

Melamine

Empirical Formula: C₃H₆N₆

Synonyms: 2,4,6-triamino-1,3,5-triazine, s-triamino triazine

CAS No.: 108-78-1

EINECS.No: 203-615-4

Molecular mass: 126.12 kg/kmol

Specification

		Test Methods
Appearance:	white, crystalline powder	201e
Melamine:	min. 99.8%	247e
Loss on drying:	max. 0.1%	203e
Ash:	max. 0.01%	205e
pH (10% aqueous suspension):	7.5 - 9.5	210e
Processing test:	Melamine formaldehyde resin (M:F=1:3)	211e
Colour:	max. 20 APHA	
Aspect:	clear solution	

Above LAT Nitrogen analysis methods are available upon request.

Physical properties

		Test Methods
Density (20°C / 68°F):	1.574 kg/m ³	
Bulk density:	abt. 600 - 800 kg/m ³ (abt. 5.01 - 6.67 lb/gal) (USA)	224
Melting Point:	354°C/669°F (under decomposition)	
Solubility in water:	3.2 g/l (20°C/68°F)	

Above LAT Nitrogen analysis methods are available upon request.

Application

Melamine is a raw material for the production of aminoplastics. The condensation products made up of melamine and formaldehyde are in wood-working industry particularly used as impregnation resins in laminates and as glues for wood-based panels. Other uses are: moulding compounds, coatings, concrete plasticizers, resins for textile and paper finishing.

Furthermore, melamine is used as a flame retardant in coatings and polyurethane foams as well as for the production of fire prevention agents, fluorescent day-light paints, catalysts for the vulcanisation of rubber and for stabilization of formaldehyde.

Packaging

- Delivery in bulk (either by truck or railway).
- Multi-ply paper bags of 25 kg net.
- Big bags:
 - Standard BB: containing 500, 800, 1 000 or 1 500 kg net.
 - Special packaging: available on request.

Transport, storage and handling

Melamine can be characterized as having medium flowability and shows the following characteristics:

- freshly produced melamine is free flowing,
- stored product may be sensitive to compacting,
- increased compression may cause bridges in the product when stored for a longer time period,
- increased humidity causes blocking.

For this reason, it is recommended to proceed as follows:

- Melamine has to be stored in dry areas.
- Store max. 2 palletes of 800 up to 1 200 kg net in double stack position.
- Store palletes of 1 500 kg net only in single stack position.
- Use palletes with double bottom when stored one upon the other.
- For safety reasons, store peripheral palletes of 800 up to 1 200 kg only in single stack position.
- In addition, it is recommended not to use silotainers for bulk deliveries.

Storage of bulk in silo

Use silos constructed as follows:

- Humidity may not enter from the environment.
- Mass flow construction recommended.
- Don't use bottom vibration when unloading to avoid any risk of compression and blocking of product.

Requirements for storage:

- Use air for transportation of max. 110°C/230°F and humidity as low as possible to avoid condensation of water in the silo.
- Store bulk product for max. 3 months in the silo.

Transport classification: RID/ADR: no restriction

Tarif NO: 2933 6100

Safety

Dust formation and breathing dust must be avoided. Exposure to workers should be minimized as possible or avoided by technical measures or personal protective equipment. Release to the environment should be avoided.

Melamine is suspected of damaging fertility, suspected of causing cancer and may cause damage to organs (Urinary tract) through prolonged or repeated exposure. Melamine is non-flammable. Please consult the safety data sheet for further information, which is available on the LAT Nitrogen homepage or can be sent on request.

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