

ExxonMobil NDA: Your better alternative to 2-ethylhexanoic acid

Summary

The European Chemicals Agency (ECHA) has reclassified 2-Ethylhexanoic acid (2-EHA) and most of its salts as Reprotoxic Category 1B. The global industry is adapting to this reclassification by using neodecanoic acid (NDA), since it has a more advantageous classification and labeling profile, and is a safe-to-use replacement for 2-EHA.

ExxonMobil offers NDA, a neodecanoic carboxylic acid with a long and highly branched alkyl chemical structure. ExxonMobil NDA offers attributes that make it a better alternative to 2-EHA.

ExxonMobil NDA can help deliver product performance and business advantages

We are the world's largest integrated neodecanoic acid manufacturer using our own nonene feed and with supply points in the various regions. Our nonene feed enables consistency throughout the whole neodecanoic acid production process, contributing to the quality and stability of our customers' end-products and derivatives. As a pure raw material acid supplier, we prove our commitment to the global neodecanoic acid market and our customers by:

- Offering a consistent and independent source of neodecanoic acid
- Supporting and collaborating with our customers in their transition away from 2-EHA

Regulatory context: Classification and labeling (C&L)

The European Chemicals Agency (ECHA) has reclassified 2-Ethylhexanoic acid (2-EHA) and most of its salts as Reprotoxic Category 1B.

- Reclassified as Reprotoxic Category 1B under the 20th ATP amendment and effective after 1st February 2025*
- The ECHA1B rating refers to materials that are presumed to be a reproductive toxicant (H360)
- ExxonMobil NDA has a more favorable HS&E profile

Name	CASRN	EC No.	Hazard classification	Hazard phrases	Pictogram	Signal word
Neodecanoic acid	26896-20-8	248-093-9	Acute Oral Category 4	H302: Harmful if swallowed		Warning
2-Ethyl hexanoic acid	149-57-5	205-743-6	Reproductive toxicity Cat. 1B	H360D: May damage the unborn child		Danger

*Source: Commission delegated regulation (EU) 2023/1435

Key attributes



High hydrophobicity



Excellent hydrolytic stability



Enhanced heat & chemical resistance



Improved processing & compatibility

ExxonMobil NDA is an ideal building block

In addition to critical applications such as metal-based catalysts for polyurethane foams, PVC heat stabilizers and alkyd paints and ink drying agents, ExxonMobil NDA can offer end-product performance benefits for:

- Wood preservatives
- Polymerization initiators (acid chloride)
- Metal extraction
- Antifreeze
- Detergents
- Rubber adhesion promoters

ExxonMobil NDA vs. other supplier



Lower odor

Valued in white paints and foams



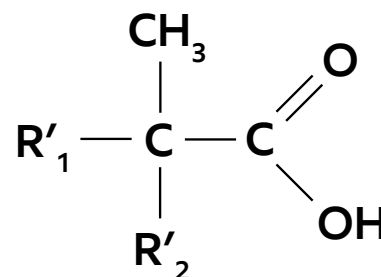
Lower color

Valued in paints, inks and cosmetics



Very stable performance in derivatives

- Metal salts
- Catalysts



Neodecanoic acid

$R'_1, R'_2 = \text{alkyl}$

$R'_1 + R'_2 = 7 \text{ carbon atoms}$

Property	Sales specification	Typical properties*	Unit	Test method
Acid value	320 (min) - 330 (max)	325	mg KOH/g	ASTM D1980
Appearance	Clear, free of suspended matter	Clear, free of suspended matter	-	Visual
Boiling range	-	249-265	°C	ASTM D1078
Color, Pt-CO	30 (max)	9	-	ASTM D5386
Odor	-	Mild	-	-
Purity	-	>99.0	%	ExxonMobil test method
Pour point	-	<-40	°C	ASTM D5950
Water content	0.1 (max)	<0.1	wt%	ASTM E1064

Data from tests performed by or on behalf of ExxonMobil
 *Typical properties values fluctuate over time

Fully integrated platform

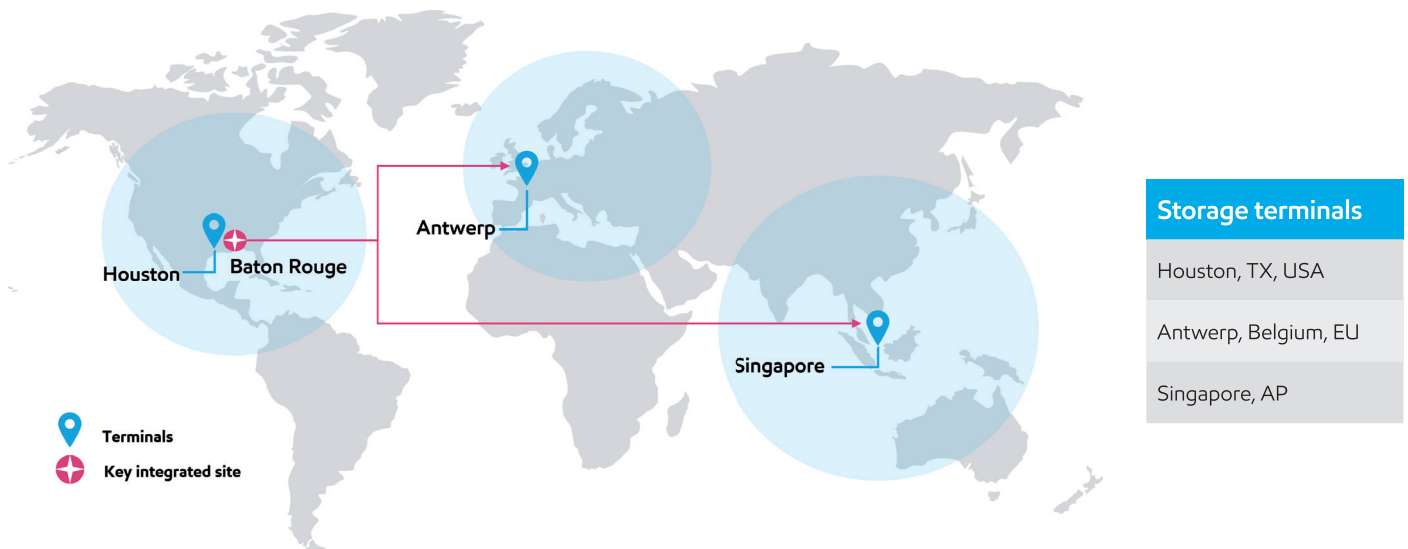
ExxonMobil's fully integrated production of ExxonMobil NDA leverages our market-leading production volume of on-purpose nonene.



Global supply capability with regional responsiveness

ExxonMobil provides global coverage, with a world-scale **integrated petrochemical production facility located in Baton Rouge, Louisiana, USA.**

ExxonMobil NDA is available in dedicated storage tanks in **each region.**



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