



Sales Specifications of Dimethyl 2,6-Naphthalene Dicarboxylate (NDC) (CAS 840-65-3)

IVL's dimethyl 2,6-naphthalene dicarboxylate (NDC) is a difunctional aromatic ester that is typically used in the production of specialty polyester polymers. Incorporation of NDC into polyesters characteristically improves their thermal, barrier (both diffusional and UV penetration), mechanical, and weathering properties as well as those of their fabricated products, which include specialty films, high performance fibers, rigid packaging, liquid crystal polymers, and other engineering resins. NDC is EU REACH registered, and its polymers may be used in food contact articles under US FDA regulations.

Table 1: NDC Product Sales Specifications

Property	Value	Test Method
Organic Purity ⁽¹⁾ (wt%)	>99.95	HPLC
Acid Number (mg KOH/g)	<0.02	HPLC
Color (APHA)	≤50	Colorimeter/Melt
Ash (ppm)	<2	Combustion
Foreign Particles (particles/g >1.5 microns)	<1200	Hiac Royco

¹ 100% minus impurities MeFNA (methyl 6-formyl-2-naphthoate), MM-NDC (monomethyl 2,6-naphthalene dicarboxylate), and NDA (2,6-naphthalene dicarboxylic acid).

Shipping and Handling Information

NDC flakes are 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. Typically, two bags are 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.

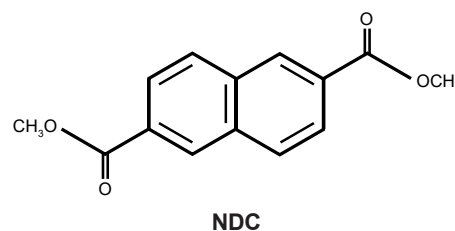
For an additional charge, NDC is also available in smaller packages, such as polyethylene-lined fiber drums containing 125 kilograms. Drum dimensions are 22" diameter x 35" tall. Four drums may be shipped on a pallet with shrink-wrapping. A description of pallet loads is given in Table 2.

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. NDC's Harmonized System (HS) code is 2917.39. Under US Export Administration Regulations (EAR), NDC 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.

Table 2: Shipping Weights for NDC

	Fabric Bag	Fiber Drums
Wt. per container, net	700 kg (1543 lb)	125 kg (275.6 lb)
Containers per pallet	2	4
Wt. per pallet, net	1400 kg (3086 lb)	500 kg (1102 lb)
Shipping wt. for freight rates	Actual weight	

Figure 1: Chemical Structure of NDC



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 NDC 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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