IPN 144.7 Ink, Raw Stock Marking, Black

JAN 25 1982

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Material

U.S. DEPARTMENT OF LABOR

WORKPLACE STANDARDS ADMINISTRATION

Bureau of Labor Standards

Pg 1

MATERIAL SAFETY DATA SHEET

SECTION I

Advance Stamp & Supply Co.
1295 JOHNSON DR.
CITY OF INDUSTRY, CA. 91745

	EMERGENCY TELEPHONE NO. [illegible]
1. Ink [illegible]	
	TRADE NAME AND SYNONYMS [illegible]
	FORMULA

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES		%	TLV (Units)
Cresylic Acid (Cresol)	Cresylic Acid (Cresol)	40	5ppm
Aniline	Aniline	18	5ppm
Methyl Alcohol (Methanol)	Methyl Alcohol (Methanol)	18	200ppm

SECTION III PHYSICAL DATA

BOILING POINT (°F.) (Initial) Approx.	150° F	SPECIFIC GRAVITY (H_2O=1)	1.05
VAPOR PRESSURE (mm Hg.)	?	PERCENT VOLATILE BY VOLUME (%) approx.	18
VAPOR DENSITY (AIR=1)	?	EVAPORATION RATE (_____=1)	?
SOLUBILITY IN WATER	partial		
APPEARANCE AND ODOR	Black liquid, phenolic odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) PM closed cup 100F	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA Carbon dioxide or dry chemical	Carbon dioxide or dry chemical		
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS Vigorous reaction to strong oxidizing agents			
Vigorous reaction to strong oxidizing agents			

Pg #2

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

see attached data on Cresole, aniline and Methanol

EMERGENCY AND FIRST AID PROCEDURES

SECTION VI REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)* strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

flushing with water - scrubbing with alkaline detergents

WASTE DISPOSAL METHOD as recommended for cresols

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* none

VENTILATION	LOCAL EXHAUST	SPECIAL
normal	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES recommended

EYE PROTECTION avoid contact with liquid

OTHER PROTECTIVE EQUIPMENT none

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid excessive breathing of vapors and contact with eyes and skin

OTHER PRECAUTIONS

TO:
SUBJECT:
REF. NO.:

For your information, the following are data on the ingredients which are considered hazardous to any degree. These are copies from "Dangerous Properties of Industrial Materials, 3rd Edition" by N. Irving Sax.

CRESOL

General Information

Synonyms: Cresylic acid, cresylol, tricresol.

Description: (U.S.P. XVI) mixture of isomeric cresols obtained from coal tar; colorless or yellowish to brown yellow or pinkish liquid, phenol-like odor.

Formula: $C_6H_4OHCH_3$.

Constants: Mol wt: 108.10, mp: 10.9-35.5°C, bp: 191-203°C, flash p. 110°F, d: 1.030-1.038 at 25°/25°C, vap press.: 1 mm at 38-53°C, vap. d.: 3.72.

Hazard Analysis

Toxic Hazard Rating:

Acute Local: Irritant 2; Allergen 1; Ingestion 2; Inhalation 2.

Acute Systemic: Ingestion 2; Inhalation 2; Skin Absorption 2.

Chronic Local: Irritant 3; Allergen 1.

Chronic Systemic: Ingestion 2; Inhalation 2; Skin Absorption 2.

TLV: ACGIH (accepted); 22 milligrams per cubic meter of air; 5 parts per million in air. May be absorbed via intact skin.

Toxicology: Cresol is similar to phenol in its action on the body, but it is less severe in its effects. It has corrosive action on the skin and mucous membranes. Systemic poisoning has rarely been reported, but it is possible that absorption may result in damage to the kidneys, liver and nervous system. The main hazard accompanying its use in industry lies in its action on the skin and mucous membranes, with production of severe chemical burns and dermatitis (Section 9).

Fire Hazard: Moderate, when exposed to heat or flame.

Explosion Hazard: Slight, in the form of vapor when exposed to heat or flame (Section 7).

Explosive Range: 1.35% at 300°F.

