriate protective measures,
- ▶ Giving you access to safety data sheets for hazardous products,
- ▶ Labeling hazardous products,
- ▶ Providing you with and maintaining personal protective equipment (PPE) for protection from workplace hazard(s), and
- ▶ Having a written respiratory protection program, if respirators are required for protection from workplace hazard(s).

Your employer should also regularly conduct exposure assessments to identify and evaluate hazards present in your workplace.

EPOXY RESIN SYSTEMS

When Working

1 Use Engineering Controls

Ventilate the air. Limit the amount of epoxy resin used. Dilution and highly respirable.

2 Wear Protective Clothing

When preparing epoxy resin products:

- ▶ Long-sleeved shirts and pants
- ▶ Protective gloves
- ▶ Protective eyewear
- ▶ For the face:
 - Full-face respirator
 - Half-face respirator

Keep 10' respirator distance.

3 Practice Good Hygiene

- ▶ Wash hands using soap and water after using epoxy resin
- ▶ Clean work clothes and tools
- ▶ Change clothes and shoes if necessary
- ▶ Take a shower after work
- ▶ Keep epoxy resin off your skin

To learn more, visit:

Working with Epoxy Resin
<https://www.osha-slc.gov>

ChooseHandSafety.org
<https://www.choosehandsafety.org>

If you think you are in a hazardous situation, call OSHA at 1-800-321-6742.

ADVERTENCIA DE PELIGRO

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¿Qué son los sistemas de resina epoxi?

Los sistemas de resina epoxi (o epóxidos) son una mezcla química muy utilizada en la industria de la construcción por su gran adherencia a las superficies, durabilidad y propiedades anticorrosivas.

Se utilizan en muchos oficios diferentes. Entre los pintores, los epoxis se utilizan a menudo para revestimientos protectores de estructuras de acero, como puentes, tanques de almacenamiento y turbinas eólicas.

Los epoxis son peligrosos si entran en contacto con la piel o si se respiran los vapores, neblinas o partículas al pulverizarlos.

¿Cuáles son los efectos sobre la salud?

La exposición a epoxis puede causar diferentes tipos de **dermatitis** (inflamación de la piel) que puede causar una **erupción cutánea dolorosa o con picor** que suele aparecer en la y la cara). Algunos trabajadores también desarrollan una **alergia** (denominada sensibilización). Una vez que un trabajador se sensibiliza, puede tener una reacción alérgica cada vez que su piel se expone a estas sustancias. Otros efectos sobre la salud son el **asma, la inflamación pulmonar y el deterioro de la función pulmonar**. Algunas sustancias químicas de los epoxis también pueden interferir con las hormonas.

Si tiene síntomas, dentro o fuera del trabajo, hable con su médico.

Tenga en cuenta estos símbolos:

Requisitos del empleador

La Administración de Seguridad y Salud Ocupacional (Occupational Safety and Health Administration) requiere que su empleador lo proteja de la exposición a epoxis al:

- ▶ Tener un programa escrito de comunicación de riesgos,
- ▶ Capacitarlo sobre la norma de comunicación de peligros, los peligros químicos y la protección apropiada,
- ▶ Darle acceso a las fichas de datos de seguridad de los productos peligrosos,
- ▶ Etiquetar los productos peligrosos,
- ▶ Proporcionarle y mantener el equipo de protección personal (EPP) para la protección de la exposición a epoxis,
- ▶ Tener un programa escrito de protección respiratoria, si se requieren respiradores.

Si usted también debe realizar periódicamente evaluaciones de la exposición para identificar y evaluar los peligros presentes en su lugar de trabajo.

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SISTEMAS DE RESINA EPOXI

Al trabajar con sistemas de resina epoxi...

1 Use controles de ingeniería

La ventilación es fundamental para eliminar del aire los vapores químicos y las partículas en aerosol. Los sistemas de extracción locales, como los colectores de polvo de las herramientas eléctricas, capturan los contaminantes en la fuente o cerca de ella y pueden utilizarse cuando se pinta en interiores. La ventilación por dilución, como los ventiladores de suministro mecánico o las corrientes de aire naturales, son muy recomendables cuando se trabaja en espacios cerrados o cubiertos (por ejemplo, pintura de puentes).

2 Use equipo de protección personal (EPP)

Cuando prepare, mezcle, manipule, aplique con rodillo o brocha y pulverice productos a base de epoxi, debe llevar:

- ▶ Camisas de manga larga, monos de polietileno o polipropileno y protección ocular.
- ▶ Guantes resistentes a los productos químicos, como los de nitrilo grueso o caucho butílico. **Nunca utilice guantes de algodón o látex** porque pueden absorber y retener estos productos químicos contra su piel.
- ▶ Para obtener la mejor protección, utilice un equipo homologado por el Instituto Nacional de Seguridad y Salud Ocupacional (National Institute for Occupational Safety and Health, NIOSH):
 - Respirador purificador de aire motorizado con filtro de partículas y cartucho de vapor orgánico (organic vapor cartridge, OVC) cuando se pulverice en espacios cerrados o cubiertos.
 - Respirador de media cara con un OVC durante la mezcla y las aplicaciones con rodillo o brocha.

Manténgase a 10 pies o más de los trabajadores que empleen productos a base de epoxi o utilice un respirador si trabaja cerca.

3 Practique una buena limpieza e higiene personal

- ▶ Lávese las manos con un jabón de pH neutro y agua tibia antes y después de utilizar guantes o en caso de salpicadura de productos químicos. Su empleador debe proporcionarle lavamanos portátiles.
- ▶ Limpie las herramientas y los guantes reutilizables después de cada uso. Utilice productos desechables siempre que sea posible.
- ▶ Cámbiese de ropa antes de salir del trabajo. La ropa sucia debe meterse en una bolsa y lavarse por separado.
- ▶ Duchese en cuanto llegue a casa para eliminar los contaminantes de la piel.
- ▶ Mantenga limpias las zonas de trabajo y almacenamiento y tape bien los recipientes de productos químicos cuando no los utilice.

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SISTEMAS DE RESINA EPOXI

Para aprender más, visite:

▶ Trabajar con sistemas de resina epoxi en la construcción:
<https://invarid.com/epoxysystems>

▶ ChooseHandSafety.org: Una fuente única de información sobre trastornos de la piel y lesiones de las manos

Si usted piensa que está en peligro, contacte a su supervisor. Contacte a su sindicato. Llame a OSHA 1-800-321-6742.

Obtenga más información sobre los riesgos de la construcción.

Para recibir copias de esta advertencia de peligro y tarjetas sobre otros temas: llame al **301-578-8500** o visite cpwr.com/hazardalerts

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Preventing Suicide and Opioid-Related Deaths in Construction Research Projects

- **Evaluating the Implementation and Effectiveness of New Peer-Support Programs in Two Building Trades Unions.** *Washington University in St. Louis*
- **Examining the development and impact of the International Union of Elevator Constructors Local 1 Member Assistance Education Program.** *MDB, Inc.*
- **Impact of employment laws on construction worker suicide.** *University of Iowa*
- **Reducing opioid overdose deaths through meaningful access to naloxone.** *Sheet Metal Occupational Health Institute Trust (SMOHIT) Member Assistance Program*
- **Suicide Prevention Practices for Iron Workers.** *Purdue University*

Thank You!

Follow-up Questions?

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