



Environmental Guidance Manual for Science Centers

Presented by the
Environmental Compliance Group

Office of Environmental Health & Safety
Los Angeles Unified School District

Presentation Outline

- Waste Handled at LAUSD
 - Recycling
 - Universal Waste
 - Hazardous Waste
- Transportation
- Chemical Storage and Handling
- Chemical Inventory
- Material Safety Data Sheet (MSDS)

Goals of LAUSD/City of LA Recycling Program

- Reduce the amount of waste the District disposes in landfills by 70 percent during the period 1990 to 2020
- Implement a District-wide joint recycling program with the City of Los Angeles
- Reduce disposal and recycling costs

Responsibilities

OEHS

- Provide training to students and staff
- Provide individual boxes for classrooms and small plastic (12-gallon) recycling containers for each site

City of Los Angeles

- Provide outreach to students and staff
- Provide large (60-gallon) recycling containers for each site
- Provide pick-up services

Responsibilities

M&O (Plant Managers)

- Transfer recyclable materials from small recycling containers to large recycling containers
- Record volume of recyclable materials per week
- Place large recycling containers by the curbside once per week and return emptied recycling containers to collection stations

Teachers and Students

- Collect paper in individual boxes inside the classrooms and transfer to large (60-gallon) recycling containers
- Collect bottles and cans in small (12-gallon) recycling containers

Recyclable Materials in Joint LAUSD / City of Los Angeles Program

- Homework paper
- Notebook paper
- Computer paper
- Construction paper
- White and colored paper
- Phone books
- Copier paper
- Sticky notes
- Ads and junk mail
- Envelopes
- Letters
- Newspaper
- Cereal boxes
- Plastic containers (water bottles and milk cartons)
- Glass bottles
- Aluminum, metal, steel and tin cans
- Cardboard
- Magazines
- Catalogs
- NCR paper
- Flyers
- Paper bags
- Aluminum trays

RECYCLING CONTAINER

To request recycling containers contact Douglas Santos
of OEHS at (213) 241-3199



Recycling Bin

To request recycling bins contact Douglas Santos
of OEHS at (213) 241-3199



BEVERAGE CONTAINERS RECYCLING BIN

Contact Robert Skillman of LOS ANGELES CONSERVATION
CORPS (LACC) at 213-749-3601 (rskillman@lacorps.org)
or OEHS at 213-241-3199



Toner & Inkjet Cartridges Recycling

Contact ECCO at (800) 368-5881



Universal Waste

- Fluorescent light bulbs
- Lamps with mercury
- Computers
- Televisions
- Mercury thermostats
- Mercury switches
- Batteries (nickel-cadmium batteries,
small sealed lead acid batteries,
alkaline batteries)

NOTE: Automotive-type lead acid batteries are not universal waste.

Disposal of Universal Waste

Complete hazardous waste pick-up request form & fax
to OEHS at
(213) 241-6816 to dispose fluorescent light bulbs and
lamps with mercury



Recycling of Electronic Devices

Do not dispose of in trash!



Contact Truck Operations at
(562) 654-9000

to arrange for collection of Computer Monitors, Televisions
and Other Electronic Devices

HAZARDOUS WASTE

Highly regulated waste that may harm people or the environment.

Hazardous Waste at School Sites

Examples of some hazardous wastes include:

- Duplicating fluid (flammable, non flammable)
- Laboratory chemicals (organics, acids/bases)
- Flammable solvents
- Used motor oil
- Car batteries
- Solvent based paint

Hazardous Waste at School Sites

- Contaminated gasoline or Diesel
- Asbestos containing materials
- Lead containing materials
- PCBs ballasts
- Old cleaning products
- Old maintenance and repair compounds



- All fields are required.
- Check with other staff members to ensure chemicals may not still be used.
- List all items.
- Store in a secure accessible area. Keep incompatibles separate. Materials should be ready to go.
- Complete form and mail/fax to OEHHS. Specify number of pages at bottom right of request.
- If confirmation of request is not received within 5 working days, please re-submit.

