

Nikethamide BP (N,N-Diethylnicotamide)

PRODUCT IN FOCUS



Nikethamide BP (N,N-Diethylnicotamide)

INTRODUCTION

Nikethamide is a synthetic organic compound derived from nicotinic acid (vitamin B₃). It consists of a pyridine ring linked to a diethyl amide functional group and belongs to the class of pyridine amide derivatives.

Historically, it has been used as a central nervous system (CNS) and respiratory stimulant, acting to enhance ventilation and assist in the correction of respiratory depression. Nikethamide is typically supplied as a liquid substance, most commonly formulated as aqueous injection solutions (e.g., ~25% w/v) and, less commonly, in oral liquid or lozenge forms.

Manufacture

Nikethamide is manufactured by converting nicotinic acid into an activated intermediate, then reacting it with diethylamine to form the amide, followed by purification to meet BP standards.

Applications

Nikethamide BP is a pharmacopoeial-grade CNS and respiratory stimulant. Its applications are mostly medical with some niche veterinary and emergency uses.

Pharmaceutical / Medicinal Use

- In treatment of acute respiratory depression by stimulating the medullary respiratory center, increasing breathing rate and depth.
- Used alongside antidotes to restore breathing and consciousness.
- Provides mild cardiovascular stimulation by increasing heart rate and blood pressure.

Niche Applications

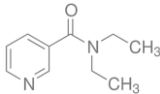
- Used to improve alertness and endurance in extreme conditions

Research / Pharmacology Studies

- Used to study respiratory control mechanisms and CNS stimulants

Veterinary Applications

- Recovery from anaesthesia or sedation.
- As a neonatal revival agent it helps initiate breathing in newborn animals.

Synonyms	N,N-diethyl-3-pyridinecarboxamide; Nicethamide;
CAS no.	59-26-7
EINECS no.	200-418-5
Molecular Formula	C ₁₀ H ₁₄ N ₂ O
Molecular Weight	178.23
Structure	

Nikethamide BP (N,N-Diethylnicotamide)

PRODUCT IN FOCUS



SPECIFICATIONS – BP

Test	Unit	Specification
Appearance	-	Colourless or slightly yellowish oily liquid/ crystalline mass with faint characteristic odor
Solubility	-	Miscible with Water, Ethanol (96%), Chloroform and Ether
Identification (Second identification A,C,D)		
A. By Spectrophotometry	-	Should meet as per BP monograph
C. Reaction with Sodium Hydroxide	-	Should meet as per BP monograph
D. Reaction with Cyanogen bromide	-	Should meet as per BP monograph
Appearance	-	The substance under examination in liquid form and clear by slight heating and not more intensely coloured then reference solution Ys
pH	-	6.0 – 7.8
Refractive Index	-	1.524 – 1.526
Sulphated Ash	%	NMT 0.1
Water content (By Semi micro determination)	%	NMT 0.3
Related Substances		
Reference solution (a)	%	NMT 1.0
Reference solution (b)	%	NMT 0.1
Assay	%	99.0 – 101.0
Residual Solvents		
Toluene	ppm	NMT 890

Nikethamide BP (N,N-Diethylnicotamide)

PRODUCT IN FOCUS



PACKING

25 Kgs UN approved SS Can

STORAGE

Store in a cool, well-ventilated place, out of direct sunlight

REACH status

Not registered

ExSyn offers Nikethamide BP (N,N - Diethylnicotamide) on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.