

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Phthalic anhydride
CAS number	85-44-9
Synonyms	1,3-Isobenzofurandione

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific Target Organ Toxicity (single exposure)	Category 3

Target Organ(s) - Respiratory system
Combustible Dust

Yes

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May form combustible dust concentrations in air.
Harmful if swallowed.
Causes skin irritation.
May cause an allergic reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary statements

Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/vapors/spray. In case of inadequate ventilation, wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms, call a POISON CENTER or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs, get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9	< 100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician and treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water spray, Carbon dioxide (CO ₂), dry chemical, chemical foam.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Fine dust dispersed in air may ignite. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Hazardous Combustion Products: Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point 152 °C / 305.6 °F

Autoignition Temperature 580 °C / 1076 °F

Explosion limits

Upper 10.50 vol %

Lower 1.70 %

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	1	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture. Keep away from incompatible materials.

Incompatibilities

Acids, strong oxidizing agents, strong bases, strong reducing agents.

SECTION 8: Exposure controls/personal protection**8.1 Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Component	Type	Value
Pthalic anhydride	TWA (Vacated)	6 mg/m ³
	TWA	12 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Pthalic anhydride	TWA	0.002 mg/m ³
	STEL	0.005 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Pthalic anhydride	IDLH	60 mg/m ³
	TWA	6 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls**Appropriate engineering controls**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	2 - 6 g/l aq.solution
Melting Point/Range	129-132 °C / 264.2-269.6 °F
Boiling Point/Range	284 °C / 305.6 °F @ 760 mmHg
Evaporation Rate	Not applicable
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	10.50 vol %
Lower	1.70 vol %
Vapor Pressure	0.01 mbar @ 20°C
Vapor Density	Not applicable
Density	No information available
Solubility	6 g/l (20°C)
Partition coefficient; n-octanol/water	No data available.
Autoignition Temp	580 °C / 1076 °F
Decomposition Temp	No information available
Viscosity	Not applicable
Molecular Formula	C8H4O3
Molecular Weight	148.12 g/mol

VOC Content(%) No information available
Oxidizing properties No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No known reactive hazards based on information available.

10.2 Chemical stability

Stable under normal conditions. Moisture sensitive.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products, exposure to moist air or water, dust formation.

10.5 Incompatible materials

Acids, strong oxidizing agents, strong bases, strong reducing agents.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phthalic anhydride	1530 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 2.14 mg/L (Rat) 4h

Skin corrosion/irritation

Irritating to skin.

Serious eye damage/eye irritation

Severe eye irritant.

Respiratory or skin sensitization

Irritating to respiratory system.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Phthalic anhydride	85-44-9	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Do not empty into drains.

12.2 Persistence and degradability

Persistence is unlikely.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Likely mobile in the environment due to its water solubility (log Pow = 1.6).

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Pthalic anhydride	U190	-

SECTION 14: Transport information

DOT (US) Not regulated.

IMDG Not regulated.

IATA Not regulated.

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, RQ: 5000 lb.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
See Section 2 for more information.

SARA 313 (TRI reporting)
Listed.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed.

US. New Jersey Worker and Community Right-to-Know Act

Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Listed.

California Proposition 65

Not listed.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.