


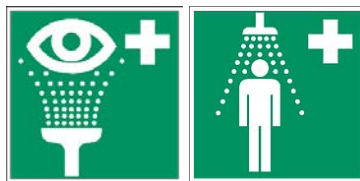
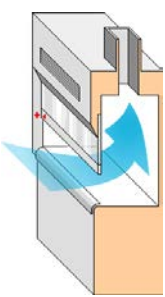





Duke OESO Guidelines for Safe Use of CORROSIVES



Examples: hydrochloric, phosphoric, formic, & acetic acids; sodium & potassium hydroxides

Hazards	Potential Hazards	<ul style="list-style-type: none"> • Destroys tissue at site of contact (skin, eyes, or respiratory tract). • Corrodes metal. • See Safety Data Sheet (SDS) for specific hazard information. • <i>A lab-specific SOP is needed for corrosives that are particularly hazardous (e.g, sulfuric, nitric, or perchloric acids; aqua regia, piranha, or phenol). See also bleach guideline.</i>
	Selection & Purchase	<ul style="list-style-type: none"> • Purchase the smallest containers at the lowest concentration practical. • Purchase in shatter-resistant containers if available (such as plastic or PVC-coated glass).
Hazard Controls	Storage & Transportation	<ul style="list-style-type: none"> • Store in well-ventilated areas with secondary containment (such as non-reactive bin). • Store below eye level but not on the floor. • Store away from metal. • Do not store under the sink. • Store away from incompatibles: <ul style="list-style-type: none"> ○ Oxidizing acids away from organic acids. ○ Acids away from bases. ○ See SDS for specific incompatibility information. • Transport corrosives in a bottle carrier.   
	Engineering Controls	 <ul style="list-style-type: none"> • Work in a chemical fume hood with volatile or powdered corrosives, or if there is any potential for inhalation exposure. 
	Work Practice Controls	<ul style="list-style-type: none"> • When diluting acids, add acid to water slowly, in small amounts. • Plan work to avoid contact with gloves. <i>Change gloves immediately if contaminated.</i>
	Personal Protective Equipment (PPE)	<p>Minimum PPE:</p> <ul style="list-style-type: none"> • Fastened lab coat • Safety goggles • 2 pairs of standard nitrile gloves <p>Risk of splash/large amounts, ADD:</p> <ul style="list-style-type: none"> • Face shield • Impervious apron and sleeves (or coverall) • Thicker chemical-resistant gloves (over 1 pair nitrile gloves)  <p><i>Consult the manufacturer's glove guide for glove effectiveness with the chemical you are using.</i></p>
	Emergencies	See Emergency Response Flip Chart and/or lab specific chemical hygiene plan.
Other	Waste	Follow above storage guidelines. See lab-specific chemical hygiene plan, Lab Chemical Waste Management Practice , and Drain Disposal Practice .
	Training	Sign signature page in lab-specific plan to indicate review.
	Questions	Contact OESO Occupational Hygiene and Safety at 919-684-5996.