

INTERSTATE STANDARD

(Abstract)

INDUSTRIAL DIPHENYLAMINE Specifications

GOST 194-80

This standard applies to the industrial diphenylamine applied for thiodiphenylamine, diaphene FP (ФП), N-nitrosodiphenylamine, colorants, and for special purposes.

1 Technical requirements

1.1. Diphenylamine shall be manufactured in compliance with the requirements of this standard, following the technology procedure.

1.2 Physical and chemical parameters of diphenylamine shall comply with the standard values specified in Table 1.

Table 1

Parameter	Normative value for the category	
	premium	first
1 Appearance	Scales or small crystals from light gray to light yellow color	Scales or small crystals of light gray, light yellow or light brownish color or a melt of brown color
2 Diphenylamine mass fraction, % minimum	99	98.5
3 Crystallisation temperature, °C, not lower than	52.4	52.0
4 Mass fraction of aniline, %, maximum	None	0.1

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Table 1 (end)

Parameter	Normative value for the category	
	premium	first
5 Mass fraction of impurities not soluble in ethyl alcohol, %, maximum	0.05	0.05
6 Water extract pH	6-8	6-8
N o t e – If in the course of diphenylamine storage, the color changes to pink, pinkish gray or brown, lumps appear, it should not be seen as a cause for rejection under condition that all the main parameters will meet the requirements of this standard.		

2 Safety requirements

2.1 Diphenylamine is a combustible substance. The inflammation temperature is 173°C. The auto ignition temperature is 634°C. The lower concentration limit of flame spread is 20 g/m³. Temperature limits of flame spread: the lower is 147°C, the upper is 194°C. Upon ignition, diphenylamine should be extinguished with sprayed water with a wetting agent.

2.2 Diphenylamine is a moderately hazardous substance of the 3rd hazard class (by median lethal dose at introduction into stomach equal to 2.0-3.2 g/kg).

Premises, where work with the product takes place, must be equipped with general suction and exhaust ventilation. Local pumps shall be provided in the places of possible dust emission.

Wet cleaning of the room shall be conducted during every shift. From skin and mucosae, the product is removed with water.

2.3. When applying diphenylamine, workers shall be provided with personal protection equipment.

In case of gas contamination of premises with diphenylamine vapours, a gas mask should be used; in case of dustiness – respirators.

3 Packaging, marking, transportation, and storage

3.1 Diphenylamine in form of scales and crystals is packed into cardboard drums with a capacity of 36-52, 76 and 100 dm³ with a polyethylene liner-bag, polyethylene bags made of film with the thickness of (0.19+0.03) mm, inserted into four-five layered paper bags.

The product weight in bags is (25.0±0.5) kg. The product weight of (30.0±0.5) kg is allowed.

3.2 Diphenylamine marking – with application of a hazard symbol, Class 6, Subclass 6.1, Classification Code 6163, UN Serial Number 2811.

3.3. Transportation. By railroad, industrial diphenylamine is transported by coaches in covered coaches, by the rules set for diphenylguanidine.

3.4 Diphenylamine is stored in closed containers in manufacturer's package. Ready product may not be stored near heating systems and under direct sunlight.