PANA (N-Phenyl-alpha-naphthylamine)

CAS Number 90-30-2



PANA is a high-purity product widely used as an antioxidant in petroleum products, synthetic lubricants, rubber products, and as an organic intermediate.

Petroleum Products: greases, turbine oils, heat transfer fluids, crankcase lubricants, transformer oils, hydraulic and transmission fluids, and metal working fluids.

Synthetic Lubricants: polyglycol fluids and ester-type fluids.

PANA is available as a free-flowing flaked material, a solid in drums, and molten in bulk. The flaked material allows for relatively easy solution of the additive in oil. The solid in drums can be returned to the molten state by heating the drums.

Physical Properties		
Molecular Weight	219.29	
Apparent Specific Gravity at 20/20°C	1.2	
Melting Point	60-62°C (140-144°F)	
Freezing Point	55°C (131°F)	
Solubility		
in petroleum oils	Approximately 2 wt% at 25°C	(77°F)
	Minimum of 0.5 wt% at -15°C	(5°F)
in lubricating ails 8 groaces	Dissolves readily above E7°C	(12E°E)
Acidity (nH of aquoous solution 200 g/l)		(155 F)
	2.2280 °C	
Specifications	00.0%	
Purity	99.0%	
<u>α-Naphthol</u>	0.5%	MAXIMUM
Aniline	0.099%	MAXIMUM
α-Naphthylamine	0.05%	MAXIMUM
β-Naphthylamine	0.005%	MAXIMUM
Toluene Insolubles	0.25%	MAXIMUM
N-Phenyl-β-naphthylamine	0.50%	MAXIMUM
Moisture	0.10%	MAXIMUM
Color (Gardner)	4	MAXIMUM
Packaging		
Bulk Molten Liquid	To meet customer requirement	nts
Cast Solid, 55 gallon steel drum	450 lb NET	
Flaked Solid, 55 gallon fiber drum	200 Ib NET	
Flaked Solid, bag	20 kg NET	
Storage & Handling		

PANA has excellent storage stability. Upon prolonged exposure to air and light, PANA will gradually darken; however, this darkening does not measurably alter the anti-oxidant activity of this material. Containers should be kept covered when not in use. Storage in a clean, dry, shaded area is recommended.