Disaster Hazard: Dangerous; when heated to decomposition, it emits highly toxic fumes; it can react vigorously with oxidizing materials.

Countermeasures

Ventilation Control: Section 2.

Personnel Protection: Section 3.

First Aid: Section 1.

Storage and Handling: Section 7.

To Fight Fire: Foam, carbon dioxide, dry chemical or carbon tetrachloride (Section 6).

Shipping Regulations: Section 11.

Coast Guard Classification: Inflammable liquid.

MCA warning label.

IATA (liquid: Poison B, poison label, 1 liter (passenger), 220 liters (cargo).

ANILINE

General Information

Synonyms: Phenylamine; aminobenzene; aniline oil.

Description: Colorless, oily liquid.

Formula: $C_6H_5NH_2$.

Constants: Mol wt: 93.12, bp: 184.4°C, lel: 1.3%, uel: 20-25, flash p: 158°F (C.C.), fp: −6.2°C, d: 1.02 at 20°/4°C, autoign. temp.: 1418°F, vap. press.: 1 mm at 34.8°C, vap. d: 3.22.

Hazard Analysis

Toxic Hazard Rating:

Acute Local: Allergen 2.

Acute Systemic: Ingestion 3; Inhalation 3; Skin Absorption 3.

Chronic Local: Allergen 2.

Chronic Systemic: Ingestion 3; Inhalation 3; Skin Absorption 3.

TLV: ACGIH (recommended); 5 parts per million in air; 19 milligrams per cubic meter of air. Absorbed via the skin.

Toxicology: The most important action of aniline on the body is the formation of methemoglobin, with the resulting anoxemia and depression of the central nervous system. Some investigators believe that aniline may also have a direct toxic action, resulting in a fall in blood pressure and cardiac arrhythmia. In acute exposures, which usually result from spilling the liquid on the skin and clothes, but which may also follow the inhalation of the vapor given off when aniline is heated, the signs are of methemoglobinemia and anoxemia. In less acute exposure which has been prolonged over some weeks or months, there is usually hemolysis of the red blood cells, followed by stimulation of the bone marrow and attempts at regeneration. The red cells may show stippling; immature cells may be present. The white blood cells usually show little change either in number or morphology. The liver may be affected with production of jaundice. The urine is frequently dark brown or wine colored, and may contain hemoglobin, hematoporphyrin, and in some cases excretion products of aniline, such as p-aminophenol. Long continued employment in the manufacture of aniline dyes has been associated with the development of papillomatous growths of the bladder, some of which became malignant. Aniline itself has not been proven to be a carcinogen, but the intermediates benzedine and naphthylamines have been incriminated. See α-1 and β-naphthylamine. Note: A common air contaminant (Section 4).

Caution: Mild sensitizer. Local contact may cause contact dermatitis (Section 9).

Fire Hazard: Moderate, when exposed to heat or flame.

Spontaneous Heating: No.

Disaster Hazard: Dangerous; when heated to decomposition, it emits highly toxic fumes; can react vigorously with oxidizing materials.

Countermeasures

Ventilation Control: Section 2.

To Fight Fire: Alcohol foam, carbon dioxide, dry chemical or carbon tetrachloride (Section 6).

Personnel Protection: Section 3.

First Aid: Section 1.

Storage and Handling: Section 7.

Shipping Regulations: Section 11.

I.C.C. Classification: Poison B; poison label.

Coast Guard Classification: Poison B; poison label.

TOXIC HAZARD RATING CODE (For detailed description, see Section 14)

0 NONE: (a) No harm under any conditions; (b) Harmful only under unusual conditions or overwhelming dosage.

1 SLIGHT: Causes readily reversible changes which disappear after end of exposure.

2 MODERATE: May involve both irreversible and reversible changes not severe enough to cause death or permanent injury.

3 HIGH: May cause death or permanent injury after very short exposure to small quantities.

4 U UNKNOWN: No information on humans considered valid by author.

mei
P.O. BOX 1048
PORTLAND, OREGON 97207

GLYCERINE

General Information

Synonyms: 1,2,3-Propanetriol; glycerol.

Description: Colorless or pale yellow liquid; odorless and syrupy, sweet and warm taste.

