



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

KOPPERS INC.
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PITTSBURGH, PA 15219-1800
naorgmsds@koppers.com

MEDICAL EMERGENCIES: 877-737-9047
MEDICAL EMERGENCIES OUTSIDE U.S.A.: 651-632-9269
TECHNICAL ASSISTANCE: 412-227-2001
MSDS REQUESTS: 866-852-5239
CHEMTREC ASSISTANCE: 800-424-9300
CANUTEC: 613-996-6666

MSDS NUMBER: 00227844

SUBSTANCE: PHTHALIC ANHYDRIDE - FLAKE

TRADE NAMES/SYNONYMS:
PHTHALIC ANHYDRIDE SOLID

CHEMICAL FAMILY: aromatic, carboxylic, anhydrides

PRODUCT USE: Used in the manufacturer of plasticizers, polyester and alkyd resins, dye intermediates, food preservatives, pharmaceuticals, insect repellants and perfume fixatives.

REVISION DATE: Jun 14 2007

2. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=1 REACTIVITY=0



EMERGENCY OVERVIEW:

COLOR: white

PHYSICAL FORM: flake

ODOR: acrid odor

SIGNAL WORD: DANGER!

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, allergic reactions

PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode. May decompose on contact with water or moist air.

PRECAUTIONARY STATEMENTS: Do not breathe dust. Avoid contact with eyes, skin and clothing.

Avoid repeated or prolonged contact. Avoid creation of dust. Keep container tightly closed. Do not allow water to get in container. Use only with adequate ventilation. Wash thoroughly after handling. Observe good hygiene and safety practices when handling this product. Do not use this product until the MSDS has been read and understood.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation (possibly severe), allergic reactions, sore throat, difficulty breathing, nosebleed

LONG TERM EXPOSURE: irritation (possibly severe), allergic reactions

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation (possibly severe), allergic reactions

LONG TERM EXPOSURE: irritation (possibly severe), allergic reactions

EYE CONTACT:

SHORT TERM EXPOSURE: irritation (possibly severe)

LONG TERM EXPOSURE: irritation (possibly severe)

INGESTION:

SHORT TERM EXPOSURE: irritation (possibly severe)

LONG TERM EXPOSURE: irritation (possibly severe)

3. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: PHTHALIC ANHYDRIDE

CAS NUMBER: 85-44-9

PERCENTAGE: >99.7

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: DO NOT induce vomiting. If a large amount is swallowed, get immediate medical attention. Never make an unconscious person vomit or drink fluids. If vomiting occurs, keep head lower than hips to help prevent aspiration.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Dust/air mixtures may ignite or explode. Minimum dust concentration required is 0.015 oz/ft³.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, dry sand, alcohol resistant foam, water spray

FIRE FIGHTING: Move container from fire area if it can be done without risk. Use extinguishing agents appropriate for surrounding fire. Large fires: Flood with fine water spray. Directly spraying water or foam onto hot burning product may cause frothing. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Keep unnecessary people away, isolate hazard area and deny entry.

FIRE FIGHTING PROTECTIVE EQUIPMENT: Full fire fighting turn-out gear (bunker gear).

SENSITIVITY TO MECHANICAL IMPACT: Not available

SENSITIVITY TO STATIC DISCHARGE: Yes (dust)

FLASH POINT: 304 F (151 C) (CC)

LOWER FLAMMABLE LIMIT: 1.7%

UPPER FLAMMABLE LIMIT: 10.4%

AUTOIGNITION: 1058 F (570 C)

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Do not touch spilled material. Stop leak if possible without personal risk. Collect spilled material in appropriate container for disposal. Do not get water directly on material. In Canada, report releases to provincial authorities, municipal authorities, or both, as required. If this product is spilled or leaked into the environment, the CERCLA (40 CFR 302.4) reportable quantity is 5000 pounds, and requires National Response Center notification.

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store in a cool, dry place. Avoid contact with water or moisture. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition. Keep separated from incompatible substances.

