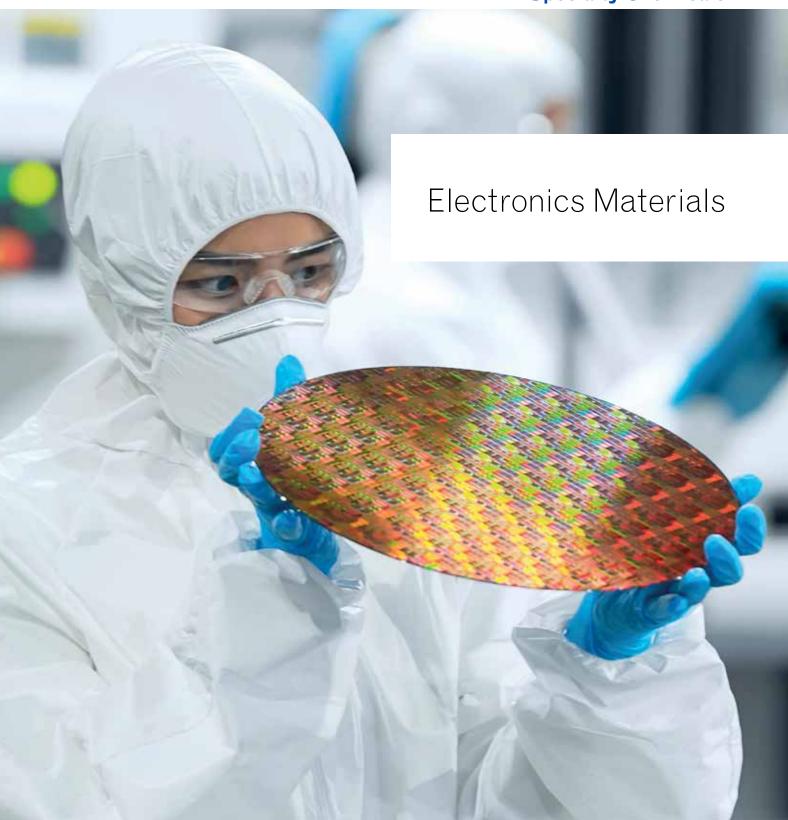


Specialty Chemicals



Photoresist Monomers are essential materials in the semiconductor industry

They lie at the heart of all modern electronics: Semiconductors are fabricated through photolithography, a highly precise process used to etch intricate circuits onto wafers. A crucial material in this process is photoresist.

SONGWON's high-purity acrylate monomers serve as essential raw materials for these photoresists. They play

a vital role in forming minute and clear circuit patterns on semiconductor wafers. Specifically, our materials are optimized for superior performance in **193nm argon fluoride(ArF)** and next-generation extreme ultraviolet **(EUV) lithography processes,** thereby maximizing the yield and quality of our customers' semiconductor production.

Common Product Quality

	Purity control	Color control	Metal Control	Particle control
Photo- resist Monomer	> 99.0%	LQ : Colorless PW : White Powder	Below 10 ppb/each metal	Below 1.0 NTU

Photoresist Monomer overview

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
MAMA	2-Methyl- 2-Adamantyl Methacrylate	177080-67-0		Colorless Clear Liquid	ArF	1 kg, 3 kg, 15 kg
EAMA	2-Ethyl- 2-Adamantyl Methacrylate	209982-56-9		White Powder	ArF	20 kg
IPAMA	2-Isopropyl- 2-Adamantyl Methacrylate	297156-50-4		White Powder	ArF	5 kg, 20 kg
нама	3-Hydroxy- 1-Adamantyl Methacrylate	115372-36-6	OH O	White Powder	ArF	20 kg, 40 kg
МСРМА	1-Methyl- 1-Cyclopentyl Methacrylate	178889-45-7		Colorless Clear Liquid	ArF	1 kg, 3 kg, 15 kg
ECPMA	1-Ethyl- 1-Cyclopentyl Methacrylate	266308-58-1		Colorless Clear Liquid	ArF/EUV	1 kg, 3 kg, 15 kg
IPCPMA	1-Isopropyl- 1-Cyclopentyl Methacrylate	1149760-04-2		Colorless Clear Liquid	ArF	1 kg, 3 kg, 15kg
ECHMA	1-Ethyl- 1-Cyclohexyl Methacrylate	274248-09-8	0	Colorless Clear Liquid	ArF	1 kg, 15 kg