Facility Information

School/Site:	_____	Date:	_____
Address:	_____	Phone:	_____
City, Zip:	_____	Fax:	_____
Contact Title:	_____	Storage Building:	_____
Contact Name:	_____	Storage Room:	_____

[illegible]

Number of Replacement Containers Needed:

*** To be completed by OEHS ***

CONTRACTOR:

DATE REQUESTED:

DATE LAB PACKED:

DATE OF PICK-UP:

Fill-out this form and fax to OEHS at
(213) 241-6816

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY.
THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

ACCUMULATION START DATE INSERT DATE EPA WASTE NO. 0001 CA WASTE NO. 001 014

D.O.T. PROPER SHIPPING NAME Waste Paint Related Material

AND 3 UN1263 PGII

U.N. OR
N.A. NO.

GENERATOR'S NAME INSERT YOUR SITE NAME

ADDRESS INSERT YOUR SITE ADDRESS

CITY STATE

EPA ID. NO. YOUR SITE EPA ID # MANIFEST TRACKING NO.

CONTENTS COMPOSITION Paint and Solvent With Paint

PHYSICAL STATE HAZARDOUS PROPERTIES
☐ SOLID ☐ LIQUID ☐ CORROSIVE ☐ REACTIVE ☒ FLAMMABLE ☐ TOXIC
OTHER

HAZARDOUS WASTE

HANDLE WITH CARE

1. Uniform Hazardous Waste Manifest 2. Generator's Name and Mailing Address Los Angeles Unified School District 400 K Street, 4th Floor Los Angeles, CA 90012		3. Page 1 of 1 4. Emergency Response Phone (800) 625-6645		5. Manifest Tracking Number 000963501 JJK	
6. Generator's Phone: (213) 241-3199		7. Transporter's Name and Mailing Address Ecology Control Industries, Inc. 15591 38th Street San Diego, CA 92128		8. U.S. EPA ID Number CAD98203C173	
9. Designated Facility Name and Location CEMENTS WASTE MANAGEMENT TREATMENT FACILITY 15501 OLD SKYLINE ROAD SUTHERLAND, CA 95676		10. U.S. EPA ID Number CAT000046117		11. Facility Phone: (559) 386-9711	
12. Date of Shipment 09/01/2002		13. Date of Receipt 09/01/2002		14. Date of Manifest 09/01/2002	
15. Description of Waste Hazardous Waste Solid, N.O.S. 9, NA 3077, PG III (ID008) (Lead contaminated debris)		16. Quantity 500		17. Unit P	
18. Manifest Tracking Number 000963501 JJK		19. Manifest Tracking Number 000963501 JJK		20. Manifest Tracking Number 000963501 JJK	
21. Signature of Generator [Signature]		22. Signature of Transporter [Signature]		23. Signature of Facility [Signature]	
24. Date of Shipment 09/01/2002		25. Date of Receipt 09/01/2002		26. Date of Manifest 09/01/2002	
27. Signature of Generator [Signature]		28. Signature of Transporter [Signature]		29. Signature of Facility [Signature]	
30. Date of Shipment 09/01/2002		31. Date of Receipt 09/01/2002		32. Date of Manifest 09/01/2002	
33. Signature of Generator [Signature]		34. Signature of Transporter [Signature]		35. Signature of Facility [Signature]	
36. Date of Shipment 09/01/2002		37. Date of Receipt 09/01/2002		38. Date of Manifest 09/01/2002	
39. Signature of Generator [Signature]		40. Signature of Transporter [Signature]		41. Signature of Facility [Signature]	
42. Date of Shipment 09/01/2002		43. Date of Receipt 09/01/2002		44. Date of Manifest 09/01/2002	
45. Signature of Generator [Signature]		46. Signature of Transporter [Signature]		47. Signature of Facility [Signature]	
48. Date of Shipment 09/01/2002		49. Date of Receipt 09/01/2002		50. Date of Manifest 09/01/2002	
51. Signature of Generator [Signature]		52. Signature of Transporter [Signature]		53. Signature of Facility [Signature]	
54. Date of Shipment 09/01/2002		55. Date of Receipt 09/01/2002		56. Date of Manifest 09/01/2002	
57. Signature of Generator [Signature]		58. Signature of Transporter [Signature]		59. Signature of Facility [Signature]	
60. Date of Shipment 09/01/2002		61. Date of Receipt 09/01/2002		62. Date of Manifest 09/01/2002	
63. Signature of Generator [Signature]		64. Signature of Transporter [Signature]		65. Signature of Facility [Signature]	
