

# Technical Data

## Specialty Monomers



 **BASF**

The Chemical Company



## **BASF offers a versatile product range of Specialty Monomers**

Tailor-made system solutions for a large number of customer needs can be developed using innovative application technologies for Specialty Monomers.

### **Content**

#### **Physical Properties** **4**

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- Acrylate Monomers
- Methacrylate Monomers

#### **Selected Specification Values** **6**

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- Acrylate Monomers
- Methacrylate Monomers

#### **Key Features** **8**

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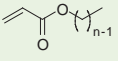
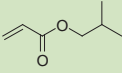
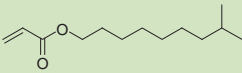
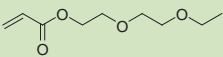
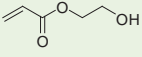
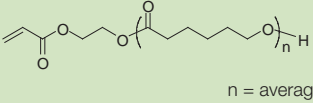
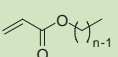
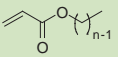
#### **Application Fields** **9**

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#### **Listing** **10**

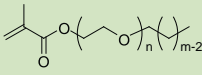
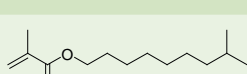
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## Physical Properties

Product CAS-No.	Chemical structure	M <sub>w</sub> [g/mol]	Polymer T <sub>g</sub> [°C]	Mp [°C]	Bp [°C]	VP [mbar at °C]
<b>Acrylate Monomers</b>						
Behenyl Acrylate 1822 F (BEA 1822 F) 4813-57-4 (C18); 18299-85-9 (C22)	 n = 18, 22	324.3 / 380.4	54*	43–45	410	–
<i>iso</i> -Butyl Acrylate (IBA) 106-63-8		128.2	–24	–61	138	9.6 at 25
<i>tert</i> -Butyl Acrylate (TBA) 1663-39-4		128.2	44	–69	119	20 at 23
<i>iso</i> -Decyl Acrylate F (IDA F) 1330-61-6		212.3	–55	–100	158 (66 mbar)	0.03 at 25
Dihydrodicyclopentadienyl Acrylate (DCPA) 12542-30-2		204.3	110	–40	81 (0.7 mbar)	0.09 at 20
Ethyldiglycol Acrylate (EDGA) 7328-17-8		188.2	–53	–62	95 (5 mbar)	0.2 at 39
Heptadecyl Acrylate (C17A) 1473386-36-5		310.5	–64	< –20	–	0.000125 at 32
4-Hydroxybutyl Acrylate (4-HBA) 2478-10-6		144.2	–65	< –80	236	1.3 at 80
2-Hydroxyethyl Acrylate (HEA) 818-61-1		116.1	–15	< –60	200	0.1 at 21
Hydroxyethylcaprolactone Acrylate (HECLA) 110489-05-9	 n = average 2	344.4 (Mn)	–52	–	–	–
Hydroxypropyl Acrylate (HPA) 25584-83-2		130.1	–7	–23	199	0.01 at 20
Lauryl Acrylate 1214 (LA 1214) 2156-97-0 (C12); 21643-42-5 (C14)	 n = 12, 14	240.4 / 268.4	7*	–8	296	0.003 at 25
2-Propylheptyl Acrylate (2-PHA) 149021-58-9		212.3	–68	20	250	0.01 at 20
Stearyl Acrylate 1618 (SA 1618) 13402-02-3 (C16); 4813-57-4 (C18)	 n = 16, 18	296.5 / 324.5	41 *	25	160 (3 mbar)	–
Stearyl Acrylate 18 (SA 18) 4813-57-4 (C18)	 n = 18	324.5	49 *	25	160 (3 mbar)	–

