



**Regional Chem-E-Car™ Competition**  
**Competition Dates: March-April 2014**

## **Safety Checklist**

The following safety requirements must be met in order to compete in this year's Regional competition:

1. **The Engineering Documentation Package (EDP) MUST be completed and placed on the SharePoint site by the deadline. Check the AICHE website for details on the deadline for your specific Region.**

**The Engineering documentation package for your Chem-E-Car™ includes the following items in the following order: (Please PDF your entire document for ease in reviewing)**

- a. JSA
- b. A description of your car and how it works, include a diagram or picture of the vehicle.
- c. A complete list of every piece of equipment on the car in Table format (rows and columns), include in the list the manufacturer of the equipment.
- d. Include either the manufacturer's specification documents or specifications for custom-built components. Include operating limits for equipment, and ensure material compatibility where pertinent.
- e. Standard operating procedures.
- f. A description of the chemistry involved.
- g. A quantitative design basis for pressure relieving load.
- h. Sizing calculations for a pressure relief device.
- i. Test procedure and results for a pressure relief.
- j. Car experimentation area floor plan.
- k. Management system for chemical use and disposal.
- l. Management system for approval of vehicle changes.
- m. Pictures of your vehicle after construction is completed. These pictures must be current.
- n. Material Safety Data Sheets for all chemicals.
- o. Safety Rules Verification Page (NEW for 2014).

2. **Complete the Certification page.** Have the engineering documentation package reviewed by your faculty advisor to ensure that you have identified the major hazards and have controlled them properly. It is recommended that you also enlist the assistance of an outside safety expert or another faculty member with expertise in this area. **This review must be complete by the deadline. Note that your group must have a minimum of 10 hrs of operating time on the car prior to the faculty member signing.**
3. Make any changes to your vehicle and engineering documentation to address any issues identified in Step 2. Obtain a final review by your faculty advisor if changes to your car are required.
4. Upload your engineering documentation package and signature page to the AICHE website, as per instructions provided via email. **This must be completed by the deadline no later than 5 pm (standard time in your area).** Failure to meet this deadline will result in disqualification of your vehicle.
5. Ship your car to the designated University hosting the competition. See the AIChE website for the shipping address and information for both cars and chemicals. Ship at least 1 week prior to the competition to avoid shipping delays. Schools are not allowed to ship chemicals directly to the competition site, without obtaining proper approval from the hosting University for a select list of common household chemicals, such as baking soda. Most chemicals will need to be shipped directly from the chemical supply store/manufacturer. Make sure you put your school's name and team name on the packages you send. You may elect to transport your vehicle to the competition site. You will not be allowed to transport chemicals.
6. Have your vehicle, engineering documentation package and poster ready for pre-competition inspection on the date of the competition.
7. Prepare your chemicals and vehicle for competition. The prep area will be announced at the pre-competition inspection.