Photoresist Monomer overview

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
TFAAMA	3-[(2,2,2-Trifluo- roacetyl)oxy]tri- cyclo[3.3.1.13,7] dec-1-yl 2-met- hyl-2-propenoate	1151809-20-9	F ₃ C 0	Slightly Yellowish Powder	ArF/EUV	1 kg, 10 kg
MNLMA	2-Propenoic acid, 2-methyl-, 2-[(he- xahydro-2-oxo-3,5- methano-2H-cyclo- penta[b]furan-6-yl) oxy]-2-oxoethyl ester	347886-81-1		White Powder	ArF	10 kg
NLMA	2-Oxo-3-oxatricyc- lo[4.2.1.04,8]nonan- 5-yl methacrylate	254900-07-7		White Powder	ArF	1 kg, 20 kg
GBLMA	2-Propenoic acid, 2-methyl-, tetrahy- dro-2-oxo-3-furanyl ester	195000-66-9		Colorless Solid	ArF	3 kg
PQMA(H)	4-Hydroxyphenyl Methacrylate	31480-93-0	HO - O	White Powder	KrF	1 kg, 10 kg
PQMA(G) (General grade)	4-Hydroxyphenyl Methacrylate	31480-93-0	HO - O	Yellowish Powder	Display	10 kg
TFEMA	2-Oxo-2-(2,2,2- trifluoroethoxy) ethyl 2-methyl- 2-propenoate	1137830-21-7	0 CF ₃	Colorless Clear Liquid	ArF	1 kg
ЕСНА	1-Ethyl-1- Cyclohexyl Acrylate	251909-25-8	0	Colorless Clear Liquid	ArF	1 kg, 3 kg, 15 kg
ASM	4-Acetoxystyrene	2628-16-2	0 0	Colorless Liquid	KrF	200 kg

Lab stage

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
THFNMA	2-Tetrahydrofuranyl methacrylate	15895-80-4	0 0	Colorless Liquid	ArF	100 g–1 kg
ммсрма	2-[(1-Methylcyclo- pentyl)oxy]-2-oxo- ethyl 2-methyl- 2-propenoate	1132712-14-1		Colorless Liquid	ArF	100 g–1 kg
VBA	4-Vinylbenzoic acid	1075-49-6	ООН	White-off Powder	EUV	100 g–1 kg

Customize products

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
	R_1O O		$R_1 \longrightarrow R_2$ R_3	O O R ₁	R_{2}	

MAKE YOUR IDEAS INTO REALITY:

REFINED, FOCUSED, AND READY FOR ACTION!

Electronics materials

Crosslinker

SONGWON crosslinkers are designed to enhance durability, thermal resistance, and chemical stability in high-performance materials. In semiconductor manufacturing, crosslinkers play a vital role in

photoresists and patterning materials by improving pattern stability, dimensional control, and resistance to heat and chemicals.

Commercial & Pilot stage

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
TMGU	Tetrahydro-1,3,4,6- tetrakis(me- thoxymethyl) imidazo[4,5-d]imi- dazole-2,5(1H,3H)- dione	17464-88-9		White powder	Crosslinker	10 kg
TMOM-BP	3,3',5,5'-Tetra- kis(MethoxyMet- hyl)-[1,1'-biphenyl]- 4,4'-diol	455943-61-0	0 HO O O O	White to Slightly Yellowish Powder	Crosslinker	10 kg

Lab stage

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
THPE-6M	4,4',4"-(Ethane- 1,1,1-triyl)tris(2,6- bis(methoxymet- hyl)phenol)	672926-26-0	0 HO OH O	Solid	Crosslinker	100 g– 1 kg

EDOT derivatives

SONGWON produces 3,4-ethylenedioxythiophene (EDOT), a key monomer in the creation of conductive polymers through polymerization. These conductive polymers combine excellent electrical conductivity with

optical transparency, making them essential materials in advanced industries such as organic electronics, energy, and displays.

Commercial & Pilot stage

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
EDOT	3,4-Ethylenedioxyt- hiophene	126213-50-1	o o	Clear Light Yellow Liquid	Conductive Polymers	25 kg, 200 kg, 1000 kg
Butyl EDOT	2-Butyl-2,3-di- hydrothieno[3,4- b]-1,4-dioxin	552857-06-4	000	Colorless to Light Yellow Liquid	Conductive Polymers	20 kg
3,4-DMT	3,4-Dimethoxythio- phene	51792-34-8	o So	Clear Liquid	Conductive Polymers	20 kg, 200 kg, 1000 kg

Lab stage

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
Ethyl-EDOT	2-Ethyl-2,3-dihydro- thieno[3,4-b]-1,4- dioxin	1226799-20-7	o O	Colorless to Yellowish Liquid	Conductive Polymers	100 g– 1 kg
HM-EDOT	2,3-Dihydrothie- no[3,4-b]-1,4-dio- xin-2-methanol	146796-02-3	O OH	White to Brown Solid	Conductive Polymers	_
EDOT-S	1-Butanesulfonic acid, 4-[(2,3-di- hydrothieno[3,4- b]-1,4-dioxin-2-yl) methoxy]-, sodium salt	204444-01-9	S SO ₃ Na O O	Solid	Conductive Polymers	-

Other products

Benzoylphenyl Monomers:

These products initiate polymerization while also acting as photoinitiators. Through the absorption of UV light, they quickly generate free radicals, which set off the polymerization reaction, curing liquid resins and coatings to form solids in a very short time.

