



***INDUSTRIAL
& SPECIALTY
MONOMERS***

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www.sanesters.com

SAN ESTERS CORPORATION

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MITSUBISHI RAYON'S METHACRYLIC MONOMERS

NON-FUNCTIONAL MONOMERS

		Typ.Purity (%)	Viscosity (mPa.s)	Tg
tert-BUTYL METHACRYLATE	t-BMA	99.7	0.93	107
LAURYL (C12) METHACRYLATE	LMA	99.5	4.60	-65
TRIDECYL (C13) METHACRYLATE	TDMA	98.7	5.81	-46
STEARYL (C18) METHACRYLATE	SMA	99.6	8.21*	-100
CYCLOHEXYL METHACRYLATE	CHMA	99.7	2.50	83
BENZYL METHACRYLATE	BZMA	98.8	2.68	54
ISOBORNYL METHACRYLATE	IBXMA	99.6	7.40	> 111°C
ALKYL METHACRYLATE (C ₁₂ -C ₁₃)	SLMA	99.0	5.06	-62

FUNCTIONAL MONOMERS

		Typ.Purity (%)	Viscosity (mPa.s)	Tg
2-HYDROXYETHYL METHACRYLATE	HEMA	97.6	6.79	55
2-HYDROXYPROPYL METHACRYLATE	HPMA	97.0	9.28	26
DIMETHYLAMINOETHYL METHACRYLATE	DMMA	99.0	1.34	18
BENZYL CHLORIDE SALT	DMMA	41.0	14.5	53
METHYL CHLORIDE SALT	DMMA	79.0	1.08	---
DIETHYLAMINOETHYL METHACRYLATE	DEMA	99.8	1.80	20
GLYCIDYL METHACRYLATE	GMA	98.0	2.53	46
TETRAHYDROFURFURYL METHACRYLATE	THFMA	98.9	2.84	60
ALLYL METHACRYLATE	AMA	99.9	1.09	52
ETHYLENEGLYCOL DIMETHACRYLATE	EDMA	98.6	3.20	---
TRIETHYLENEGLYCOL DIMETHACRYLATE	3EDMA	99.5	10.2	---
1,3-BUTYLENEGLYCOL DIMETHACRYLATE	BDMA	97.7	4.40	---
1,6-HEXANEDIOL DIMETHACRYLATE	HXMA	97.0	4	---
TRIMETHYLOLPROPANE TRIMETHACRYLATE	TMPMA	96.9	57.0	---
ETHOXYETHYL METHACRYLATE	ETMA	98.0	3.5	-31
TRIFLUOROETHYL METHACRYLATE	3FM	98.0	1.0	80
POLYBUTYLENEGLYCOL DIMETHACRYLATE	PBOM	95.0	120	---
ortho-HEXAHYDROPHTHALIC ACID, MONO METHACRYLOXY ETHYL ESTER	HH	96	---	70
2-METHACRYLOYLOXYETHYL PHTHALIC ACID	PA	95	6,000	75
2-METHACRYLOYLOXYETHYL SUCCINIC ACID	SA	94	170	20

LUCITE USA – (Please contact Lucite USA directly)

		Min.Purity (%)	Viscosity (mPa.s)	Tg
METHYL METHACRYLATE	MMA	99.9	0.58	105
ETHYL METHACRYLATE	EMA	99.0	0.56	65
n-BUTYL METHACRYLATE	n-BMA	99.2	1.04	20
ISOBUTYL METHACRYLATE	IBMA	99.0	1.00	55
2-ETHYLHEXYL METHACRYLATE	EHMA	98.0	2.65	-10
METHACRYLIC ACID	MAA	99.0	1.54	228

(All Products are Listed on TSCA Inventory, LVE Indicates Low Volume exemption only)

* at 30°C

OSAKA ORGANIC'S SPECIALTY MONOMERS

HIGH PURITY UV DILUENTS MONOACRYLATES

		Viscosity (mPa·s)	Tg (°C)	Draize Irritation Index
LAURYL (C12) ACRYLATE	LA	4.0	15	3.0
BENZYL ACRYLATE	(#160)	8.0	6	---
ISOBORNYL ACRYLATE	IBXA	7.7	94	0.6
ETHOXYETHOXYETHYL ACRYLATE	(#190)	2.9	-67	4.9
2-PHENOXYETHYL ACRYLATE	(#192)	3.3	-22	1.7
TETRAHYDROFURFURYL ACRYLATE	THFA	2.8	-12	5.0
DIOXOLANE ACRYLATE (LVE)	MEDOL10	5.1	-7	1.3

