

Product Overview

The n-ETHER Early Strength (ES) series represents a premium class of high-performance Polycarboxylate Ether (PCE) liquid polymers engineered for advanced concrete technologies. This specialized formulation accelerates initial cement hydration matrices to drive rapid early strength development without compromising long-term ultimate compressive strength or structural durability.

Technical Specifications & Analytical Methods

The metrics below detail empirical parameters evaluated via standardized international testing protocols.

Specification Parameter	n-ETHER ES	Testing Methodology
Physical Appearance	Colorless to Pale Yellow Liquid	Visual Inspection
Active Solid Content (%)	50.0 ± 1.0%	Moisture Analyzer
pH Value (@ 25°C)	3.0 – 6.0	Digital pH Potentiometer
Dynamic Viscosity (cps) (@ 25°C)	Max 1100 cps	Brookfield Viscometer
Specific Gravity (@ 25°C)	1.00 ± 0.2 gm/cc	Hydrometer

Strategic & Salient Applications

- Precast Concrete:** Accelerates stripping cycles for rapid mould turnaround times.
- High-Performance Concrete (HPC):** Lowers water-to-cement (w/c) ratios while driving fast structural strength gain.
- High-Flow Concrete:** Maintains excellent self-consolidating fluid flow without segregation.
- Ready-Mix Concrete (RMC):** Facilitates faster setting performance when pouring in cold climates or tight schedules.
- Sustainable Eco-Green Concrete:** Compensates for slow early strength gain in mixes using high fly ash or slag content.

Application Protocols & Dosage Guidelines

Recommended Dosage Range

The standard dosage profile ranges from 0.4% to 1.4% by weight of total cementitious materials (cement + SCMs). Engineers must adjust precise configuration variables based on project aggregate properties, cement classes and ambient site conditions.

Mandatory Rule: Project-specific laboratory trial mixes must be executed with local materials to verify performance targets prior to full-scale batching.

Admixture Compatibility

Approved Matrix: Fully compatible with all alternative Polycarboxylate Ether (PCE) variants and Lignosulfonate-based plasticizers.

Strict Restrictions: Do not blend with Sulfonated Melamine Formaldehyde (SMF) or Sulfonated Naphthalene Formaldehyde (SNF) plasticizers. Cross-contamination permanently impairs plasticization mechanisms.

Logistics, Packaging & Supply

Industrial Drums: 230 kg net capacity sealed heavy-duty containers.

Bulk Deliveries: Full industrial road tanker shipments.

Alternative or custom high-capacity containers are engineered and supplied upon request.

Warehouse Storage & Shelf Life

Temperature Range: Safely maintain warehousing frameworks between 5°C and 40°C.

Environmental Exposure: Securely guard product units against direct sunlight, freezing temperatures, or localized weather elements.

Handling Note: Direct sunlight or temperatures above 35°C may cause the HDPE drums to bulge slightly.

This is a normal physical reaction caused by water evaporation and does not affect product quality. To resolve this, gently loosen the cap to release the pressure, then tighten it again. Move the HDPE drums to a cool, shaded area.

Aesthetic Variations: The liquid may naturally exhibit variations from light yellow to deeper brownish shades under normal storage. This reaction is purely cosmetic and exerts zero influence on product performance.

Shelf Life Maturity: Valid for 12 months from the noted production timestamp when stored in uncompromised original containers.

Health, Safety & Environmental (HSE) Profiles

Personal Protective Equipment (PPE)

Industrial Skin Guarding: Wear chemical-impervious safety gloves at all times during handling and application.

Ocular Protection: Deploy clear safety goggles or face protective shields while dispensing.

First Aid & Industrial Hygiene

Decontamination: Thoroughly wash face, skin and hands using soap and clean water at the end of working shifts or following incidental exposures.

Hazardous Rating: Formulated with non-hazardous base materials. Exercise standard industrial hygiene procedures during all operational phases.

Disclaimer:

The technical data and application guidelines herein are based on laboratory testing and current expertise. They reflect typical product properties and serve as a general guide only. Since site-specific environmental conditions, substrate preparation, material compounding and application methods are beyond our direct control, this information does not constitute a legal warranty or guarantee of performance, express or implied. Users must conduct independent, project-specific trial mixes to verify product suitability for their unique operational requirements prior to commercial use. The manufacturer assumes no liability for site-specific performance failures.