66. Date of Shipment 09/01/2002		67. Date of Receipt 09/01/2002		68. Date of Manifest 09/01/2002	
69. Signature of Generator [Signature]		70. Signature of Transporter [Signature]		71. Signature of Facility [Signature]	
72. Date of Shipment 09/01/2002		73. Date of Receipt 09/01/2002		74. Date of Manifest 09/01/2002	
75. Signature of Generator [Signature]		76. Signature of Transporter [Signature]		77. Signature of Facility [Signature]	
78. Date of Shipment 09/01/2002		79. Date of Receipt 09/01/2002		80. Date of Manifest 09/01/2002	
81. Signature of Generator [Signature]		82. Signature of Transporter [Signature]		83. Signature of Facility [Signature]	
84. Date of Shipment 09/01/2002		85. Date of Receipt 09/01/2002		86. Date of Manifest 09/01/2002	
87. Signature of Generator [Signature]		88. Signature of Transporter [Signature]		89. Signature of Facility [Signature]	
90. Date of Shipment 09/01/2002		91. Date of Receipt 09/01/2002		92. Date of Manifest 09/01/2002	
93. Signature of Generator [Signature]		94. Signature of Transporter [Signature]		95. Signature of Facility [Signature]	
96. Date of Shipment 09/01/2002		97. Date of Receipt 09/01/2002		98. Date of Manifest 09/01/2002	
99. Signature of Generator [Signature]		100. Signature of Transporter [Signature]		101. Signature of Facility [Signature]	
102. Date of Shipment 09/01/2002		103. Date of Receipt 09/01/2002		104. Date of Manifest 09/01/2002	
105. Signature of Generator [Signature]		106. Signature of Transporter [Signature]		107. Signature of Facility [Signature]	
108. Date of Shipment 09/01/2002		109. Date of Receipt 09/01/2002		110. Date of Manifest 09/01/2002	
111. Signature of Generator [Signature]		112. Signature of Transporter [Signature]		113. Signature of Facility [Signature]	
114. Date of Shipment 09/01/2002		115. Date of Receipt 09/01/2002		116. Date of Manifest 09/01/2002	
117. Signature of Generator					

Transportation

- 5 gallons or 50 lbs. of hazardous materials can be transported in your **own vehicle**; however shipping papers are required
- > 5 gallons or 50 lbs. but < 1,000 lbs. or 135 gallons must be transported in a **District vehicle**, with a shipping paper
- Proper labeling

Shipping Paper for Transporting Science Chemicals



LOS ANGELES UNIFIED SCHOOL DISTRICT SHIPPING PAPAR

Date: _____

From:
School/Site _____
Address: _____

To:
School/Site: _____
Address: _____

Transporter: _____
Title: _____

Line Item #	Chemicals	Physical State	Container Type	Quantity	Total Volume
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Name of person receiving chemicals _____ Title: _____

Signature: _____

Physical State Code:

L = Liquid
S = Solid
P = Paste or Semi-Solid
G = Gas

Container Type Code:

F= Fiberboard
G = Glass
M = Metal
P = Plastic

Chemical Storage and Handling

- LAUSD Approved Chemicals List
- Suggested Chemical Storage Pattern
- Chemical Storage Compatibility Categories
- Proper labeling

LAUSD Approved Chemicals List

Can be obtained from

1. www.lausd-oehs.org/chemical-hygiene.asp
2. Click on “View Approved Laboratory Chemicals”

Suggested Chemical Storage Pattern

Can be obtained from

www.lausd-oehs.org/chemical-hygiene_handout.asp

"Your Safer Source for Science Supplies"

Suggested Chemical Storage Pattern

SUGGESTED CHEMICAL STORAGE PATTERN

Storage of laboratory chemicals presents an ongoing safety hazard for school science departments. There are many chemicals that are incompatible with each other. The common method of storing these products in alphabetical order sometimes results in incompatible neighbors. For example, storing strong oxidizing materials next to organic chemicals can present a hazard.