Triazine

This high-performance UV efficiently absorbs UV light and dissipates it as thermal energy. In doing so, it helps to prevent plastics and coatings from photodegradation, which can lead to discoloration, cracking, and loss of physical properties. With its long side chains, it provides excellent compatibility with other materials.

Hydrophilic Monomer

SONGWON manufactures hydrophilic monomers, which have an affinity for water. They contain hydroxyl (-OH) and methacrylate groups, giving them an excellent ability to bind with water and undergo polymerization. These properties make them an important component in the creation of hydrogel materials containing a high volume of water.

Photoacid Generator (PAG)

Photoacid generator(PAG) produce acid when exposed to specific wavelengths of light, primarily in the UV range. This makes them a fundamental component in processes that use light to alter the properties of materials.

Other products overview

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
ВРМА	4-Benzoylphenyl Methacrylate	56467-43-7	0 0	White to Yellowish Solid	UV-curable coatings Photoresists	20 kg
АОВР	4-benzoylphenyl 2-propenoate	22535-49-5		White to Yellowish Solid	UV-curable coatings Photoresists	20 kg
CS 408	2,2,2-(1,3,5-Tria- zine-2,4,6-triyl) tris[5-(hexyloxy)- 6-methylphenol]	222529-65-9	0 OH OH OH OH N N N N N N N N N N N N N N	Yellow Color powder	Triazine UV absorber	10 kg
CS 477	2-Bromopropanoic acid, octyl ester, branched reaction products with 4,4',4"-(1,3,5-tria- zine-2,4,6-triyl)tri- s[1,3-benzenediol]	446824-06-2	(IsomixiC,H., Somixi)	Yellow to orange viscous liquid	Triazine UV absorber	20 kg
GMMA	2,3-Dihydroxypro- pyl methacrylate	5919-74-4	ООНОН	Clear Liquid	Hydrophilic monomer	2.5 kg, 20 kg
NIT	N-hydroxy Naphthalimide triflate	85342-62-7	O O O O O O O O O O O O O O O O O O O	White powder	Photoacid Generator (PAG)	1 kg

Functional Product overview

Special molecules known as functional monomers provide a polymer with additional, enhanced performance effects and/or significantly improve processing performance when incorporated in the polymerization-process.

SONGWON develops, manufactures and supplies different functional monomers based on three backbone chemistries: dicyclopentadiene (DCPD) phenol, bisphenol for high performance resins.

Our functional monomers are used as hardeners in epoxy and phenolic resins as well as in certain polymers, for example polycarbonate, polyester, polyimide.

These are suitable for a wide range of industries, end products ranging from tiny electronic components such as integrated circuit chips to large scale composites, for instance wind turbine rotor blades

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
BP-EF	2,2'-[9H-fluoren 9-ylidenebis(4,1- phenyleneoxy)]	117344-32-8	ОН НО	White Powder	Various types of resins	20 kg
DMBPA	4,4'-Isopropylidene bis [2-methylphe- nol]	79-97-0	но Он	White Powder	Various types of resins	20 kg
ТМВР	3,3',5,5'-Tetrame- thyl-1,1'-biphenyl- 4,4'-diol	2417-04-1	но — Он	Yellow Powder	Various types of resins	25 kg, 500 kg
ERM-6095	Dicyclopentadiene Phenol	30420-31-6	OH OH OH	Red to ocher semi bead	Various types of resins	20 kg, 500 kg
ERM-6140	Dicyclopentadiene Phenol	30420-31-6	OH OH OH	Red to ocher semi bead	Various types of resins	20 kg, 500 kg

Product name	Chemical name	Cas No.	Structure	Appearance	Application	Packing
BPN	Phenol polymer with 4,4'-bis (chloromethyl)- 1,1'-biphenyl	208254-04-0	OH OH n	Yellow Powder	Various types of resins	20 kg, 500 kg
ERS-0550	2-Biphenylyl glycidyl ether	7144-65-2		Liquid (Molten)	Binder for LCD/OLED	20 kg
ERS-3980	2,2'-Dihydroxy- 1,1'-binaphthyl diglycidyl ether	1106-42-9	0 0 0	Yellowish Solid	Binder for LCD/OLED	20 kg





For further information, please contact:

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SONGWON provides customers with warranties and representations as to the chemical or technical specifications, compositions and/or the suitability for use for any particular purpose exclusively in individual written agreements.

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