




















MATERIAL HAZARDS

HAZARD SYMBOLS

HAZARDS

Eye	
Nose	
Mouth	
Hand	
Poisonous	
Explosive	
Corrosive	
Cardinogen	
Flammable	
Fatal	
Narcotic	
Allergies	
DO NOT USE	
Toxic Gas	
Death	
Medical	
Toxic	
Cuts	
Burns	

SAFETY PRACTICES

Wet Mop	
Ventilation	
Dustmask	
Gloves	
Wash hands	
Avoid Ingestion	
Proper Storage	
Goggles	
Avoid Flame	

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FABRIC









The fabric area involves the creation of fabric itself, using various fibers, yarns, or plants, as well as the practice of decorating and dying fabric with natural and man-made dyes, mordants, waxes, or inks.

Dangers from inhalation range from nasal irritation from fibers from hemp to severe irritation from the toxic gas released when bleach is heated. The most common source of irritation comes from the fumes released when wax is removed during the batik process.







Many of the mordants and chemicals used to set the dye are harmful if ingested. It is important for the instructor to know what materials, dyes, and processes are being used in the classroom and what the potential hazards are. Removal of dangerous materials and procedures is a must. Teach the safe use of dying and fabric decoration in your classroom.

Wear rubber gloves and use safe dye mixing practices to avoid skin contact with dye, dye stuff, chemicals and the wet dyed cloth itself.










FABRIC

MATERIAL	SYMBOL	HAZARD
<div><div><u>BLEACH</u></div><div>Sodium hypochlorate solution</div></div>	<div><div> </div><div></div><div></div><div> M</div></div>	<div>Severe irritation</div> <div>Heating or addition of acid releases highly toxic chlorine gas</div> <div>Mixing with ammonia creates highly poisonous gas</div> <div>Breakes down protective skin barrier causing dermatitis</div>
<div><div><u>CLOTH</u></div><div>Burlap/cotton formaldehyde fungicide</div></div>	<div><div></div><div></div></div>	<div>Dust</div> <div>Skin allergies</div>
<div><div><u>DYE</u></div><div><div><u>ACID</u></div><div>Used for silk/wool</div><div>Glaubers salt</div><div>Sulfuric acid</div><div>Formic acid</div></div></div>	<div><div></div></div>	<div>Long term exposure to acid vapor may cause chronic bronchitis</div>






FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
 	<p>Wear goggles when mixing- 1 part bleach to 10 parts water</p> <p>Do not heat</p> <p>Do not add acids or ammonia such as dutch cleanser or Ajax</p> <p>Wear gloves</p> <p>AVOID use at elementary level</p>	
	<p>AVOID excess cutting or pulling frayed ends</p> <p>Wash cloth before use</p> <p>Wear dust mask</p>	
  	<p>AVOID at elementary and junior high level</p> <p>Wear goggles</p> <p>Wear dust mask</p> <p>Wear rubber gloves</p> <p>Keep baking soda near or neutralize acid spills</p>	<p>Use vinegar as dye assistant</p>






FABRIC

MATERIAL	SYMBOL	HAZARD
<u>DYE</u> <u>ALL PURPOSE/UNION</u> Rit Tintex Dylon benzidine	  	Carcinogen
<u>BASIC DYE</u> Used for wool, silk, and some synthetics Catonic dye Fluorescent dye	 	Allergies
<u>DIRECT OR AZO DYE</u> Used for cotton, linen and rayon benzidine	  	Bladder cancer Burns from hot liquid
<u>DISPERSE DYE</u> Used on fibers which repel water		Contact with dye or dyed cloth may cause dermatitis or allergic reactions

FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
 	Wear dust mask Wear rubber gloves Use clothes pegs to handle and hang up dyed material	
 	Wear dust mask Wear gloves	
	AVOID USE	










FABRIC

MATERIAL	SYMBOL	HAZARD
<u>DYES</u> <u>FIBER REACTIVE OR COLD WATER DYE</u> Used on cotton or linen Procion pigment sodium carbonate	 L  H	Dust easily inhaled. Reacts with lung tissue causing allergies, asthma, and hayfever Dermatitis
<u>NAPHTHOL OR AZOIC DYE</u> Used to dye cotton, silk, linen, rayon, and polyester Sennelier dye Tinfix H. Dupong dyes Prince colour dyes fast salt/fast base sodium hydroxide sulfonated castor oil		Highly corrosive Allergies
<u>LIQUID DYE</u> Sennelier dye Tinfix Super tinfix solvent base liquids methanol	 M 	Respiratory irritant Kidney, liver, and nerve damage Possible fire hazard






FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
<div>☹</div> <div>☞☞</div> <div>⊘</div>	Wear dust mask Mix dye in "powder box" using slurry method Wear rubber gloves AVOID use at elementary level	Purchase dye in premixed liquid form
<div>⊘</div>	AVOID use at this level	
<div>☹☞</div> <div>☹</div> <div>☞☞</div>	AVOID ingestion Wear dust mask Wear gloves	Use those dyes with water , ethanol , or rubbing alcohol base




