

MATERIAL SAFETY DATA SHEET

MSDS

I. PRODUCT AND COMPANY IDENTIFICATION

Chemical Name: DIOCTYL-PHTHALATE; DOP

Supplier: Zhejiang Tsingyan Chemical Co., Ltd.

Address: No. 558 Taikang Zhong Road, Shounan Street, Yinzhou District, Ningbo City, Zhejiang, China

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FAX: None

MSDS number: TYC -2015-002

Effective date: 2015-05-07

Emergency call: 0086 15888110454

II. COMPOSITION AND PHYSICAL DATA

The chemical is pure

Molecular Formula: C₂₄H₃₈O₄

Molecular weight: 390.56

CAS No.: 117-81 -7

Concentration: ≥99.5 %

Chemical Name: DOP

III. HAZARDS IDENTIFICATION

Hazards categories: Non-Hazard goods

Pathways: Skin contact, eyes contact, ingestion, inhalation

Health hazards: Currently, no information on occupational poisoning reported

Explosion hazard: High heat open flame or contact with oxidants, cause a fire hazard.

IV. FIRST AID MEASURES

Skin Contact: Remove contaminated clothing, then wash skin with soap or flowing water.

Eye Contact: Wash with flowing water for at least 10 minutes , then go for contact doctor.

Inhalation: Move the patient to fresh air, give oxygen or artificial respiration if necessary.

Fresh into: Rinse the mouth, drink a lot of water and get medical treatment.

V. FIRE FIGHTING MEASURES

Hazardous characteristics: Combustible and met a open flame, high heat or contact with strong oxidants, cause a fire hazard.

Hazardous combustion products: carbon monoxide, carbon dioxide, dense smoke

Fire fighting media: use AFFF, carbon dioxide, dry powder, sand put out the fire, water invalid.

Fire fighting methods: Fire water can not flow into the sewer or the river, fire hazardous decomposition products when it had caused the dense smoke, dense smoke inhalation damage health, it is recommended to wear breathing apparatus when fire fighting, while use water to cooling the closed container around.

VI. ACCIDENTAL RELEASE MEASURES

Emergency treatment: cut off the fire, cut off the source of leakage. Rapid leave contaminated areas evacuated personnel to a safe area, and isolation and strict restrictions on access. Recommended the person who deal with the emergency should wearing self-pressurized respirators and wear the anti-static clothing. Preventing the leakage goes to sewers, flood discharge trench etc. restrictive space.

Small amount of leakage: Use sand, activated carbon or other inert materials to absorb the residue, collect leaking liquid in covered container as possible. Disposal abide by the waste disposal regulations.

VII. HANDLING AND STORAGE

Handling precaution: Closed operation, provide good natural ventilation. Operator must go through specialized training, strict adherence to rules. Proposed operators wear self-absorption filter gas mask(half), wearing rubber gloves. Keep away from

the fire, heat, workplace forbid smoke. Use explosion-proof ventilation systems and equipment. Prevent the steam leak into the air in workplace. Avoid contact with the oxidant. Handling should care, and packaging and containers to prevent damage. Correspond with the variety and quantity of fire-fighting equipment and emergency equipment of leakage. Empty containers may be harmful residues.

Storage precautions: Store in a cool, ventilated warehouse. Container maintained in seal. Do not empty the containers with pressure ways. Opened containers should be sealed again and be vertical to avoid leaking. Smoking prohibited, should be strong oxidants, strong acids, strong alkali stored separately. Avoid direct sunlight. All personnel shall not be arbitrarily access without permission. Containers should not load other substances. Use the label of product. Keep the warehouse in good ventilation. Away from heat, ignition sources. Avoid direct sunlight. Store temperature : 5~35 °C . Correspond with the variety and quantity of fire-fighting equipment. Storage areas should be equipped with spill response equipment and suitable host material.

VII. EXPOSURE CONTROL/ PERSONAL PROTECTION

Occupational exposure limits: Not available.