A possible solution is to separate chemicals into their organic and inorganic families and then to further divide the materials into related and compatible families. Below is a list of compatible families. On the next page you will find this family arrangement pictured as shelf areas in your chemical stores area. The pictured shelf arrangement will easily enable you to rearrange your inventory into a safer and more compatible environment.

Inorganic	Organic
1. Metals, Hydrides	1. Acids, Amino Acids, Anhydrides, Peracids
2. Acetates, Halides, Iodides, Sulfates, Sulfites, Thiosulfates, Phosphates, Halogens	2. Alcohols, Glycols, Sugars, Amines, Amides, Imines, Imides
3. Amides, Nitrates (except Ammonium Nitrate), Nitrites, Azides	3. Hydrocarbons, Esters, Aldehydes, Oils
4. Hydroxides, Oxides, Silicates, Carbonates, Carbon	4. Ethers, Ketones, Ketenes, Halogenated Hydrocarbons, Ethylene Oxide
5. Sulfides, Selenides, Phosphides, Carbides, Nitrides	5. Epoxy Compounds, Isocyanates
6. Chlorates, Bromates, Iodates, Chlorites, Hypochlorites, Perchlorates, Perchloric Acid, Peroxides, Hydrogen Peroxide	6. Peroxides, Hydroperoxides, Azides
7. Arsenates, Cyanides, Cyanates	7. Sulfides, Polysulfides, Sulfoxides, Nitriles
8. Borates, Chromates, Manganates, Permanganates	8. Phenols, Cresols
9. Acids (except Nitric) (Nitric Acid is isolated and stored by itself)	9. Dyes, Stains, Indicators
10. Sulfur, Phosphorus, Arsenic, Phosphorus Pentoxide	10. Organic miscellaneous
11. Inorganic miscellaneous	

NOTE: If you store volatile materials (ether, hydrocarbons, etc.) in a refrigerator, the refrigerator must be explosion-proof. The thermostat switch or light switch in a standard refrigerator may spark and set off the volatile fumes inside and thus cause an explosion.

Surely this list is not complete and is intended only to cover the materials possibly found in an average school situation. This is not the only method of arranging these materials and is only offered as a suggestion.

See the next three pages for detailed inventory and storage steps you might follow to vastly improve the safety profile of your chemical storage.

