








CHEMICAL WASTE GUIDELINE

Silica Gel Waste in Laboratories

Examples: Silica Gel (cartridges), Celite

Identification	Description	Silica Gel (Silicon Dioxide) is used as the drying agent in the bottom of desiccators in a laboratory setting. It is used to remove moisture from gases, liquids and to thicken liquids. Silica Gel is the only desiccant type which is FDA approved for use with direct contact with food and pharmacy items.
	Classification	Non-Regulated Chemical Waste
	Potential Hazards	 <ul style="list-style-type: none"> Refer to chemical specific Safety Data Sheet (SDS) for specific hazard information.
Waste Minimization	Opportunities	<ul style="list-style-type: none"> Use only the lowest amount of silica gel to remove moisture from a solution or mixture.
Supplies	The following supplies are available through Environmental Health and Radiation Safety (EHRS). To order these supplies, call (215) 707-2520 or complete the online Chemical waste request form	
	Supply	Description
		Temple University “Hazardous Waste Tag” The Temple University Hazardous Waste Tag must be affixed on all waste containers used to collect Silica Gel waste.
	Spent Silica Gel waste must be collected in a closed container. The following containers may be used: <ul style="list-style-type: none"> 5-gallon black pail Larger containers will be made available upon requests 	

SAA Management	Accumulation Limits	A maximum of 5 gallons of silica gel waste may be accumulated in a laboratory (Satellite Accumulation Area (SAA)).
	Personal Protective Equipment	 EYE PROTECTION  CHEMICAL GLOVES  LONG PANTS  CLOSED TOED SHOES ARE REQUIRED Note: Always refer to glove manufacturer for chemical specific glove type.
	Collection Procedures	<ul style="list-style-type: none"> • Select an appropriate waste collection container. • All commingling of Silica Gel waste must be conducted in an operating chemical fume hood. • Refer to chemical labels or Safety Data Sheets (SDS) for incompatibilities • Keep container closed when not adding waste. • Do Not Overfill - Leave a 2" headspace. • Begin to complete the hazardous waste tag as soon as any material is placed in the selected container.
	Storage	<ul style="list-style-type: none"> • Collection containers must be stored in designated Satellite Accumulation Areas. (SAA) • Collection container must be properly segregated and stored in secondary containment. • Keep containers tightly closed in a dry, cool, and well-ventilated area. • Store the collection container so that the hazardous waste tag is clearly visible.
Disposal	Removal	<ul style="list-style-type: none"> • Complete the TU Hazardous Waste Tag. Ensure that the: <ul style="list-style-type: none"> ○ Generator information is accurate. ○ Applicable Waste Stream is checked- Other: Silica Gel ○ Applicable Hazards are identified- NONE ○ All chemical constituents and amounts (%) are included on the tag. • Make sure that the tag is affixed to the container and the container lid is closed tight. • When the container becomes ¾ full, request a waste collection from EHRS by: <ul style="list-style-type: none"> ○ Completing the online chemical waste collection request form.
	Special Collection Request	Contact EHRS to arrange for large collections of spent silica gel waste.
Other	Breakage/ Leakage	Contain the material and collect in a closed container. Request disposal through EHRS.
	Emergencies	<p>In the event of an emergency – Call campus safety at (215) 214-1234. EHRS [(215) 707-2520] should also be notified of the incident.</p> <p>Direct contact – Flush contaminated area with copious amounts of water (eyewash or safety shower) and then seek medical attention.</p> <p>Spill – Refer to the spill management sheet for general spill cleanup. Contact EHRS for additional assistance or guidance.</p> <p>Fire – ABC dry powder fire extinguisher should be adequate.</p>
	Questions	Contact Environmental Health and Radiation Safety (EHRS) at (215) 707-2520