Formula: $CH_2OHCHOHCH_2OH$.

Constants: Mol wt: 92.09, mp: 17.9°C (solidifies at a much lower temperature), bp: 290°C, uic: 10-20, flash p: 320°F, d: 1.260 at 20°/4°C, autoign. temp.: 739°F, vap. press.: 0.0025 mm at 50°C, vap. d.: 3.17.

Hazard Analysis

Toxic Hazard Rating:

- Acute Local: Irritant 1; Ingestion 1.
- Acute Systemic: Ingestion 1.
- Chronic Local: 0.
- Chronic Systemic: 0.

Toxicity: A general purpose food additive, it migrates to food from packaging materials (Section 10).

Fire Hazard: Slight, when exposed to heat, flame or powerful oxidizers.

Countermeasures

To Fight Fire: Alcohol foam, water, carbon dioxide, dry chemical or carbon tetrachloride (Section 6).

Personal Hygiene: Section 3.

Storage and Handling: Section 7.

HYDROCHLORIC ACID

General Information

Synonyms: Muriatic acid; chlorohydric acid; hydrogen chloride.

Description: Colorless gas or colorless, fuming liquid; strongly corrosive.

Formula: HCl.

Constants: Mol wt: 36.47, mp: −114.3°C, bp: −84.8°C, d: 1.639 g/liter (gas) at 0°C; 1.194 at −36°C (liquid), vap. press.: 4.0 atm at 17.8°C.

Hazard Analysis

Toxic Hazard Rating:

- Acute Local: Irritant 3; Ingestion 3; Inhalation 3.
- Acute Systemic: U.
- Chronic Local: Irritant 2.
- Chronic Systemic: U.

TLV: ACGIH (recommended); 5 parts per million in air; 7 milligrams per cubic meter of air.

Toxicology: Hydrochloric acid is an irritant to the mucous membranes of the eyes and respiratory tract, and a concentration of 35 ppm causes irritation of the throat after short exposure. Concentrations of 50 to 100 ppm are tolerable for 1 hour. More severe exposures result in pulmonary edema, and often laryngeal spasm. Concentrations of 1,000 to 2,000 ppm are dangerous, even for brief exposures. Mists of hydrochloric acid are considered less harmful than the anhydrous hydrogen chloride, since the droplets have no dehydrating action. In general, hydrochloric acid causes little trouble in industry, other than from accidental splashes and burns. It is used as a general purpose food additive (Section 10). It is a common air contaminant (Section 10).

Disaster Hazard: Dangerous; see chlorides; will react with water or steam to produce toxic and corrosive fumes.

Countermeasures

Ventilation Control: Section 2.

Personnel Protection: Section 3.

Storage and Handling: Section 7.

First Aid: Section 1.

Shipping Regulations: Section 11.

- I.C.C.: Corrosive liquid; white label, 10 pints.
- Coast Guard Classification: Corrosive liquid; white label.
- Coast Guard (anhydrous) Classification: Noninflammable gas; green gas label.
- MCA warning label.
- IATA: Corrosive liquid, white label, 1 liter (passenger), 5 liters (cargo).

METHYL ALCOHOL

General Information

Synonyms: Methanol.

Description: Clear colorless very mobile liquid.

Formula: CH_3OH.

Constants: Mol wt: 32.04, bp: 64.8°C, lel: 7.3%, uel: 36.5%, fp: −97.8°C, flash p: 52°F, d: 0.7913 at 20°/4°C, autoign. temp.: 867°F, vap. press.: 100 mm at 21.2°C, vap. d.: 1.11.

Hazard Analysis

Toxic Hazard Rating:

- Acute Local: Irritant 1; Inhalation 1.
- Acute Systemic: Ingestion 3; Inhalation 2; Skin Absorption 2.
- Chronic Local: Irritant 1; Inhalation 1.
- Chronic Systemic: Ingestion 2; Inhalation 2; Skin Absorption 2.

TLV: ACGIH (recommended); 200 parts per million in air; 262 milligrams per cubic meter of air.

