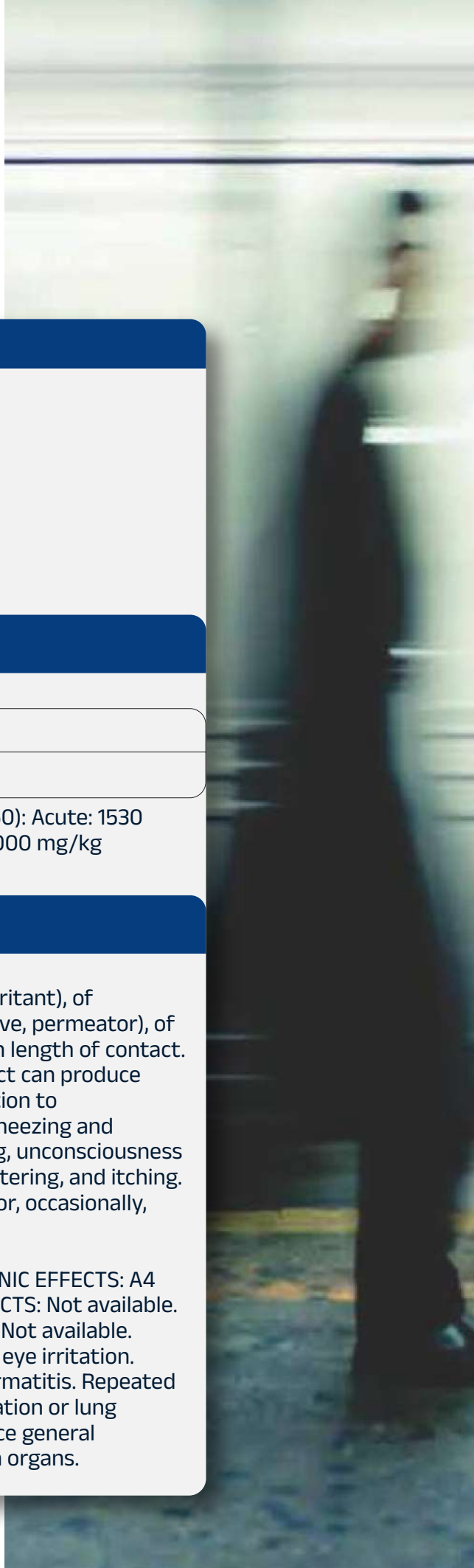
GANPATI EXIM™
Pursuing Excellence

MATERIAL SAFETY DATA SHEET
PHTHALIC ANHYDRIDE



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Phthalic anhydride
Catalog Codes : SLP4651, SLP1825
CAS# : 85-44-9
RTECS : TI3150000
TSCA : TSCA 8(b) inventory: Phthalic anhydride
CI# : Not available.
Synonym : 1,3-Isobenzofurandione
Chemical Name : Phthalic Anydride
Chemical Formula : C8H4O3

Section 2: Composition and Information on Ingredients

Composition:

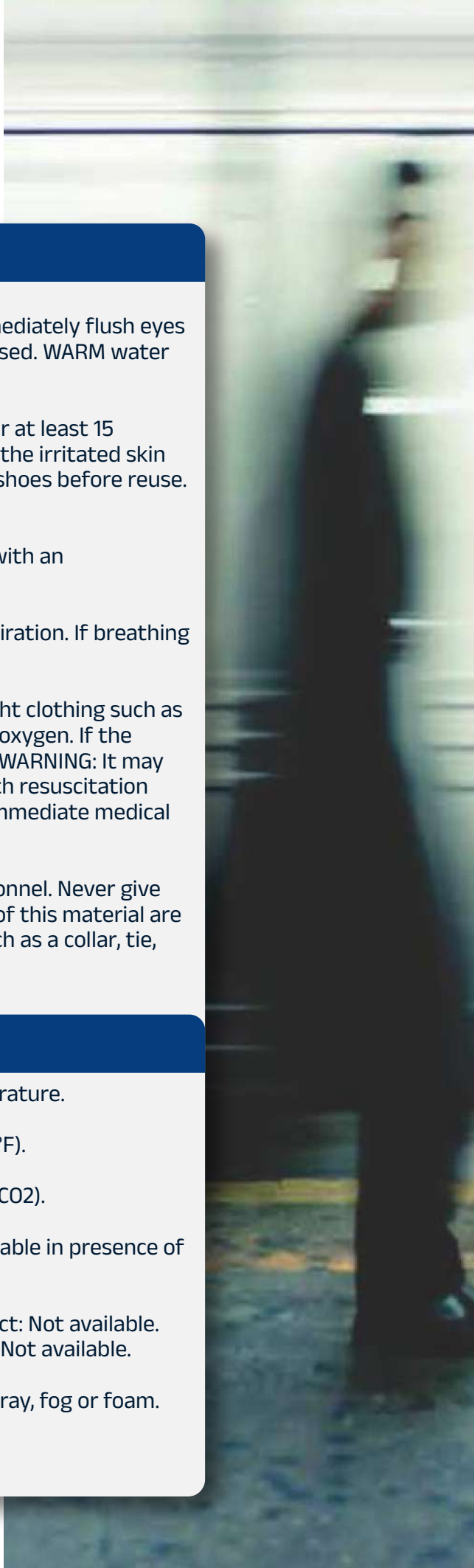
Name	CAS #	% by Weight
Phthalic anhydride	85-44-9	100

