

EMPLOYEE TRAINING RECORD

TRAINING TITLE **Reactivity of Chlorine and Chlorine Products**

KEY TEACHING POINTS

Chlorine reacts violently, explosively, with hydrocarbons. These are gasoline, kerosene, oil, diesel, grease, brake fluids, turpentine, mineral spirits, and most lubricants that contain hydrocarbons.

Petroleum based products must never be stored in the vicinity of chlorine products of any type. Chlorination equipment must not be lubricated with petroleum based materials.

Hydrogen burns spontaneously in chlorine with the presence of sunlight. Wet PVC glue or cleaner also can be explosive. Never store any of the above with chlorine or chlorine products. Chlorine gas mixing with ammonia fumes produces a white cloud. Even mixing cleaning solutions such as bleach and ammonia can produce toxic fumes. Metals such as iron will begin to burn in chlorine with only a slight amount of heating.

High amounts of chlorine mixing with water is very corrosive.

The reaction of water with chlorine produces heat. This is most noticeable when calcium hypochlorite (HTH) solutions are made-up, because the reactants are very concentrated. In typical gas chlorination systems, the amount of chlorine added to the make-up water is very small, so the heat being produced is not noticed.

TEST

QUESTION	ANSWERS	
	TRUE	FALSE
1 Low amounts of chlorine mixing with water is very corrosive.		
2 The reaction of water with chlorine produces heat.		
3 Hydrogen burns spontaneously in chlorine with the presence of sunlight.		
4 Wet PVC glue or cleaner is not explosive.		
5 Chlorination equipment must not be lubricated with petroleum based products.		
EMPLOYEE'S NAME	EMPLOYEE'S SIGNATURE	DATE
INSTRUCTOR'S NAME	INSTRUCTOR'S SIGNATURE	DATE

1. False 2. True 3. True 4. False 5. False