PHTHALIC ANHYDRIDE

Version: 2

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Technical Data Sheet

Formula	C8H4O3
CAS	85-44-9
EC	201-607-5
Chemical name	Phthalic anhydride

Specifications

	Unit	Value	Test Methods
Colour	APHA	≤ 20	ASTM D3366-95
Colour after heating	APHA	≤ 40	(90 min at 250°C) - ASTM D 3366-95
Solidification point	°C	≥ 130.8	WI-bepalen stolpunt PAN
Purity	% wt/wt	≥ 99.8	WI-Bepalen zuiverheid PAN (GC)
Benzoic acid content	% wt/wt	≤ 0.05	WI-Bepalen zuiverheid PAN (GC)
Phhtalic acid content	% wt/wt	≤ 0.1	WI-Vrije zuurtegraad PAN

Analytical data's

		Conditions
WI-Bepalen zuiverheid PAN (GC)	Gas chromatography	The following conditions have been established in practice for the chromatographic assay: Column: Type: AT-5, 60 m long, internal diameter: 0.32 mm, film thickness 0.25 µm. Temperatures: Injector: 250°C, Oven: 50°C (3 min) - 15°C/min - 250°C. Detector: 300°C Carrier gas: hydrogen Injector: split Detector: FID Evaluation: internal standardization
WI-Vrije zuurtegraat PAN	Phthalic acid content	Add 3 drops of bromophenol blue (0.3 % in acetone) to 150 ml acetone and titrate with 0.1 N triethylamine in ortho-xylene until blue. Weigh 10 g sample, add to the titration solution and dissolve. Titrate with 0.1 N triethylamine until blue. Express the result as percentage free phthalic acid.
WI-Bepalen Stolpunt PAN	Solidification point	Fill a Nessler tube with sample and put in a heating block at 250°C until completely molten. Put the Nessler tube in a second heating block at 100 °C, insert a thermometer in the product and stir carefully. Monitor the temperature. It will decrease constantly in the beginning. When crystallisation process starts, temperature will rise again. Note down the highest temperature after the start of the crystallisation process.

Principal applications

Phthalic anhydride is a versatile intermediate in organic chemistry, primarily used in the production of general purpose plasticizers, unsaturated polyesters (UPRs), alkyd resins and polyols (APPs).

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