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SAFETY DATA SHEET

# PHTHALIC ANHYDRIDE

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

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| **1.1 Product identifier**: | |
| **CAS Number:** | 85-44-9 |
| **EC number:** | 201-607-5. |
| **1.2 SYNONYMS** | 3-Chloro-1-propene, , 1-chloro-2-propene, 3-chloropropylene |

## SECTION 2: Hazards identification:

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| **2.1 Classification of the substance or mixture:** | Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation. |
| **2.2 Label elements:** | Labelling according to Regulation (EC) No 1272/2008<br>• **Skin Corrosion/Irritation** (Category 2)<br>• **Serious Eye Damage/Eye Irritation** (Category 1)<br>• **Respiratory Sensitization** (Category 1)<br>• **Skin Sensitization** (Category 1) |
| **Hazard Pictograms:** |  |
| **Signal Word:** | Danger |
| **Hazard statements:** | **H302** Harmful if swallowed.<br>**H315** Causes skin irritation.<br>**H317** May cause an allergic skin reaction.<br>**H318** Causes serious eye damage.<br>**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

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| | **H335** May cause respiratory irritation. |
| **Precautionary Statements:** | **P280** Wear protective gloves / protective clothing / eye protection / face protection<br>**P403+P404** Store in a well-ventilated pLace. Store in a closed container.<br>**P304+P340** If Inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing<br>**P501** Dispose of contents/container to hazardous or special waste collection point. |
| **2.3 Other hazards:** | |
| **Inhalation**: | may cause irritation to the respiratory tract, leading to symptoms such as coughing, shortness of breath, and a sore throat. |
| **Ingestion:** | can cause severe gastrointestinal irritation, nausea, vomiting, and abdominal pain. |
| **Skin Contact:** | an cause severe burns, irritation, and allergic reactions, |
| **Eye contact:** | an cause severe eye damage. |
| **Chronic Exposure:** | an lead to respiratory issues such as asthma and chronic bronchitis, skin sensitization or dermatitis, eye irritation, and potential systemic effects like liver and kidney damage. |
| **Aggravation of pre-existing conditions :** | may aggravate pre-existing respiratory conditions, such as asthma or chronic obstructive pulmonary disease (COPD), and skin conditions like dermatitis. |

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## SECTION 3: Composition/information on ingredients

| | |
|---|---|
| **3.1 Chemical characterisation:** | Substances |
| **CAS No:** | Description: 85-44-9 PHTHALIC ANHYDRIDE |
| **Identification number(s):** | EC number: 201-607-5 |

## SECTION 4: First aid measures

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| **4.1 Description of first aid measures** | |
| **General information:** | |
| **After inhalation:** | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician |
| **After skin contact:** | Wash affected areas thoroughly with soap and water. Remove contaminated clothing. Consult a physician. |
| **After eye contact:** | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. |
| **After swallowing:** | Gargle, drink plenty of water and do not induce vomiting. Consult a physician. |
| **4.2 Most important symptoms and effects, both acute and delayed:** | acute symptoms of phthalic anhydride exposure include severe eye irritation, skin irritation, respiratory distress and gastrointestinal discomfort while Delayed effects may include respiratory sensitization, chronic skin reactions and long-term lung damage with repeated exposure. |
| **4.3 Indication of any immediate medical attention and special treatment needed:** | In case of exposure, immediate medical attention is required, especially if symptoms such as severe eye irritation**,** respiratory distress**,** or skin burns occur. |

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## SECTION 5: Firefighting measures

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| **5.1 Extinguishing media** | dry chemical or carbon dioxide, sand |
| **5.2 Special hazards arising from the substance or mixture** | Highly combustible, releases heat when reacted with water and toxic vapors can cause respiratory issues. Harmful to environment particularly aquatic life |
| **5.3 Advice for firefighters** | Wear fully protective suit, safety glasses and respiratory device . |
| **5.4 further information** | Use water spray to cool unopened containers. |

## SECTION 6: Accidental release measures

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| **6.1 Personal precautions, protective equipment and emergency procedures** | Use personal protective equipment.<br>Avoid breathing vapors, mist or gas.<br>Ensure adequate ventilation.<br>Remove all sources of ignition.<br>Evacuate personnel to safe areas.<br>Beware of vapours accumulating to form explosive concentrations. |
| **6.2 Environmental precautions:** | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. |
| **6.3 Methods and material for containment and cleaning up:** | Wore chemical protection suit and self-contained<br>breathing apparatus (SCBA).<br>Collect spilled into container and absorb with sand, earth or inert substances.<br>Keep containers tightly sealed.<br>Do not allow water into the container ban chemical exposure.<br>Spray water to reduce vapors.<br>Ventilate the area and wash clean the area spilled material contained closed. |

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## SECTION 7: Handling and storage

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| **7.1 Precautions for safe handling** | For use in are with adequate ventilation.<br>Do not use in confined spaces.<br>Electro static discharge protection.<br>Do not let flame ignition<br>No smoking |
| **7.2 Conditions for safe storage, including any incompatibilities** | Store in original containers.<br>Keep containers securely sealed.<br>Store in a cool, dry, well-ventilated area.<br>Store away from incompatible materials and foodstuff containers.<br>Protect containers against physical damage and check regularly for leaks. |
| **Requirements to be met by storerooms and receptacles:** | Keep container tightly closed in a dry and well-ventilated place.<br>Containers which are opened must be carefully resealed and kept upright to prevent leakage. |
| **7.3 Specific end uses** | no data available |