Toxicological Data on Ingredients: Phthalic anhydride: ORAL (LD50): Acute: 1530 mg/kg [Rat]. 1500 mg/kg [Mouse]. DERMAL (LD50): Acute: >10000 mg/kg [Rabbit]. DUST (LC50): Acute: >210 mg/m 1 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe overexposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.



SECTION 4: FIRST AID MEASURES

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

SECTION 5: FIRE AND EXPLOSION DATA

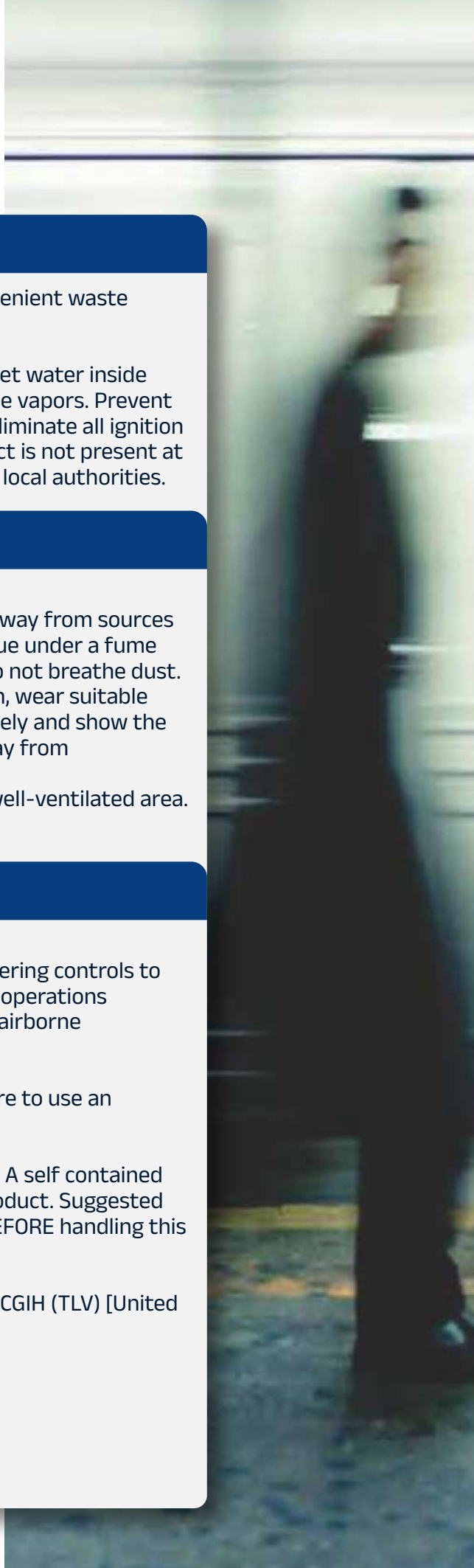
Flammability of the Product: May be combustible at high temperature.
Auto-Ignition Temperature: 570°C (1058°F)
Flash Points: CLOSED CUP: 151.67°C (305°F). OPEN CUP: 165°C (329°F).
Flammable Limits: LOWER: 1.7% UPPER: 10.4%
Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.
Special Remarks on Explosion Hazards: Not available.



SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.p. 3

Large Spill:

Corrosive solid. Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

SECTION 7: HANDLING AND STORAGE

Precautions:

Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

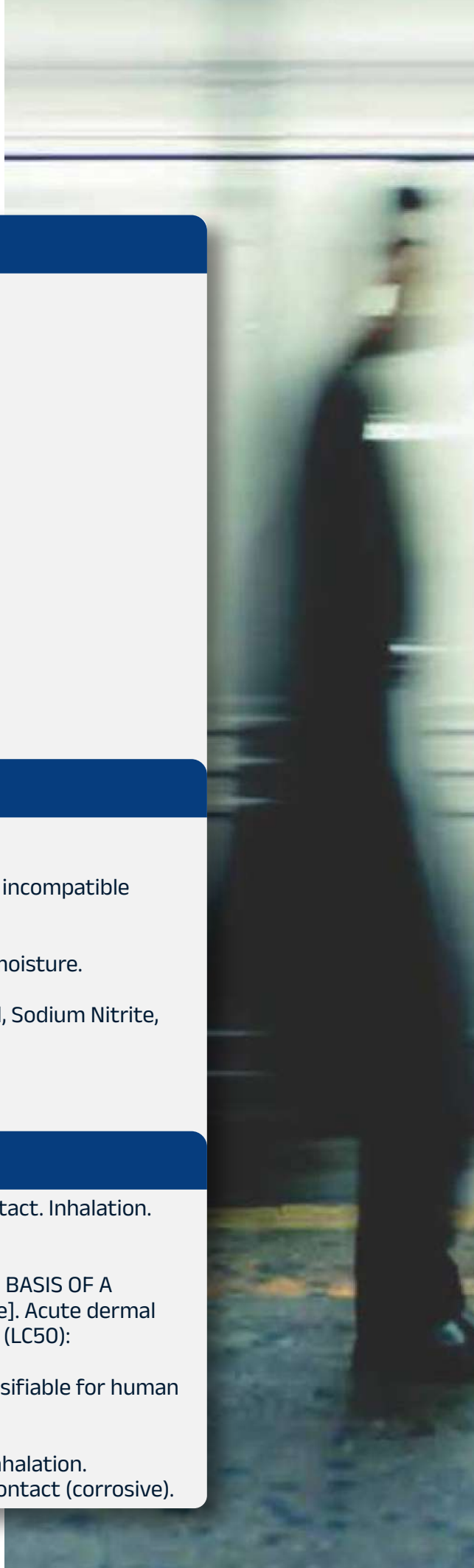
Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 6.1 (mg/m3) from ACGIH (TLV) [United States] TWA: 6 from ACGIH (TLV) [United States]Consult local authorities for acceptable exposure limits.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

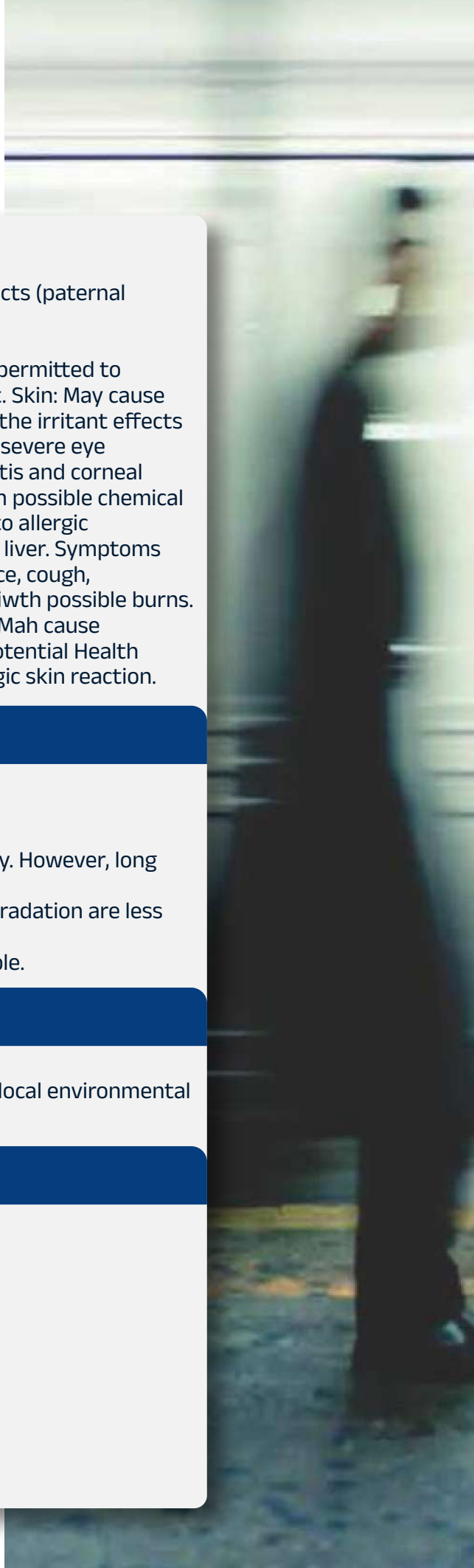
Physical state and appearance: Solid. (Crystals solid.)
Odor: Characteristic acrid, choking
Taste: Not available.
Molecular Weight: 148.13 g/mole
Color: White.
pH (1% soln/water): Not available.
Boiling Point: 295°C (563°F)
Melting Point: 131°C (267.8°F)
Critical Temperature: Not available.
Specific Gravity: 1.53 (Water = 1)
Vapor Pressure: Not applicable.p. 4
Vapor Density: 6.6 (Air = 1)
Volatility: Not available.
Odor Threshold: Not available.
Water/Oil Dist. Coeff.: Not available.
Ionicity (in Water): Not available.
Dispersion Properties: Not available.
Solubility: Very slightly soluble in cold water, diethyl ether.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Excess heat, dust generation, moisture, incompatible matrerials.
Incompatibility with various substances:
Reactive with oxidizing agents. Slightly reactive to reactive with moisture.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity: Also incompatible with Nitric Acid, Sodium Nitrite, and Copper Oxide.
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 1500 mg/kg [Mouse]. Acute dermal toxicity (LD50): >10000 mg/kg [Rabbit]. Acute toxicity of the dust (LC50): >210 mg/m 1 hours [Rat]. 3
Chronic Effects on Humans: CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.
Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).



Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans:
May affect genetic material. May cause adverse reproductive effects (paternal effects) based on animal data.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Corrosive! If the solid materials is permitted to remain in contact with moist tissues, superficial burns may result. Skin: May cause severe skin irritation witn possible skin burns. If the skin is moist the irritant effects will be greater due to hydrolysis of phthalic acid. Eyes: May cause severe eye irritation with possible eye burns. May cause chemical conjunctivitis and corneal damage. Inhalation: Causes severe respiratory tract irritation with possible chemical burns to the respiratory tract. May cause asthmatic attacks due to allergic sensitization of respiratory tract. May also affect respiration, and liver. Symptoms may include Rhinorrhea, blaody nasal disharge, hoarseness of voice, cough, bronchospasm Ingestion: Causes severe digestive tract irritation iwth possible burns. May cause severe and permanent damage to the digestive tract. Mah cause perforation of the digestive tract. May affect behavior. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause allergic skin reaction.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation: Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification: Class 8: Corrosive material
Identification: : Phthalic anhydride UNNA: 2214 PG: III
Special Provisions for Transport: Not available.

SECTION 15: OTHER REGULATORY INFORMATION

Federal and State Regulations:
Connecticut hazardous material survey.: Phthalic anhydride Illinois toxic substances disclosure to employee act: Phthalic anhydride Illinois chemical safety act: Phthalic anhydride New York release reporting list: Phthalic anhydride Rhode Island RTK hazardous substances: Phthalic anhydride Pennsylvania RTK: Phthalic anhydride Minnesota: Phthalic anhydride Michigan critical material: Phthalic anhydride Massachusetts RTK: Phthalic anhydride Massachusetts spill list: Phthalic anhydride New Jersey: Phthalic anhydride New Jersey spill list: Phthalic anhydride Louisiana spill reporting: Phthalic anhydride California Director's List of Hazardous Substances: Phthalic anhydride TSCA 8(b) inventory: Phthalic anhydride TSCA 8(a) IUR: Phthalic anhydride SARA 313 toxic chemical notification and release reporting: Phthalic anhydride CERCLA: Hazardous substances.: Phthalic anhydride: 5000 lbs. (2268 kg)
Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
Other Classifications:
WHMIS (Canada):
CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS E: Corrosive solid.
DSCL (EEC):
R22- Harmful if swallowed. R26- Very toxic by inhalation. R38- Irritating to skin. R41- Risk of serious damage to eyes. S1/2-Keep locked up and out of the reach of children. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of [***] S36/37- Wear suitable protective clothing and gloves. S39- Wear eye/face protection. S45- In case of accident or if you feel unwell,
HMIS (U.S.A.):
Health Hazard: 3
Fire Hazard: 1
Reactivity: 1p. 6
Personal Protection: j
National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 1
Reactivity: 0
Specific hazard:
Protective Equipment:
Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

SECTION 16: OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.