1005

Chemical Inventory & Storage

Chemical Storage Compatibility Categories

Can be obtained from

www.lausd-oehs.org/chemical-hygiene_handout.asp

Chemical Storage Compatibility Categories

1. **Metals.** All metals except mercury (see item 8). Phosphorus (red only; white or yellow phosphorus not recommended for school usage) should also be stored here. Flammable solids should be stored in the flammables cabinet. *Location:* Keep separate from oxidizers (including ammonium nitrate), halogens, organic compounds, and moisture.
 2. **Oxidizers.** All except ammonium nitrate. Includes nitrates, nitrites, permanganates, chlorates, perchlorates, peroxides, and hydrogen peroxide 30 percent or greater. *Location:* Keep separate from metals, acids, organic materials, and ammonium nitrate. Preferably, isolate oxidizers from the flammable liquids storage cabinet by a minimum of eight meters (25 feet) or by a one-hour fire wall.
 3. **Ammonium nitrate.** Store in isolation from all other chemicals, especially acids, powdered metals, flammable liquids, chlorates, nitrites, sulfur, and finely divided organic combustible materials.
 4. **Bases.** Strong bases—sodium hydroxide, potassium hydroxide, and other regulated bases—and ammonium hydroxide. Store in a dedicated corrosive chemicals storage cabinet that has an interior constructed entirely of corrosion-resistant materials.
 5. **Acids.** Inorganic (except nitric acid) and regulated organic acids. Store in a dedicated corrosive chemicals storage cabinet that has an interior constructed entirely of corrosion-resistant materials.
 6. **Nitric acid.** Must be stored separately from acetic acid. Store either in an isolated compartment in the acids cabinet or in special Styrofoam containers available for that purpose from vendors of chemicals. Fuming nitric acid should never be used.
 7. **Flammables.** Store in a dedicated flammables storage cabinet painted with heat/flame-resistant paint. Preferably, isolate flammables from all oxidizers by a minimum of eight meters (25 feet) or by a one-hour fire wall.
 8. **Poisons.** Cyanides (no longer recommended for school programs), mercury and mercury compounds, nicotine, and other poisons. *Location:* Use a lockable drawer remote from the acids storage cabinet.
 9. **Compressed gases.** Cylinders must be chained or strapped to the wall, with caps on tight. *Location:* (a) Keep oxidizing gases remote from flammable liquids, metals, and flammable gases; (b) keep flammable gases remote from oxidizers and oxidizing gases by a distance of eight meters (25 feet) or by a one-hour fire wall.
 10. **Low-hazard chemicals.** Many of the salts not otherwise specified (of course, *not* the nitrates), weak bases, oxides, carbonates, sulfides, dyes, indicators, stains, noncorrosive organic acids, amino acids, sugars, and so forth. Store on open shelves that have earthquake barriers.
9. Bottled gas cylinders should be secured to a wall or counter to prevent upsetting the cylinders. The rupture or unintentional opening of the release valve may cause serious personal injury and destruction of laboratory facilities, especially if the cylinder is not secured and becomes a projectile.
10. Larger gas cylinders must be kept in the cart provided for their transport. Valves should be in perfect working order. When not in use, each cylinder must be secured against movement; that is, each must be held by a sturdy chain or strap connected to ring bolts that will not pull free. The cylinders must be located within an approved storage area. Move large gas cylinders only when regulator valves have been removed and safety covers have been installed.
- A relatively safe and practical pattern for storage of chemicals is one that has separate storage provisions for different categories of chemicals (see diagram on page 44).

F Labeling of Chemical Reagents

Whenever feasible, store chemicals in the containers in which they were received and retain the vendors' labels. Labels on prepared chemical reagent bottles or

Checklist for Safe Handling and Storage of Chemicals

LOS ANGELES UNIFIED SCHOOL DISTRICT

MONTHLY CHECK LIST FOR SAFE HANDLING AND STORAGE OF CHEMICALS

(To be completed by CSC)

ACTIVITY	Yes	No
1. All chemicals are correctly and clearly labeled.		
2. Unlabeled containers and chemical wastes have been inventoried and a disposal request submitted to OEHS		
3. Only chemicals that are being used are continually being stored.		
4. Only the amount of chemicals which can be consumed within a year are being stored.		
5. CSC is aware of and has trained others on the hazards and precautions for protection prior to using any chemical, and has reviewed the precautionary labels and contents before using any chemical product.		
6. All chemicals are stored by compatibility (see CHSP Appendix IV, Table 1: Chemical Shelf Storage Identification Chart and Table 2: Storage for Compatibility Categories).		
7. Chemicals are stored on shelves below eye level.		
8. Chemicals are not stored on the floor.		
9. Chemicals are being stored in approved storage cabinets.		
10. Neutralizing chemicals, absorbent and other spill control materials are readily available.		
11. Compressed gas cylinders are upright and secured to the wall with caps in place.		
12. Storage cabinets for corrosive chemicals (separated for acids and for bases) are appropriately labeled.		
13. Flammable materials are stored in approved storage cabinets.		
14. Shelving is equipped with lips to prevent products from rolling off shelves and secured to walls/floor to prevent tipping of entire sections.		
15. Storage areas/cabinets are labeled to identify the hazardous nature of the products stored within.		
16. Class ABC fire extinguishers are available in chemical storage areas and are in working order.		
17. There are no sources of ignition in the chemical storage area.		
18. Chemicals storage area have two exits and egress (exiting) area is clear.		
19. Used and contaminated reagents are stored and labeled properly.		
20. Current and dated inventory lists are posted clearly in each storage room throughout the science department.		
21. Chemical storage cabinets are locked when laboratory classes are not in session.		