## SECTION 8: Exposure controls/personal protection

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| **8.1 Control parameters** | |
| **Additional information about design of technical facilities:** | A system of local and general exhaust is recommended |
| **8.2 Exposure controls** | |
| **Appropriate engineering controls** | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |
| **Personal protective equipment:** | Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc. |
| **General protective and hygienic measures:** | Eyes, body and hand protection, maintain indoor air unobstructed.<br>Wear protective equipment. |
| | **Respiratory protection:** Required. |

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| **Protection of hands:** | Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands |
| | **Eye protection:** Required |
| **Protection of Body:** | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. |

## SECTION 9: Physical and chemical properties

| **9.1 Information on basic physical and chemical properties General Information** | |
|---|---|
| **Appearance: Form:** | Flake powder |
| **Colour:** | white |
| **Odour:** | Choking odour |
| **pH-value:** | 2 |
| **Melting point/Melting range:** | 131.3°C |
| **Boiling point/Boiling range:** | 284.8℃. |
| **Flammability (solid, gaseous):** | No data available |
| **Ignition temperature:** | No data available |
| **Decomposition temperature:** | No data available |
| **Self-igniting:** | No data available |
| **Flash point:** | No data available |
| **Danger of explosion:** | No data available |
| **Explosion limits: Lower:** | 1.7 %; |
| **Explosion limits: Upper:** | 10.5 % |
| **Vapour pressure:** | 0.00069 hPa at 25°C |
| **Density at 20 °C:** | 1.53 g/cm³ (approx.) |
| **Relative density:** | 1.527 |
| **Vapour density:** | 2.1 |
| **Evaporation rate:** | Very low |
| **Solubility in / Miscibility with-·water at 20 °C:** | slightly soluble |

| | |
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| **Partition coefficient:(n-octanol/water)** | 0.73 |
| **Viscosity:** | 0.34 cP at 20°C (approx) |

## SECTION 10: Stability and reactivity

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| **10.1 Reactivity** | No data available |
| **10.2 Chemical stability** | The material is stable at room temperature |
| **10.3 Possibility of hazardous reactions** | Can undergo hazardous reactions when exposed with water. |
| **10.4 Conditions to avoid** | Moisture and water |
| **10.5 Incompatible materials** | strong bases, amines, or oxidizing agents, water |
| **10.6 Hazardous decomposition products** | carbon monoxide, carbon dioxide, phthalic acid vapors, and potentially other toxic organic compounds |

## SECTION 11: Toxicological information

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| **11.1 Information on toxicological effects** | |
| **Acute Toxicity:** | **LD50** (Oral, Rat) : 1530 mg/kg<br>**LD50** (Dermal, Rabbit) : 10,000 mg/kg<br>**LC50** (Inhalation Rat) : 0.647mg/liter /10 min. |
| **Skin corrosion/Irritation:** | causes severe skin corrosion and irritation, leading to redness and pain. |
| **Serious eye damage/irritation:** | causes serious eye damage, resulting in severe irritation, pain, redness |
| **Respiratory damage/irritation:** | Irritate the nose and throat Cause pneumonia, cough, shortness of breath, headache, dizziness and unconsciousness. |
| **Ingestion:** | Stomachache, vomiting and abdominal pain. |

| | |
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| **Germ cell mutagenicity:** | No mutagenic effect was found in various tests with bacteria and mammalian cell culture |
| **Carcinogenicity:** | In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. |
| **Reproductive toxicity:** | no data available |
| **Specific target organ toxicity - single exposure:** | No data available |
| **Specific target organ toxicity - repeated exposure:** | No data available |
| **Aspiration hazard:** | No data available |
| **Signs and Symptoms of Exposure:** | Refer section 2.3 |
| **11.2 Additional toxicological information** | |
| **Aquatic Toxicity:** | It is highly toxic to aquatic organisms in relatively low concentrations. |
| **Biodegradability:** | Poorly biodegradable |

## SECTION 12: Ecological information

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|---|---|
| **12.1 Toxicity**<br>**Aquatic toxicity:** | **LC50:** 100 mg/l 96 h (Oncorhynchus mykiss) |
| **12.2 Persistence and degradability:** | Low persistent and poorly biodegradable |
| **12.3 Bioaccumulative potential:** | Not bio-accumulative |
| **12.4 Mobility in soil:** | Low mobility |
| **12.5 Other adverse effects** | No data available |

## SECTION 13: Disposal considerations

| **13.1 Waste treatment methods** | |
|---|---|
| **Uncleaned packaging**<br>**Recommendation:** | dispose of in accordance with local hazardous waste regulations |
| **Recommended cleansing agents:** | Soapy water, alkaline cleaning agents, aceotone and isopropyl alcohol |

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## SECTION 14: Transport information

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|---|---|
| **14.1 UN-Number · ADR, ADN, IMDG, IATA:** | Not classified |
| **14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:** | Allyl chloride |
| **14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA** : | Not classified |
| **14.4 Packing group · ADR, IMDG, IATA:** | Not classified |
| **14.5 Environmental hazards:** | Yes |
| **14.6 Special precautions for user** | No data available |

## SECTION 15: Regulatory information

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| **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU** | Directive 2012/18/EU, under that this substance is classified as toxic and flammable substance. |
| **Named dangerous substances** | This substance is listed in the annex 1 to the directive under the category of "Dangerous substances" due to its flammability |
| **15.2 Chemical safety assessment:** | Chemical assessment has been carried out under **REACH** regulation. |

## SECTION 16: Other information

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available.