HANDLING: Avoid contact with eyes, skin and clothing. Use methods to minimize dust. When using, do not eat, drink or smoke. Wash thoroughly after handling.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

PHTHALIC ANHYDRIDE - FLAKE:

PHTHALIC ANHYDRIDE:

2 ppm (12 mg/m³) OSHA TWA
1 ppm ACGIH TWA (sensitizer)
1 ppm (6 mg/m³) NIOSH recommended TWA 10 hour(s)

VENTILATION: Ensure adequate ventilation. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: ANSI Z87.1-1989 approved safety glasses with side shields. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate clothing.

GLOVES: Wear appropriate gloves.

PROTECTIVE MATERIAL TYPES: rubber

RESPIRATOR: If the applicable TLVs and/or PELs are exceeded, use canister or cartridge respirators, which are MSHA/NIOSH-approved, with high-efficiency particulate filters.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: solid

COLOR: white

PHYSICAL FORM: flake

ODOR: acrid odor

MOLECULAR WEIGHT: 148.12

MOLECULAR FORMULA: C₆H₄-(C-O)₂-O

BOILING POINT: 543 F (284 C)

MELTING POINT: 268 F (131 C)

SUBLIMATION POINT: 563 F (295 C)

VAPOR PRESSURE: 0.001 mmHg @ 30 C

VAPOR DENSITY (air=1): 5.1

SPECIFIC GRAVITY (water=1): 1.527 @ 4 C

BULK DENSITY: 1.53 lbs/gal

WATER SOLUBILITY: 0.62% @ 20 C (insoluble at room temperature)

PH: 1.37-1.94 @ 95 C (2-15 g/L solution)

VOLATILITY: Not applicable

ODOR THRESHOLD: 0.32-0.72 mg/m³

EVAPORATION RATE: Not applicable

VISCOSITY: 6.4 mPa.s @ 97 C

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

SOLVENT SOLUBILITY:

Soluble: alcohol, carbon disulfide

Slightly Soluble: ether

10. STABILITY AND REACTIVITY

REACTIVITY: May decompose on contact with water or moist air.

CONDITIONS TO AVOID: Avoid contact with water or moisture. Keep out of water supplies and sewers.

INCOMPATIBILITIES: amines, bases, metal oxides, metals, oxidizing materials, combustible materials

HAZARDOUS DECOMPOSITION:

Decomposition products on contact with water or moisture: phthalic acid

Thermal decomposition products: carbon monoxide, carbon dioxide

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

PHTHALIC ANHYDRIDE - FLAKE:

CARCINOGEN STATUS: OSHA: No, NTP: No, IARC: No

TARGET ORGANS: respiratory system, skin, eyes

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders, skin disorders, immune system disorders or allergies

PHTHALIC ANHYDRIDE:

IRRITATION DATA: 500 mg/24 hour(s) skin-rabbit mild; 50 mg/24 hour(s) eyes-rabbit moderate

TOXICITY DATA: >210 mg/m³/1 hour(s) inhalation-rat LC50; >10 gm/kg skin-rabbit LD50; 1530 mg/kg oral-rat LD50

CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen

LOCAL EFFECTS:

Corrosive: inhalation, skin, eye, ingestion

ACUTE TOXICITY LEVEL:

Moderately Toxic: ingestion

TARGET ORGANS: immune system (sensitizer)

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: immune system disorders or allergies, respiratory disorders

ADDITIONAL DATA: Alcohol may enhance the toxic effects.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Relatively non-persistent in the environment. Not expected to leach through the soil or the sediment. Accumulates very little in the bodies of living organisms. Not appreciably volatile from water.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U190.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

15. REGULATORY INFORMATION

U.S. REGULATIONS:

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: Yes

CHRONIC: Yes

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):

PHTHALIC ANHYDRIDE

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: D2A.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDL): Listed on DSL.

16. OTHER INFORMATION

MSDS SUMMARY OF CHANGES

2. HAZARDS IDENTIFICATION

3. COMPOSITION, INFORMATION ON INGREDIENTS

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