Certification: I hereby certify that I have completed all of the above activities in fulfillment of my responsibilities as the Chemical Safety Coordinator (CSC) for my school.

Date

School

CSC Signature

CSC Name (print)

Site Administrator

Date Completed

Chemical Inventory

Chemical Inventory Form can be obtained from

1. www.lausd-oehs.org/chemical-hygiene_handout.asp
2. Click on “LAUSD Approved Chemical Inventory List”

Chemical Inventory Form

LAUSD APPROVED CHEMICALS LIST (INVENTORY LIST)

School/Site:
Name:
Signature:

Room No.:
Time Spent:
Date:

CHEMICAL NAME	MANUFACTURER	MATERIAL SAFETY DATA SHEET YES / NO	COMPATIBLE STORAGE	HAZARD HEALTH EFFECTS	H.R.	TOTAL NUMBER OF CONTAINERS	TOTAL QUANTITY (GAS: GRAVIMETER, LIQUID: VOLUMETER, SOLID: COUNTER, CC, LITER)	SHELF LIFE (Months)	Expired Chemical YES/NO
Carbon Dioxide CO ₂ (PEL 10,000 ppm)			Chain Or Cabinet For Gas Container	Experimental teratogenic data. Experimental reproductive effects.	1			12 - 50	
Nitrogen N ₂			Chain Or Cabinet for Gas Container	See Hazard Rating (HFS)	1			12 - 50	
Oxygen O Tank			Chain Or cabinet for Gas Container	Human mutation data reported. Human teratogenic data.	3			12 - 50	
Propane C ₃ H ₈			Chain Or Cabinet for Gas Container	See Hazard Rating (HFS)	3			12 - 50	
Helium He			Chain Or Cabinet For Gas Container	See Hazard Rating (HFR)	1			12 - 50	
Aluminum Al (powder, PEL 15 mg/m ³)			I-1	See Hazard Rating (HFR)	3			12 - 50 Ⓢ	
Stainless Steel Metal (particles)			I-1	Poison	3			12 - 50 Ⓢ	
Calcium Ca			I-1	See Hazard Rating (HFR)	3			6 - 30 Ⓢ	
Copper Cu Metal (wire, strips, plates) (For dust PEL 1 mg/m ³)			I-1	Experimental teratogenic data, reproductive effects. Questionable carcinogen with experimental tumorigenic data.	2			12 - 50	
Iron Fe Metal (powder, strips, wire, plates)			I-1	Poison. Questionable carcinogen with experimental tumorigenic data.	3			12 - 50	
*** Lead Pb Metal For Demonstration only (strip) (powder, PEL 0.05 mg/m ³) Prop. 65			(Strips Only) I-1	Poison. Questionable carcinogen. Experimental teratogen. reproductive effects. Human mutation data reported. Halomethanes and related perfluorinated compounds. (No powder, No strips)	3			12 - 50 Ⓢ	
Lithium Metal Li			I-1 Under Mineral Oil	Poison. Reacts Vigorously With Water.	3			12 - 50	
*** Magnesium Mg Metal (ribbons)			I-1	See Hazard Rating (HFR)	3			12 - 50 Ⓢ	
Manganese Mn Metal (powder PEL 1 mg/m ³)			I-1	Poison. Questionable carcinogen with experimental tumorigenic effects.	3			12 - 50	
*** Nickel Ni Metal For Demonstration Only Prop. 65			(Strips Only) I-1	Confirmed carcinogen with experimental carcinogenic, Neoplastigenic, Teratogenic and Mutagenic Data. Mutation data reported.	3			12 - 50	
*** Silver (powder, PEL 0.01 mg/m ³)			(Strips Only) I-1	Oral Toxic. Poison (Dust Powder)	3			12 - 50	
Silicon Si			I-1	See Hazard Rating (HFR)	3			12 - 50	

