**Polymer Add (Thailand) Co.,Ltd.**

**Office** - 106, Chalaremprakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

**Factory** - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

**Mobile -** Thai : 0804531391, English: 0839415475, **E-mail –** contact@polymeradd.co.th

# TECHNICAL DATA SHEET

## NEOPENTYLGLYCOL DIBENZOATE (MICRONIZED)

### PRODUCT CLASSIFICATION

| | |
|---|---|
| **Chemical Name** | **NEOPENTYLGLYCOL DIBENZOATE (MICRONIZED)** |
| **CAS No** | 4196-89-8 |
| **HS Code** | 2916.31.90 |
| **EINECS No** | 224-069-1 |
| **Molecular Formula** | $C_{18}H_{20}O_4$ |
| **Molecular Weight** | 300.35 g/mol |
| **Synonyms** | NPG Dibenzoate, 2,2-Dimethyl-1,3-propanediol dibenzoate |

### TECHNICAL PROPERTIES

| Property | Typical Value / Description | Test Method |
|---|---|---|
| Appearance | White to off-white powder | Visual |
| Odor | Mild ester odor | Sensory |
| Melting Point | 43 – 46 °C | Capillary Method |
| Moisture Content | ≤ 1.0% | Oven Drying at 105 °C |
| Bulk Density | 0.35 – 0.50 g/cm$^3$ | Tapped Density |
| Solubility in Water | Insoluble | Visual Observation |
| Solubility in Organic Solvents | Soluble in esters, ketones, chlorinated solvents | Gravimetric/Visual |
| pH (10% in ethanol-water) | 6.0 – 7.5 | pH Meter |
| Particle Size (D50) | Typically, 10 – 14 µm | Laser Diffraction |
| Particle Size (D99) | Typically, < 40 µm | Laser Diffraction |

➢ The commercial specification may include only a subset of these values. Listed data is for technical reference.

### HEAVY METALS (EU REGULATION 10/2011 – CONTENT LIMITS IN ADDITIVES FOR PLASTICS)

| Element | Typical Max Limit (ppm) | Test Method |
|---|---|---|
| Lead (Pb) | ≤ 5 ppm | ICP, AAS, XRF |
| Cadmium (Cd) | ≤ 1 ppm | ICP, AAS |
| Mercury (Hg) | ≤ 1 ppm | ICP, CV-AAS |
| Arsenic (As) | ≤ 1 ppm | ICP, AAS |

### USES / APPLICATION

| Industry | Commercial Application / Uses (Micronized Grade) |
|---|---|
| Plastics | Primary plasticizer in flexible PVC and polar polymers |
| Adhesives | Modifier in hot melt and pressure-sensitive adhesive formulations |

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| | |
|---|---|
| Inks & Coatings | Plasticizer for nitrocellulose-based inks and coatings |
| Flooring & Films | Used in vinyl flooring, film processing, and sealant formulations |
| Construction | Intermediate in reactive binder systems and filled polymer composites |

**US FDA 21 CFR LISTING**

| CFR Section | Title / Description |
|---|---|
| 175.105 | Adhesives – permitted for indirect food contact |
| 176.180 | Components of paper/paperboard in contact with dry food |
| 177.1680 | Polyurethane resins (indirect food additives) |

**COLOUR IMPACTING IMPURITIES**

| Element | Typical Max Limit (ppm) | Test Method |
|---|---|---|
| Iron (Fe) | ≤ 150 ppm | ICP, AAS, XRF |
| Manganese (Mn) | ≤ 50 ppm | ICP, AAS, XRF |
| Copper (Cu) | ≤ 20 ppm | ICP, AAS, XRF |
| Nickel (Ni) | ≤ 20 ppm | ICP, AAS, XRF |
| Chromium (Cr) | ≤ 10 ppm | ICP, AAS, XRF |

**PRODUCT PERFORMANCE IMPACTING IMPURITIES**

| Ion / Element | Typical Max Limit (ppm) | Test Method |
|---|---|---|
| Sodium (Na) | ≤ 150 ppm | ICP, AAS, XRF |
| Potassium (K) | ≤ 100 ppm | ICP, AAS, XRF |
| Calcium (Ca) | ≤ 300 ppm | ICP, AAS, XRF |
| Magnesium (Mg) | ≤ 200 ppm | ICP, AAS, XRF |
| Chloride ($Cl^-$) | ≤ 50 ppm | Ion Chromatography |
| Sulphate ($SO_4^{2-}$) | ≤ 50 ppm | Ion Chromatography |

**Product Disclaimer:**

This product is intended for industrial use. Values shown are typical and not guaranteed specifications unless explicitly agreed in writing. Suitability should be verified under actual use conditions. Not intended for medical or pharmaceutical applications.

**Month of Creation:** July 2025
**Month of Review:** July 2027