SPECIALTY ACRYLATE MONOMERS

		Viscosity (mPa·s)	Tg (°C)	Draize Irritation Index
STEARYL (C18) ACRYLATE	STA	8-10*	---	---
CYCLOHEXYL ACRYLATE	(#155)	3.0	15	---
ISO-OCTYL ACRYLATE	IOAA	-	-58	---
2-METHOXYETHYL ACRYLATE	2-MTA	1.4	-50	3.3
4-HYDROXYBUTYL ACRYLATE	4HBA	5.5	-32	3.0
ETHOXYLATED BIS PHENOL A DIACRYLATE	V-700	1,000	-	0.6
TETRAETHYLENE GLYCOL DIACRYLATE	(#355 HP)	18	---	2.3
1,9-NONANEDIOL DIACRYLATE (LVE)	(260)	21	---	2.0
METHOXPOLYETHYLENE GLYCOL ACRYLATE		25	---	---
POLYBUTADIENE DIACRYLATE	BAC-45	6,000		
POLYBUTADIENE DIACRYLATE	BAC-15	2,000		
PHTHALIC ACID, MONO ACRYLOXY PROPYL ESTER (LVE)	V-2100	---	---	---
PENTAERYTHRITOL TRIACRYLATE	(#300)	500		3.4
PENTAERYTHRITOL TETRAACRYLATE	(#400)	---	---	2.8
TRIFLUOROETHYL ACRYLATE	(3F)	1.1	-10	---
OCTAFLUOROPENTYL METHACRYLATE (LVE)	(8F)	4	---	---

(All Products above are Listed on TSCA Inventory, LVE Indicates Low Volume exemption only)

DEVELOPMENT MONOMERS NOT ON TSCA:

		Viscosity (mPa·s)	Tg (°C)	Draize Irritation Index
OCTAFLUOROPENTYL ACRYLATE	(8F)	3.1	---	---
ISOSTEARYL ACRYLATE	(ISTA)	17	-18	1.3
TRIPENTAERYTHRITOL OCTA-ACRYLATE	(V-802)	12,000	---	0.1
TRI ACRYLOYLOXYETHYL PHOSPHATE	(V-3PA)	---	---	3.6
GAMMA - BUTYROLACTONE ACRYLATE	(GBLA)	---	---	3.6
3-ETHYL-3-OXETANYLMETHYL ACRYLATE	(OXE-10)	4.3	---	5.5

SAN ESTERS CORPORATION (SEC)



SEC is a leading supplier of Methacrylate and specialty Acrylate Monomers produced by its parent companies, Mitsubishi Rayon Company and Osaka Organic Chemical Industries. The wide variety of Monomers available provides paint & resin manufacturers with new opportunities for developing environmentally compliant coatings with significantly improved properties. SEC welcomes inquiries on custom manufacturing and special purity requirements.

MITSUBISHI RAYON COMPANY, LTD. (MRC)



MRC, founded in 1933, is one of the world's largest producers of High Purity Methacrylic Monomers. Its products range from the large commodity Methacrylates like MMA to highly specialized products such as the fluorinated Monomers. MRC is now a division of Mitsubishi Chemical.

MRC has pioneered the development of highly reactive and crosslinkable Monomers such as Glycidyl Methacrylate, Allyl Methacrylate, and Ethylene Glycol Dimethacrylate.

MRC specializes in offering high Tg, Low Color Methacrylates such as Isobornyl (IBXMA), and tert-Butyl Methacrylates (TBMA), without using color forming Phenothiazine (PTZ) inhibitors. TBMA is a lower cost replacement for Isobornyl Methacrylate, while exhibiting excellent gloss retention and weathering properties.

MRC has developed a very low acidity and less color for its Hydroxy Monomers: Hydroxyethyl Methacrylate (HEMA) and Hydroxypropyl Methacrylate (HPMA).

Our sister company Lucite USA produces the monomers (MMA, BMA, MAA, etc.) at the bottom of page 2 in the USA, please contact Lucite USA directly for information on these monomers (phone 800-458-2483 ext.2437, 800-4LUCITE), website www.luciteinternational.com

OSAKA ORGANIC CHEMICAL INDUSTRIES, LTD. (OOC)



Osaka Organic offers over 50 Alkyl and multi-functional Acrylates that are used both in conventional and radiation curable coatings. Osaka Organic has the unique ability to respond quickly to customer requirements for special products and purities.

OOC's key advantage is in offering Low Color (+PTZ Free) high purity (97% min) diluent monomers such as Isobornyl, Ethoxyethoxy Ethyl, Tetrahydrofurfuryl, and Phenoxyethyl Acrylates.

4-Hydroxybutyl Acrylate (4-HBA) is a low Tg, high flexible monomer used to make fast curing Acrylic Polyols for polyurethanes with extended pot life and reduced catalyst use. Waterborne urethanes utilizing tertiary Isocyanates will find that 4-HBA based polyols will substantially increase the tertiary NCO's reactivity resulting in faster development of solvent resistance and final cure properties.