Toxicology: Methyl alcohol possesses distinct narcotic properties. It is also a slight irritant to the mucous membranes. Its main toxic effect is exerted upon the nervous system, particularly the optic nerves and possibly the retinae. The effect upon the eyes has been attributed to optic neuritis, which subsides but is followed by atrophy of the optic nerve. Once absorbed, methyl alcohol is only very slowly eliminated. Coma resulting from massive exposures may last as long as 2 to 4 days. In the body the products formed by its oxidation are formaldehyde and formic acid, both of which are toxic. Because of the slowness with which it is eliminated, methyl alcohol should be regarded as a cumulative poison. Though single exposures to fumes may cause no harmful effect, daily exposure may result in the accumulation of sufficient methyl alcohol in the body to cause illness.

Severe exposures may cause dizziness, unconsciousness, sighing respiration, cardiac depression, and eventually death. Where the exposure is less severe, the first symptoms may be blurring of vision, photophobia and conjunctivitis, followed by the development of definite eye lesions. There may be headache, gastrointestinal disturbances, dizziness and a feeling of intoxication. The visual symptoms may clear temporarily, only to recur later and progress to actual blindness. Irritation of the mucous membranes of the throat and respiratory tract, peripheral neuritis, and occasionally, symptoms referable to other lesions of the nervous system have been reported. The skin may become dry and cracked due to the solvent action of methyl alcohol.

Methyl alcohol is a common air contaminant (Section 4). It is used as a food additive permitted in foods for human consumption, Section 10.

Fire Hazard: Dangerous, when exposed to heat or flame.

Spontaneous Heating: No.

Explosion Hazard: Moderate, when exposed to flame.

Disaster Hazard: Dangerous, upon exposure to heat or flame; can react vigorously with oxidizing materials.

Countermeasures

Ventilation Control: Section 2.

To Fight Fire: Carbon dioxide, dry chemical, or carbon tetrachloride (Section 6).

Personnel Protection: Section 3.

Storage and Handling: Section 7.

Shipping Regulations: Section 11.

- I.C.C.: Flammable liquid; red label, 10 gallons.
- Coast Guard Classification: Inflammable liquid; red label.
- MCA warning label.
- IATA: See Alcohol, N.O.S.

MERCURY COMPOUNDS, INORGANIC

Hazard Analysis

Toxic Hazard Rating:

Acute Local: Irritant 3; Ingestion 3; Inhalation 2.
Acute Systemic: Ingestion 2; Inhalation 3.
Chronic Local: Irritant 2; Allergen 3.
Chronic Systemic: Ingestion 3; Inhalation 3; Skin Absorption 3.

Toxicology: Mercury is a general protoplasmic poison; after absorption it circulates in the blood and is stored in the liver, kidneys and spleen and bone. It is eliminated in the urine, feces, sweat, saliva and milk. In industrial poisoning, the chief effect is upon the central nervous system and upon the mouth and gums. Colitis has been reported frequently; a nephritis or nephrosis is rarely reported. The organic mercury compounds, like the organic lead compounds, appear to have an affinity for the lipoid-containing organs, resulting in disturbances of the central nervous system resembling those of tetraethyl lead. Fulminate of mercury rarely produces symptoms of systemic poisoning, but frequently causes a dermatitis. Organic mercury compounds may act as vesicants on the skin (Section 9).

The cardinal symptoms of industrial mercury poisoning are stomatitis, tremors, and psychic disturbances. Usually the first complaints are of excessive salivation, and pain on chewing; in severe cases there may be gingivitis, with loosening of the teeth, and a dark line on the gum margins, resembling the "lead line." In slow poisoning the salivation may be absent, and the only complaint dryness of the throat and mouth. Tremor and psychic disturbances are commonly seen in the slow, chronic form of the poisoning; the tremor is of the intention type, and may be seen when the patient spreads the outstretched fingers or protrudes the tongue, or attempts to perform specified movements. Muscles of the face, hands and arms are chiefly affected. In more severe cases there may also be convulsive or shaking movements; writing is frequently illegible. Hyperactive kneejerks and scanning speech may be present in advanced cases. The psychic disturbance (so called "erethism") includes such changes as loss of memory, insomnia, lack of confidence, irritability, vague fears and depression.