Material Safety Data Sheet (MSDS)

Can be obtained from

1. www.lausd-oehs.org
2. Select “Product Review”
3. Click on “download Material Safety Data Sheets”

Sample Material Safety Data Sheet

Flinn Scientific, Inc.
FLINN SCIENTIFIC, INC - P.O. BOX 219 - BATAVIA, ILLINOIS 60510 - (312) 879-8900
MATERIAL SAFETY DATA SHEET

CHEMICAL NAME & SYNONYMS ACETONE		FLINN CATALOG NUMBER A0009, A0010, A0081	
FORMULA CH ₃ OCH ₃	FORMULA OR ATOMIC WEIGHT 58.08		CAS NUMBER 67-64-1
PHYSICAL DATA (DENSITY, SOLUBILITY, ETC.) Specific Gravity: 0.785 Flash Point: -18C Melting Point: -94C Miscible with water and most organic solvents			
APPEARANCE AND ODOR Clear liquid, sweetish odor, volatile			
COMPATIBLE CHEMICAL FAMILY Organic See Flinn Chemical Catalog/Reference Manual	DOT CLASS Flammable Liquid		REACTIVITY Stable
CONDITIONS TO AVOID (IF ANY): Avoid any source of ignition. Avoid breathing vapor.			
HEALTH HAZARDS (IF ANY): Irritation to eyes, skin and mucous membranes. Vapor causes weakness, Fatigue, nausea and headache. Not all health aspects of this substance have been fully investigated.			THRESHOLD LIMIT VALUE (TLV) IF ESTABLISHED 750 ppm in air
FIRE HAZARDS (IF ANY): Use triclass, dry chemical fire extinguisher. Combustible liquid. Serious fire hazard.			
SPILLS AND LEAKS: Ventilate the spill area immediately. Absorb on sand or vericulite. Place in suitable container. Use the disposal method listed on the right.		DISPOSAL METHOD 26b See Flinn Chemical Catalog/Reference Manual	
SPECIAL PRECAUTIONS (IF ANY): Wear chemical gloves and goggles. Use and dispense in a hood. If no hood, then provide good ventilation. Prudent lab practices should be observed.			
FIRST AID (IF SUBSTANCE DANGEROUS): External: Wash affected parts with copious quantities of water. Internal: Wash mouth. See a physician. Eyes: Wash continuously for 15 minutes. See a physician. Respiratory: Transport to fresh air; administer oxygen. See a physician.			

Consult your copy of the Flinn Chemical Catalog/Reference Manual
for even more information about laboratory chemical.

Additional Handouts

The following handouts are available at:

- www.lausd-oehs.org/chemical-hygiene_handout.asp
 1. Hazard Communication Presentation (PowerPoint)
 2. Chemical Hygiene Plan
- www.lausd-oehs.org/chemical-hygiene.asp
 1. Science Safety Handbook for California Public Schools

Conclusion

Thanks for your time, if you have any further questions, please contact the environmental compliance group of OEHS at 213-241-3199

Appendix I

Shipping Paper for Science Centers



LOS ANGELES UNIFIED SCHOOL DISTRICT SHIPPING PAPAR

Date: _____

From:
School/Site _____
Address: _____

To:
School/Site: _____
Address: _____

Transporter: _____
Title: _____

Line Item #	Chemicals	Physical State	Container Type	Quantity	Total Volume
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Name of person receiving chemicals _____ Title: _____

Signature: _____

Physical State Code:

L = Liquid
S = Solid
P = Paste or Semi-Solid
G = Gas

Container Type Code:

F= Fiberboard
G = Glass
M = Metal
P = Plastic