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Cyanoethylated Polyamine

- Executive standard: Q/TY·J08.35-2020
- CAS RN: 68412-46-4
- Commodity name: HX-878;Tepanol
- Other name: 2-Propenenitrile, reaction products with glycidol and tetraethylenepentamine
- Molecular Formula: $C_8H_{23}N_5.C_3H_6O_2.C_3H_3N$
- Solubility: Dissolved in water, methyl alcohol and acetone. Slightly soluble in ethyl acetate and tetrahydrofuran. Insoluble in petroleum ether and toluene.
- Stability and reactivity: Stable at normal temperature and pressure conditions. It will react with strong oxidant.
- 1. Technical indexes:

Item	Index
Appearance	Yellow or light yellow viscous liquid
Secondary amine content, (eq./100g)	0.50-0.70
Tertiary amine content, (eq./100g)	0.30-0.50
Total amine content, (eq./100g)	0.80-1.20
Hydroxyl value, (eq./100g)	0.40-0.60
Viscosity (25°C), mPa.s	30000-60000
Moisture, %	≤0.50

➤ 2. Application: HX-878 has been used as the bonding agent of nitramine-based composite. The hydroxyl groups in the molecular structure of the polynitrile hydroxylamine polymer can chemically bond with the HTPB to enter the cross-linked network, and multiple nitrile groups in the molecular structure can produce strong physical adsorption with the surface of the nitramine oxidant particles. The use of nitramine or nitramine-modified HTPB composite as a bonding agent can significantly improve the mechanical properties of the composite. It can also be used in combination with other bonding agents.

➤ 3. Safety instructions: HX-878 is toxic polynitrile hydroxylamine polymer. Rubber gloves must be used during operating in case of skin contact.

➤ 4. Storage and transportation: Stored in a cool and ventilated place. Keep sealed. Avoid rain and sun exposure during transportation. The shelf life is 12 months after manufacturing date. After the shelf life expires, the samples should be re-sampled and re-inspected according to the technical specifications in Part 1, and they can still be used after passing the test.

In addition: We are able to develop custom-made products according to the clients' requests.