The dermatitis produced by fulminate of mercury takes the form of small, discrete ulcers on the exposed parts, and is usually accompanied by conjunctivitis and inflammation of the mucous membranes of the nose and throat.

Elemental mercury is probably not absorbed through the gastrointestinal tract, but many mercury compounds are. A number of mercury compounds, in addition to the fulminate, can cause skin irritations and can be absorbed through the skin; they are strong allergens (Section 9).

These are common air contaminants (Section 4).

Disaster Hazard: Dangerous; when heated to decomposition, they emit highly toxic fumes of mercury.

Countermeasures

Ventilation Control: Section 2.
Personnel Protection: Section 3.
Storage and Handling: Section 7.

ANTIMONY COMPOUNDS

Hazard Analysis

Toxic Hazard Rating:

Acute Local: Ingestion 3.
Acute Systemic: Ingestion 3; Inhalation 3.
Chronic Local: Irritant 2.
Chronic Systemic: Ingestion 3; Inhalation 3.

TLV: ACGIH (recommended): 0.5 mg per cubic meter of air.

Toxicology: Because of the association with lead and arsenic in industry, it is often difficult to assess the toxicity of antimony and its compounds. Animals exposed to fumes of antimony oxide have developed pneumonitis, fatty degeneration of the liver, a decreased leucocyte count affecting in particular the polymorphonuclears, and damage to the heart muscle. In humans, complaints referable to the nervous system have been reported. In assessing human cases, however, the possibility of lead or arsenical poisoning must always be borne in mind. Locally antimony compounds are irritant to the skin and mucous membranes.

Signs and symptoms may include irritation and eczematous eruption of the skin, inflammation of the mucous membranes of the nose and throat, metallic taste and stomatitis, gastrointestinal upset, with vomiting and diarrhea, and various nervous complaints, such as irritability, sleeplessness, fatigue, dizziness and muscular and neuralgic pains. See also specific compounds.

Countermeasures

Ventilation Control: Section 2.
Personnel Protection: Section 3.
First Air: Section 1.
Storage and Handling: Section 7.

BISMUTH COMPOUNDS

Hazard Analysis

Toxic Hazard Rating:

Acute Local: Irritant 1; Ingestion 1.
Acute Systemic: Ingestion 2.
Chronic Local: U.
Chronic Systemic: Ingestion 1; Inhalation 1.

Toxicology: Bismuth and its salts can cause kidney damage, although the degree of such damage is usually mild. Large doses can be fatal. Industrially it is considered one of the less toxic of the heavy metals, although intoxication has occurred from its use in medicine. The similarity between the pharmacologic and toxic behavior of lead and bismuth has been pointed out in the literature. Like lead, bismuth may be liberated from tissue deposits during periods of acidosis. Serious and sometimes fatal poisoning may occur from the injection of large doses into closed cavities and from extensive application to burns.

Death of animals from bismuth nephritis following injections of soluble salts occurs within several hours to 24 days, the time being generally inversely proportional to the dose, and it appears to be in the order of 5 to 10 times higher than the dose by slow intravenous injection for rabbits. It is stated that the administration of bismuth should be stopped when gingivitis appears, for otherwise serious ulcerative stomatitis is likely to result. Other toxic results may develop, such as malaise, albuminuria, diarrhea, skin reactions, and sometimes serous exodermatitis.

Industrial bismuth poisoning has not been reported, although bismuth absorbed in industrial cases may complicate a diagnosis of plumbism, since the dark line in the gums which is often present in lead poisoning is also produced by bismuth. All bismuth compounds do not have equal toxicity. See individual entries.

Countermeasures

Treatment and Antidotes: Personnel showing some of the symptoms noted above which might indicate that they were absorbing too much bismuth into the body should be removed from exposure as soon as possible. Get medical advice.

Bismuth and its salts should be labeled as poison. Personnel should be cautioned against careless handling of these materials.

Ventilation Control: Section 2.
Personal Hygiene: Section 3.
Storage and Handling: Section 7.