Engineering controls: Closed production process, full ventilation. Provide a safety shower and eyewash equipment.

Respiratory protection: Usually do not need special protection. High concentrations can wear self-absorption filter gas mask(half). Wear the air respirators during emergency rescue or evacuation.

Eye protection: Wearing chemical protective safety glasses when high concentration.

Physical protection: Wear work clothes

Hand protection: Wear oil-resistant rubber gloves.

Others: work site prohibit smoking, eating and drinking. Avoid to drink stimulant before work. Attention to personal hygiene. Go for physical examination before employment and regular physical examination.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid, special smell

PH: Neutral

Freezing point(°C): -55

Relative density(water=1): 0.983(20°C)

Boiling point (°C) : 372.5

Relative vapor density(air=1): None

Saturated vapor pressure(kpa): 0.143kpa/200°C

Heat of combustion(kcal/mol):2058

Critical temperature (°C) ; None

Critical pressure(mpa): None

Value of partition coefficient of 2-EH/water: None

Flash point (°C) : ≥200

Burning point(°C): 241

Refractive index: 1.4852

Low explosive limit% (V/V) : 0.15~0.18

Solubility: The solubility of DOP in water at 25°C is <0.01%. For water in DOP is 0.2%. Soluble in general organic solvents and hydrocarbon. Slightly soluble in glycerol and ethylene glycol. Have a good intermiscibility with most resins used in industry. Partly soluble with cellulose acetate and polyvinyl acetate.

Application: Used in industries such as plastics, rubber, paint and lubricant, emulsifier etc.

X. STABILITY AND REACTIVITY

Stability: Very stable when normalcy, partly decomposition when boiling for a long time, free acid monoester.

Materials to avoid: Strong acids, alkalis, oxidizers

Conditions to avoid: Open fire, high heat

Hazardous polymerization: Will not happen

Decomposition product: Carbon monoxide, carbon dioxide, dense smoke

XI. TOXICOLOGICAL INFORMATION

Acute toxicity: Mice through the mouth LD50 is 34ml/kg, rat through the mouth LD50 is 30.6g/kg. Skin experiment(rabbit) is 25g/kg. Intravenous injection(rat) is 4260mg/kg. Intraperitoneal injection(rat) is 30700mg/kg

Toxicity index: T=200

Chronic toxicity: Affect person's fertility

Thrill: eyes(rabbit)500mg, skin(rabbit)500mg/24Hmld

Sensitization: Not available

Mutagenicity: 12780mg/kg

Teratogenicity: Not available

Carcinogenicity: TDL0=216mg/KG/2Y-C; TD433g/kg/2Y-C

XII. ECOLOGICAL INFORMATION

Ecotoxicity: Not available

Biodegradable: Not available

Non-biodegradable: Not available

Biological enrichment or cumulative: Not available

Other harmful effect: The substance should not be drained into river or soil.

XIII. DISPOSAL CONSIDERATIONS

Nature of waste: hazardous waste

Waste disposal methods: Treat with controlled burning method

Waste Note: Empty containers could be used as waste or recycling, Not completely empty containers should be used as special waste.

XIV. TRANSPORT INFORMATION

Hazard goods number: Not available

UN Number: None

Packing catagory: III

Packing method: Drums should be used as packaging

Transportation: During transport process, containers should be placed with care.
Strictly prohibited slam and rain.

XV. REGULATION

Dangerous Chemicals Regulations

Classification of hazardous chemicals used and signs(GB 13690-92)

Dangerous goods classification and commodity code(GB 6944-86)

Dangerous goods list(GB 12268-90)

XVI. OTHERS INFORMATION

References: <Solvent Handbook> <Chemical property data sheet>

Fill in Department: Production technology department

Data audit unit: Zhejiang Tsingyan Chemical Co., Ltd.

Other information: The above information is based on the basis of accurate data, because this information could be applicated in circumstances beyond our control or be modified, we do not take any responsibility of that. The information are supplied for the consignee who has made a decision of the material for proper purpose.