

Technical Information

TI/N-CPN/IP Plastomoll® DNA
June 2025

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Petrochemicals Plasticizers



Plastomoll® DNA

Plasticizer for PVC products with good low-temperature properties.

Chemical Nature

Diisononyl adipate

BASF Registered Name

Plastomoll® DNA

CAS No.

33703-08-1

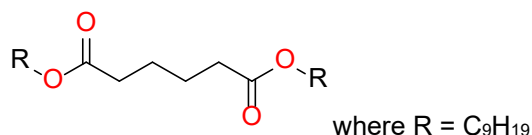
Molecular Weight

398

Formula

C₂₄H₄₆O₄

Molecular Structure



Product Specifications

	Value	Test Method
Specific gravity @ 25°/25 °C	0.917 - 0.923	ASTM D-4052
Ester content, % by weight (minimum)	99.6	ASTM D-3465
Acid Number, mg KOH/g (maximum)	0.1	ASTM D-1045
Water, % by weight (maximum)	0.1	ASTM E-203
Color, Pt-Co Units (APHA, maximum)	25	ASTM D-5386
Suspended Matter	COLSFFM*	visual

*Clear Oily Liquid Substantially Free of Foreign Material

Typical Physical Properties

The following data were measured in the BASF Corp. laboratory. They do not represent any legally binding guarantee of properties for our sales product.

	Value
Pour point, °C	-68
Flash point (COC), °C	215
Odor	mild characteristic
Surface Tension, mN/m	30.5
Solution Temperature, °C	154
Plastisol Gelation Temperature, °C	150
Vapor Pressure @ 20 °C, mbar	< 0.01
Solubility @ 25 °C in water, mg/L	< 0.01
Refractive Index ⁿ D20	1.448

Viscosity & Density Data

Temperature (°C)	Dynamic viscosity (cP)	Density (g/cm ³)
-40	1,173	0.968
-30	426	0.960
-20	188	0.952
-10	92.8	0.945
0	51.2	0.937
10	30.9	0.930
20	20.0	0.923
40	9.94	0.908
60	5.80	0.894
80	3.78	0.879

Description

Plastomoll® DNA is a highly efficient plasticizer which imparts excellent low temperature flexibility and resistance to impact to the base resin. For these reasons it finds wide use in polymeric systems based on vinyl, nitrocellulose and rubber. Vinyl plasticized with Plastomoll® DNA has far less volatility than with DOA. It is soluble in the usual organic solvents and is miscible and compatible with all the monomeric plasticizers commonly used in vinyl.

Applications

Plastomoll® DNA can be used in applications requiring an excellent cold flexibility and low volatility.

Safety

Plastomoll® DNA does not require special handling. Handle in accordance with good industrial hygiene and safety practices. Avoid eye contact by wearing personal protective equipment. If eye contact occurs, wash with flowing water and contact physician.

Avoid repeated or prolonged skin contact. Avoid breathing vapors by providing adequate ventilation.

Always refer to the Safety Data Sheet (SDS) for detailed information on safety.

Storage and Handling

Plastomoll® DNA can be stored for one year at temperatures below 40°C, if moisture is excluded.

Packaging

Plastomoll® DNA is available in bulk, tank trucks or rail cars.

Contact Information**Marketing**

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Note

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