Mn: number average molecular weight

\* Polymer T<sub>m</sub> not T<sub>g</sub>

Product CAS-No.	Chemical structure	M <sub>w</sub> [g/mol]	Polymer T <sub>g</sub> [°C]	Mp [°C]	Bp [°C]	VP [mbar at °C]
<b>Methacrylate Monomers</b>						
Behenyl Methacrylate 1822 F (BEMA 1822 F) 32360-05-7 (C18); 16669-27-5 (C22)	 n = 18, 22	338.6 / 394.7	44*	28–33	190–210 (64 mbar)	–
Behenyl Polyethyleneglycol Methacrylate 1100 (BEPEGMA 1100) 125441-8-4	 n = 25, m = 18, 22	1439.0 / 1495.9	–	15	–	–
<i>tert</i> -Butyl Methacrylate (TBMA) 585-07-9		142.2	117	–48	136	7.7 at 19
<i>tert</i> -Butyl Methacrylate low acid (TBMA LA) 585-07-9		142.2	117	–48	136	7.7 at 19
<i>tert</i> -Butyl Methacrylate low stabilizer (TBMA LS) 585-07-9		142.2	117	–48	136	7.7 at 19
Cyclohexyl Methacrylate (CHMA) 101-43-9		168.2	105	–104	94 (20 mbar)	0.2 at 20
<i>iso</i> -Decyl Methacrylate (IDMA) 29964-84-9		226.4	–28	–116	263	0.02 at 25
2-Ethylhexyl Methacrylate F (2-EHMA F) 688-84-6		198.3	–6	< –50	228	0.065 at 20
Lauryl Methacrylate 1214 F (LMA 1214 F) 142-90-5 (C12); 2549-53-3 (C14)	 n = 12, 14	254.4 / 282.5 / 310.5	–50	–22	308	–
Lauryl Methacrylate 1215 F (LMA 1215 F) 90552-02-6	 n = 12, 13, 14, 15	254.4 / 268.4 / 285.5 / 296.5	–	10	307	0.0006 at 20
Stearyl Methacrylate 1618 F (SMA 1618 F) 2495-27-4 (C16); 32360-05-7 (C18)	 n = 16, 18	310.5 / 338.6	32*	19	190–210 (64 mbar)	–
Stearyl Methacrylate 1618 F HS (SMA 1618 F HS) 2495-27-4 (C16); 32360-05-7 (C18)	 n = 16, 18	310.5 / 338.6	32*	19	190–210 (64 mbar)	–
Stearyl Polyethyleneglycol Methacrylate 1100 (SPEGMA 1100) 70879-51-5	 n = 25, m = 16, 18	1411.9 / 1439.9	–58	1	–	–
<i>iso</i> -Tridecyl Methacrylate (C13MA) 85736-97-6		268.4	–31	20	–	< 0.01 at 20
Ureido Methacrylate 25 % in MMA (UMA 25 %) 86261-90-7		198.2	–	–	101	37 at 20

\* Polymer T<sub>m</sub> not T<sub>g</sub>

## Selected Specification Values

Product CAS-No.	Stabilization [ppm]	Purity	Acid value*	Water content [wt%]	Colour APHA (max)
<b>Acrylate Monomers</b>					
Behenyl Acrylate 1822 F (BEA 1822 F) 4813-57-4 (C18); 18299-85-9 (C22)	175 ± 25 MEHQ, 55 ± 15 HQ	≥ 91.0 %	≤ 0.05 %	≤ 0.05	200
<i>iso</i> -Butyl Acrylate (IBA) 106-63-8	15 ± 5 MEHQ	≥ 99.5 %	≤ 0.01 %	≤ 0.1	10
<i>tert</i> -Butyl Acrylate (TBA) 1663-39-4	15 ± 5 MEHQ	≥ 99.0 %	≤ 0.1 %	≤ 0.04	10
<i>iso</i> -Decyl Acrylate F (IDA F) 1330-61-6	120 ± 30 MEHQ	≥ 97.5 %	≤ 0.05 %	≤ 0.08	30
Dihydrodicyclopentadienyl Acrylate (DCPA) 12542-30-2	300 ± 50 MEHQ	≥ 95.0 %	≤ 1.0 %	≤ 0.1	clear to slightly yellowish
Ethyldiglycol Acrylate (EDGA) 7328-17-8	1000 MEHQ, 1000 BHT	≥ 90.0 %	≤ 0.1 %	≤ 0.1	150
Heptadecyl Acrylate (C17A) 1473386-36-5	175 ± 25 MEHQ	≥ 94.0 %	≤ 0.05 %	≤ 0.05	100
4-Hydroxybutyl Acrylate (4-HBA) 2478-10-6	300 ± 50 MEHQ	≥ 97.0 %	≤ 0.3 %	≤ 0.1	50
2-Hydroxyethyl Acrylate (HEA) 818-61-1	250 ± 50 MEHQ	≥ 98.5 %	≤ 2.5 mg KOH/g	≤ 0.15	10
Hydroxyethylcaprolactone Acrylate (HECLA) 110489-05-9	700 ± 200 MEHQ	158.7–168.7 mg KOH/g	≤ 4.0 mg KOH/g	≤ 0.1	100 Pt/Co
Hydroxypropyl Acrylate (HPA) 25584-83-2	250 ± 50 MEHQ	≥ 98.5 %	≤ 2.5 mg KOH/g	≤ 0.1	10
Lauryl Acrylate 1214 (LA 1214) 2156-97-0 (C12); 21643-42-5 (C14)	200 ± 50 MEHQ	≥ 95.0 %	≤ 0.1 %	≤ 0.1	150
2-Propylheptyl Acrylate (2-PHA) 149021-58-9	200 ± 50 MEHQ	≥ 95.0 %	≤ 0.05 %	≤ 0.05	100
Stearyl Acrylate 1618 (SA 1618) 13402-02-3 (C16); 4813-57-4 (C18)	175 ± 25 MEHQ	≥ 94.0 %	≤ 0.05 %	≤ 0.1	150
Stearyl Acrylate 18 (SA 18) 4813-57-4	175 ± 25 MEHQ	≥ 96.0 %	≤ 0.05 %	≤ 0.1	125

