

Due to their unique properties, Sodium and other Alkali metals present many challenges requiring a disciplined approach to develop safe and reliable systems and components. This course will provide the participant with classroom and hands-on knowledge to meet those challenges.

- Hazards associated with handling and using Sodium, Potassium, NaK, and Lithium Metal
- Proper PPE, spill control techniques, and first aid
- Common design approaches for buildings, systems, and equipment used to contain Alkali metals
- What to expect in the event of a water reaction and how to respond
- How to properly prepare for a fire and contain/extinguish small metal fires



This one- and one-half day course will cover properties, hazards, safety, PPE, emergency response, building characteristics, system design, equipment, and more. It will also include hands-on demonstrations.

**\*Note: This class qualifies as 8 PDH (Professional Development Hours) and will be signified on class certificate, if requested.**

**COVID SAFETY PROTOCOL: Regarding the Pennsylvania & CDC safety guidelines, please feel free to bring a mask to wear during indoor classroom activity, however they are not required.**

## Dates and Locations

**Thursday, April 20, 2023**

**9 am – 4 pm**

**Lunch provided**

Day one classroom work will be in New Freedom, PA at the Creative Engineers facility or nearby meeting facility (TBD)

Group Networking Activity:

5 PM

Dinner optional (Venue TBD)

**Friday, April 21, 2023**

**9 am – 1 pm**

Day two hands-on work will be at the Creative Engineers, Inc. facility in New Freedom, PA and will focus on Sodium and NaK (Sodium Potassium Alloy)

## Who Should Attend?

Engineers, managers, safety professionals, operators, and fabricators who design or operate systems that contain or use Alkali metals. No technical background is needed to attend this course.

## Cost

\$1,100 per attendee

**To register, please call (717) 235-5469 or email [debees@ceina.pro](mailto:debees@ceina.pro)**



## Course Outline

### Day 1

9 am – 4 pm

Classroom work will be in New Freedom, PA in the Creative Engineers facility or nearby conference room depending on final class size. Lunch will be provided. Topics covered:

- Properties and hazards of Alkali metals
- PPE and first aid
- Fire, spill, and emergency response
- Buildings, equipment, and systems
- Storage and transportation of Alkali metals

An optional group networking activity will be planned for the evening of Day 1.

### Day 2

9 am – 1 pm

Hands-on work will be at the Creative Engineers, Inc. facility in New Freedom, PA and will focus on Sodium and NaK (Sodium Potassium Alloy).

- Demonstration of water reaction
- Sodium fire and proper extinguishing technique
- Small spill cleanup
- Cleanup of components used for Alkali metals

**\*\* Attendees that plan to participate in the hands-on portion of Day 2 must wear durable leather closed-toe shoes. All other PPE will be provided.**

## About the Instructors

**Richard VanLieshout** brings over 30 years of chemical industry experience and has served in many technical and management roles before founding CEI in 1996 along with Kevin Berry. Many of Rich's technical accomplishments involve processes using hazardous materials such as Sodium and other Alkali metals.

**Jared Gordon** is CEI's alkali metal subject matter expert with expertise in hazardous processes including processing involving liquid metal. These processes include material handling, disposal, and uses of sodium, lithium, potassium, and NaK.