FABRIC

MATERIAL	SYMBOL	HAZARD
<u>DYE</u> <u>NATURAL DYE</u> Used to dye wool and cotton	 	Possible salmonella contamination of cochineal Some roots moderately toxic eg. Logwood Mordants may be hazardous See MORDANTS
<u>VAT DYE</u> Used to dye silk, cotton, linen, and viscose rayon	  	Highly corrosive may cause burns and allergies Suspected carcinogen Chromic acid produces highly toxic sulfur dioxide when heated
<u>FABRIC CRAYONS</u> hydrocarbons pigment	 	Fumes from wax vapors released when ironing on design Keep paper on crayon to avoid excess skin contact
<u>FIBERS</u> <u>ANIMAL FIBER</u> Sheep Wool Mohair Silk Hair	 	Possible ANTHRAX contamination. Inhalation of dust spores may be fatal Dust irritant








FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
 	<p>Soak materials in water to eliminate inhalation hazards</p> <p>Wear dust mask</p> <p>Wear rubber gloves</p>	<p>Prepare dye solutions by soaking natural materials rather than purchasing pre-packaged goods</p>
	<p>Wear dust mask</p> <p>Use heat or air instead of chromic acid to oxidize fabric</p>	
	<p>Keep iron on proper temperature setting ie: cotton</p>	
 	<p>Purchase yarn or hair which has been disinfected</p> <p>Immunize against Anthrax</p> <p>Use in well-ventilated area</p> <p>Damp mop dust fibers</p>	







FABRIC

MATERIAL	SYMBOL	HAZARD
<u>FIBERS</u> <u>MAN-MADE FIBER</u> Reprocessed cellulose materials rayon acetate		Dust irritant Little is known regarding hazards
Synthetic materials nylon polyester acrylic		
<u>VEGETABLE FIBER</u> Stem flax hemp jute		Dust from moulds on fibers, especially when carding , causes headaches and sneezing Long term use can cause brown lung disease or byssinosis, chronic bronchitis, emphysema, or weaver's cough
Leaf manilla		Possible carcinogen
Seed or fruit cotton formaldehyde		Allergies
<u>MORDANTS/CHEMICALS</u> <u>ALUM</u> Potassium Aluminum sulfate		Repeated contact may cause allergies








FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
	Damp mop cleanup AVOID creation and breathing of dust and dust fibers	
   	Card materials in well ventilated area AVOID use of mouldy materials Store yarn in dry location Vacuum or wet-mop work space Wash hands after working with fibers	
 	AVOID contact at elementary level Wear gloves	






FABRIC

MATERIAL	SYMBOL	HAZARD
<u>MORDANTS/CHEMICALS</u> <u>BAKING SODA</u> Sodium bicarbonate		No known hazard
<u>BLUE VITRIOL</u> Copper sulfate	 	Vomiting Skin allergies and irritation
<u>CHROME</u> Potassium dichromate	 	Suspected carcinogen Allergies and ulceration Poisoning
<u>CREAM OF TARTER</u> Potassium acid tartrate		No significant hazards
<u>GREEN VITRIOL</u> Ferrous sulfate	 M 	Ingestion may cause poisoning Skin irritant












FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
  	<p>AVOID use at elementary level</p> <p>Wear goggles</p> <p>Wear gloves</p>	
	<p>AVOID USE</p>	
	<p>Wear rubber gloves</p>	
 	<p>AVOID use at elementary level</p> <p>Wear gloves</p>	






FABRIC

MATERIAL	SYMBOL	HAZARD
<u>MORDANTS/CHEMICALS</u> <u>LYE</u> Sodium hydroxide Caustic soda		Highly corrosive Ingestion causes intense pain to mouth and esophagus and may be FATAL Can cause pulmonary edema
<u>OXALIC ACID</u>		Severe corrosion and ulcers May cause gangrene to extremities Kidney damage
<u>SALT</u> Sodium chloride		No hazards
<u>SODA ASH</u> Sodium carbonate		Corrosive if ingested or inhaled
<u>TANNIC ACID</u> Tannin		Causes vomiting Suspected carcinogen
<u>TIN</u> Stannous chloride		Respiratory irritant




FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
<div>    </div>	<div> <div>AVOID use at elementary level</div> <div>Wear goggles</div> <div>Wear rubber gloves</div> </div>	
<div>  </div>	<div> <div>AVOID USE</div> </div>	
<div>  </div>	<div> <div>Avoid excessive ingestion</div> </div>	
<div>   </div>	<div> <div>Use dust mask</div> <div>Wear rubber gloves</div> </div>	
<div>  </div>	<div> <div>AVOID USE</div> </div>	
<div>    </div>	<div> <div>Wear goggles</div> <div>Wear dust mask</div> <div>Wear rubber gloves</div> </div>	

FABRIC

MATERIAL	SYMBOL	HAZARD
<u>MORDANTS/CHEMICALS</u> <u>UREA</u>		No significant hazard
<u>VINEGAR</u> 2% Acetic acid		Mildly corrosive when ingested
<u>WASHING SODA</u> Sodium carbonate Soda ash		Corrosive if ingested or inhaled
<u>TEXTILE PAINTS</u> Acrylic binder Formaldehyde Ammonia Solvents	  	Severe respiratory irritant Ingestion causes intense pain to mouth and esophagus and may be FATAL Skin irritant
<u>TEXTILE INKS</u>		See PRINTMAKING section

FABRIC

SYMBOL	SAFETY PRACTICE * CLEAN-UP	ALTERNATIVES
 	AVOID ingestion Wear rubber gloves	
	AVOID ingestion	
		Use non-toxic paints for use on clothing