CMS-P

(Vinylbenzyl chloride)



PRODUCT IN FOCUS

EXSYN®
ESSENTIAL CHEMISTRY

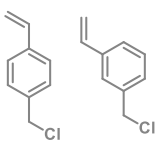
CMS-P (Vinylbenzyl chloride)

Introduction

Vinylbenzyl chloride, commonly referred to as **CMS-P**, is typically an equimolar mixture of meta and para chloromethyl styrenes. CMS-P is a bifunctional monomer, featuring both a polymerizable vinyl group and a reactive benzylic chloride functionality. It is widely used as an intermediate in synthesis of specialty polymers and can readily copolymerize with various monomers, making it valuable in the production of advanced and specialty plastics.

Manufacture

CMS-P can be synthesized by converting a mixture of the corresponding vinylbenzyl alcohols to their chlorides ($–CH_2OH \rightarrow –CH_2Cl$) using classical chlorinating agents such as thionyl chloride, phosphorus chlorides, or related halogenating reagents. Alternative synthetic routes include chloromethylation of vinyl benzene, or halogenation of alkyl side chains followed by controlled dehydrohalogenation.

Synonyms	Chloromethylstyrene (mixed isomers), *ar*-Vinylbenzyl chloride and (Chloromethyl)ethenylbenzene
CAS no.	30030-25-2
EINECS no.	250-005-9
Molecular formula	C_9H_9Cl
Molecular weight	152.62
Structure	

Applications

CMS-P is a key monomer and versatile intermediate in organic chemistry. The main areas of application include:

- **Specialty Polymer Synthesis:** •
  - Used as a functional monomer to introduce chloromethyl groups into polymer chains.
  - Important for grafting, crosslinking, and post-polymer functionalization.
- **Electronic & Semiconductor Materials:**
  - Useful in preparing dielectric polymers and functional coatings for electronic components.
- **Ion-Exchange Resin Manufacturing**:
  - CMS-P serves as a precursor for quaternary ammonium functional resins used in water treatment, pharmaceutical purification, catalytic systems, etc.
- **Reactive Intermediate for Chemical Modifications:**
  - Chloromethyl group allows easy substitution with amines, thiols and various nucleophiles enables creation of customized polymers with specific functional groups.
- **Coatings & Adhesives:**
  - Widely used in specialty high-performance coatings for applications requiring superior weather resistance, UV stability, and chemical resistance.
- **Biomedical & Diagnostic Applications:**
  - Functional CMS-polymers are used to prepare i) Affinity chromatography media, ii) Diagnostic assay materials and iii) Bio-functional surfaces (after amination or PEGylation).

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SPECIFICATIONS

Test	Unit	Specification
Appearance	-	Colorless to light yellow color liquid
Purity (By GC)	% Area	≥ 98.0
Isomer ratio	% Area	*m*-CMS: 46.0-52.0 *p*-CMS: 46.0-52.0 *o*-CMS: ≤0.5
Single maximum unknown impurity	% Area	≤ 0.5
Total Impurities	% Area	≤ 2.0
TBC (stabilizer)	ppm	≤ 500

STORAGE & PRECAUTION

Store in dark at 2-8 °C in a tightly closed container

PACKING

Globally compliant packaging

REACH Status

Not registered

ExSyn offers CMS-P (Chloromethylstyrene (mixed isomers)) on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.

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