



# Sales Specifications of Purified 2,6-Naphthalene Dicarboxylic Acid (PNDA) (CAS 1141-38-4)

IVL's purified 2,6-naphthalene dicarboxylic acid (PNDA) is produced by the hydrolysis of dimethyl 2,6-naphthalene dicarboxylate (NDC). Polymers produced from PNDA exhibit properties that make them useful in applications such as high-performance polyester films, fibers, packaging applications, and engineering applications such as liquid crystal polymers (LCP). PNDA is EU REACH registered, and its polymers may be used in food contact articles under US FDA regulations.

## Shipping and Handling Information

PNDA powder is available in bulk polypropylene fabric type 'C' bags containing 700 kilograms. The bag dimensions are 35" x 38" x 46" (height). The bag, which is equipped with a polyethylene liner, has a fabric top fill spout, 14" diameter x 20" long, and a sealed fabric outlet spout, 14" diameter x 18" long. Up to two bags can be shipped on a pallet with shrink-wrapping, meaning that a standard 20' shipping container can carry 20 bags. During unloading, the bags need to be properly grounded. A description of a pallet load is given in Table 2.

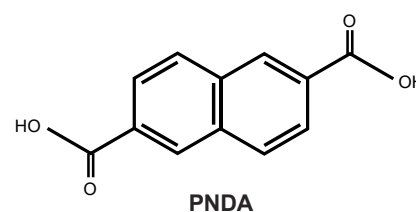
**Table 1: PNDA Product Sales Specifications**

Property	Value	Test Method
Organic Purity <sup>(1)</sup> (wt%)	>99.8	LC
[MM-NDC + NDC] (wt%)	<0.1	LC
Color (b* value)	<8	Colorimeter
Ash (ppm)	<15	Combustion
<b>Metals</b>		
Ni (ppm)	<2	ICP
Fe (ppm)	<5	ICP
Volatiles (wt%)	<0.1	Moisture Balance
Appearance	White powder	Visual

<sup>1</sup> 100% minus impurities MM-NDC, NDC, FNA (2-formyl-6-naphthoic acid), and 2-NA (2-naphthoic acid)

For an additional charge, PNDA is also available in smaller packages. The product has been evaluated and does not require any hazard warning on the label under OSHA criteria. With regard to transportation, the DOT product shipping name is not regulated. PNDA's Harmonized System (HS) code is 2917.39. Under US Export Administration Regulations (EAR), PNDA is not on the Commerce Control List (CCL), thus is designated EAR99. Please contact your Indorama Ventures PCL (IVL) representative for any additional information on product shipping.

**Figure 1: Chemical Structure of PNDA**



**Table 2: Shipping Weights for PNDA**

	<b>Fabric Bag</b>
Wt. per container, net	700 kg (1543 lb)
Containers per pallet	2
Wt. per pallet, net	1400 kg (3086 lb)
Shipping wt. for freight rates	Actual weight

## Health and Safety Information

The product described herein may require precautions in handling and use because of toxicity, flammability, or other considerations. The available product health safety information for PNDA is contained in the Safety Data Sheet (SDS) that may be obtained from your sales representative or by written request to the office address listed below. Before using any material a customer is advised to consult the SDS for the product under consideration for use.

## For additional information, on samples, pricing and availability, please contact:

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