TECHNICAL DATA SHEET

FLOREY® TPEG/IPEG/VPEG C5

TPEG/IPEG/VPEG C5

Five-carbon Polycarboxylate Monomer

Supplier: Luoyang Florey Import and Export Co., Ltd.

Website: www.floreyconcrete.com

Product Description

TPEG/IPEG/VPEG C5 is a five-carbon polyether macromonomer made by reacting isopentenol with ethylene oxide. It is supplied as white or yellowish flakes and serves as a reactive raw material for polycarboxylate ether (PCE) superplasticizers. It is used to synthesize water-reducing, combined-function, slow-release and slump-retaining PCE grades. The brochure identifies C5 monomers as a choice when slump retention is a priority.

Product Characteristics

A highly active catalyst and a dedicated synthesis process help preserve double bonds. Chloride content is ≤0.1%. The process is particularly suited to slump-retaining PCE. The resulting PCE can offer broad cement compatibility, high water reduction, improved early strength and low slump loss. It can also help lower the water-to-binder ratio, reduce shrinkage and creep, and improve durability.

Applications

Used to manufacture water-reducing, combined-function, slow-release and slump-retaining grades of PCE. The resulting admixtures can be used in precast, cast-in-place, high-performance, self-compacting and mass concrete. Applications also include retarded and high-flow concrete for railways, bridges, hydraulic and hydropower works, nuclear power projects, subways, expressways, ports and other industrial and civil construction.

Product Specification

Item	Specification
Appearance	White or yellowish flakes
Hydroxyl value (mg KOH/g)	23.40 ± 1.00
Density (g/cm³)	1.02
Moisture (%)	≤0.10
Chloride (% by mass)	≤0.1
pH (1% aqueous solution)	5.5–8.5
Unsaturation (mmol/kg)	0.385 mix*
Double bond retention rate (%)	93 mix*

* “mix” is the notation in the source TDS. The acceptance criteria require confirmation.

Guidelines for Use

Use TPEG/IPEG/VPEG C5 as a reactive macromonomer in free-radical polymerization under heating or in a redox system at room temperature. Set the dosage according to the molecular design of the PCE.

Florey provides PCE synthesis and production process guidance, formulation and compounding support, user training and on-site engineering support when needed.

Storage and Handling

Store at 0–35°C, protected from direct sunlight, rain, water ingress and contamination. Prevent moisture loss. Shelf life is 12 months.

Packaging

Available in 25 kg bags and 1000 kg bulk bags.

Precautions

The source TDS describes the product as biodegradable. Do not ingest. If the product enters the eyes, rinse promptly with plenty of water. Seek medical advice if an allergic reaction occurs. Consult the product safety data sheet for handling instructions.

Henan Fuluorui New Materials Co., Ltd.
Luoyang Florey Import and Export Co.,Ltd
https://www.floreyconcrete.com
ROOM 01, BUILDING 8, JUNHE YUNGU, SOUTHEAST CORNER OF THE INTERSECTION OF GUANGWU AVENUE AND LANTAI ROAD, YIBIN DISTRICT, LUOYANG CITY, HENAN PROVINCE 471000 Tel: +86 0379-68883868 Fax: +86 0379-68883868
TEL: +86 13783184240 E-mail: lucylu@floreyconcrete.com