

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

**TRADE NAME (as labeled):** This is the name that the manufacturer has given to their product. For Example: Kleenex

**MANUFACTURER'S NAME:** This will be the company who actually produces the listed product. For Example: DuPont

**Address (complete mailing address):** Corporate headquarters or main address of the manufacturer.

**Phone Number for additional information:** (0.00)

**Date prepared or revised:** 3/14/10 **Name of Preparer:**

## II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Percent*	Exposure ACGIH TVL	Limits In Air OSHA PEL	(Indicate Units) Other (specify)
Chemical name of the product and if a compound there may be more than one ingredient listed here. For example: Calcium carbonate	Chemical abstract number. An industry wide standard for this particular chemical for example: 1317-65-3	What quantity is in this product? may be anything from a fraction of a percent to 100 percent.	Permissible threshold limit value. This is the measurable point at which protection against this agent or chemical compound is required. Usually given in parts per million or milligrams per cubic meter.	Permissible exposure limit. For 8 hour day. (time weighted average) Usually given in parts per million (ppm) or milligrams per cubic meter (mg/m3)	Manufacturer may give other data here such as vapor pressure of the compound.

## III. PHYSICAL PROPERTIES

<b>Vapor Density (air=1)</b>		<b>Melting Point or Range, ° F</b>	
<b>Specific Gravity</b>	water=1	<b>Boiling Point or Range, ° F</b>	
<b>Solubility in Water</b>	does it dissolve?	<b>Evaporation Rate (butyl acetate = 1)</b>	
<b>Vapor Pressure, mm @ 20 ° C</b>			
<b>Appearance and Odor</b>	is it a solid, powder, liquid, paste, colored, clear, does it have an odor?		

### HOW TO DETECT THIS SUBSTANCE (Warning properties of substances as a gas, vapor dust or mist):

If it has an odor, what kind of odor? (sweet, sour smoky, etc.) If you can see it as a dust, is it heavy, is it metallic? If a gas is it colored or does it have a specific odor? If it is a vapor, does it have an odor? If it is a mist is it colored or does it have an odor? A gas is that which is a gas at room temperature and is invisible. Examples: propane, carbon dioxide, helium. May or may not have an odor. A vapor is that which evaporates from a solvent or other chemical compound at room temperature and is invisible. Examples: acetone, paint thinner, ammonia. May or may not have an odor. A mist is microscopic droplets and is visible to the naked eye as something resembling smoke. Examples: paint overspray, hairspray. May or may not have an odor. A dust is microscopic particles that float in the air and are visible to the naked eye as something resembling smoke. Examples, flour dust, sawdust, clay dust. May or may not have an odor.

#### IV. FIRE AND EXPLOSION

**Flash point, °\_F (give method):** point at which the chemical compound will ignite when exposed to a flame  
**Auto ignition Temperature, °\_F:** point at which the chemical compound will burst into flame  
**Flammable limits in air, % by volume:** **lower (LEL):** lower flammability limit **Upper (UEL):** upper flammability limit-in between these two figures the substance is likely to ignite

**Fire Extinguishing Materials:**

Water spray  Carbon dioxide  
 Foam  Dry chemical  Other

**Special firefighting procedures:** Will specific fire fighting media exacerbate the fire? For example water is not recommended for extinguishing a fire involving aluminum powder as it will generate hydrogen gas.

**Unusual fire and explosion hazards:** Is the vapor from this compound heavier than air? Will heat from a fire cause secondary reactions that will increase the risk of explosion, etc.

---

#### V. HEALTH HAZARD INFORMATION

**PRIMARY ROUTES OF EXPOSURE:**

Can this chemical be absorbed through the skin, mucous membranes, lungs or is it easily ingested?

**ORAL LD50:**

How much is needed to cause an acute reaction if ingested?

**DERMAL LD50:**

How much is needed to cause a skin rash or acute dermatitis?

**SKIN IRRITATION:**

Will this chemical irritate the skin?

**EYE IRRITATION:**

Will this chemical irritate the eyes?

**SENSITIZATION:**

Will this chemical cause skin sensitization?

**OVEREXPOSURE EFFECTS:**

Will overexposure to this chemical cause fainting, rapid heartbeat, swelling of the body, etc.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

If this chemical is inhaled, will it aggravate asthma? If absorbed through the skin will it cause a secondary reaction with specific organs?-liver, kidney, etc.

**EMERGENCY AND FIRST AID PROCEDURES – EYES:**

Should the eyes be flushed with water if it comes into contact with the eyes? If so, is medical attention required after exposure?

**EMERGENCY AND FIRST AID PROCEDURES – SKIN:**

Should the skin be washed with water, or soap and water, and if so is medical attention required after exposure? How does one recognize an acute reaction?

**EMERGENCY AND FIRST AID PROCEDURES – INGESTION:**

If ingested, is vomiting advised, if not why not?

**EMERGENCY AND FIRST AID PROCEDURES – INHALATION:**

If inhaled how does one recognize an acute reaction? Is fresh air enough to treat this acute reaction?

**EMERGENCY AND FIRST AID PROCEDURES – OTHER:**

Are there any other reactions that may be associated with any kind of exposure to this chemical compound, and if so how might they be treated?

---

**VI. REACTIVITY DATA**

**Stability:**  Stable  Unstable

**Incompatibility (materials to avoid):** What kinds of materials might cause a synergistic effect whereby an unexpected reaction might occur? For example if mixed with other chemicals might this compound burst into flame or will other more toxic gases/fumes/vapors be generated?

**Hazardous polymerization:**  May Occur  Will Not Occur

**Conditions to avoid:** Is this chemical compound best stored in a cool area, a warm area, a dry area, etc?

**Hazardous decomposition products (including combustion products):** If this chemical compound is involved in a secondary reaction or fire, what kinds of other more toxic compounds might be produced?

---

**VII. SPILL, LEAK AND DISPOSAL PROCEDURES**

**Spill response procedures (include employee protection measures):** If a powder, is sweeping enough or should it be wet swept. If a liquid what should it be absorbed with? Is protective equipment necessary if an individual is involved in a spill?

**Preparing wastes for disposal (container types, neutralization, etc.):** Is the waste considered hazardous or can it go directly into the land fill or standard waste receptacle?

**NOTE: Dispose of all wastes in accordance with federal, state and local regulations.**

---

**VIII. SPECIAL HANDLING INFORMATION**

**Ventilation and engineering controls:** Is a fan required, and if so will it require explosion proof or totally enclosed motors?

**Respiratory protection (type):** If a respirator is needed, what type? For example, is this a vapor, dust, mist, or gas?

**Eye Protection (type):** Is this a vapor, gas or dust and if so, what kind of eye protection is recommended?

**Gloves (specify material):** If this compound is a liquid, what kinds of gloves will not be affected by this liquid?

**Other clothing and equipment:**  
need to be impervious?

Is a full coverall recommended, or is a spill apron effective? Will the apron

**Work practices, hygienic practices:**

washing of any exposed clothes be performed after exposure?

Should the chemical be kept off the skin, is ventilation needed, should

**Other handling and storage requirements:**

Any special recommendations?

**Protective measures during maintenance of contaminated equipment:**  
for cleanup?

What kinds of protective equipment will be needed