Purity is reported in wt% or as hydroxyl number (NF T 60-213)

\* based on AA or MAA

Product CAS-No.	Stabilization [ppm]	Purity	Acid value*	Water content [wt%]	Colour APHA (max)
<b>Methacrylate Monomers</b>					
Behenyl Methacrylate 1822 F (BEMA 1822 F) 32360-05-7 (C18); 16669-27-5 (C22)	165 ± 75 MeHQ	≥ 98.0 %	≤ 0.05 %	≤ 0.2	250
Behenyl Polyethyleneglycol Methacrylate 1100 (BEPEGMA 1100) 125441-8-4	175 ± 75 BHT 50 ± 20 MeHQ	50 ± 3 %	25 ± 2 %	25 ± 2	100
<i>tert</i> -Butyl Methacrylate (TBMA) 585-07-9	200 ± 20 MEHQ	≥ 99.0 %	≤ 0.1 %	≤ 0.05	10
<i>tert</i> -Butyl Methacrylate low acid (TBMA LA) 585-07-9	200 ± 20 MEHQ	≥ 99.0 %	≤ 0.013 %	≤ 0.05	10
<i>tert</i> -Butyl Methacrylate low stabilizer (TBMA LS) 585-07-9	15 ± 5 MEHQ	≥ 99.0 %	≤ 0.1 %	≤ 0.05	10
Cyclohexyl Methacrylate (CHMA) 101-43-9	50 ± 5 MEHQ	≥ 98.0 %	≤ 0.01 %	≤ 0.1	10
<i>iso</i> -Decyl Methacrylate (IDMA) 29964-84-9	175 ± 25 MEHQ, < 5 HQ	≥ 98.0 %	≤ 0.05 %	≤ 0.3	50
2-Ethylhexyl Methacrylate F (2-EHMA F) 688-84-6	60 ± 20 MEHQ	≥ 98.0 %	≤ 0.01 %	≤ 0.05	25
Lauryl Methacrylate 1214 F (LMA 1214 F) 142-90-5 (C12); 2549-53-3 (C14)	100 ± 20 MEHQ	≥ 97.0 %	≤ 0.05 %	≤ 0.1	100
Lauryl Methacrylate 1215 F (LMA 1215 F) 90552-02-6	175 ± 25 MEHQ	≥ 98.0 %	≤ 0.05 %	≤ 0.1	150
Stearyl Methacrylate 1618 F (SMA 1618 F) 2495-27-4 (C16); 32360-05-7 (C18)	100 ± 20 MEHQ, 10 ± 10 HQ	≥ 97.0 %	≤ 0.05 %	≤ 0.1	200
Stearyl Methacrylate 1618 F HS (SMA 1618 F HS) 2495-27-4 (C16); 32360-05-7 (C18)	175 ± 25 MEHQ, 55 ± 15 HQ	≥ 97.0 %	≤ 0.05 %	≤ 0.1	200
Stearyl Polyethyleneglycol Methacrylate 1100 (SPEGMA 1100) 70879-51-5	250 ± 50 BHT 40 ± 20 MeHQ	60 ± 3 %	20 ± 2 %	20 ± 2	100
<i>iso</i> -Tridecyl Methacrylate (C13MA) 85736-97-6	100 ± 25 MEHQ, < 20 HQ	≥ 99.0 %	≤ 0.05 %	≤ 0.1	50
Ureido Methacrylate 25 % in MMA (UMA 25 %) 86261-90-7	75 ± 25 PTZ, 500 ± 100 MEHQ	25 ± 2 % in MMA	–	≤ 1.0	200

Purity is reported in wt% or as hydroxyl number (NF T 60-213)

\* based on AA or MAA



## Key Features

	Chemical resistance	Crosslinking	Hydrolytic stability	Hydrophobicity	Abrasion resistance	Flexibility	Hardness	Impact strength	Low shrinkage	Scratch resistance	Adhesion	Heat resistance	Rheology modifier / High solids / Low VOC	Weatherability
<b>Acrylate Monomers</b>														
Behenyl Acrylate	■			■		■		■	■				■	■
<i>iso</i> -Butyl Acrylate	■			■										■
<i>tert</i> -Butyl Acrylate	■	■		■			■			■	■		■	■
<i>iso</i> -Decyl Acrylate	■			■							■		■	■
Dihydrodicyclopentadienyl Acrylate		■	■	■			■				■	■		
Ethyldiglycol Acrylate											■		■	
Heptadecyl Acrylate	■		■	■	■	■		■	■		■		■	■
4-Hydroxybutyl Acrylate		■								■	■		■	■
2-Hydroxyethyl Acrylate	■	■								■	■		■	■
Hydroxyethylcaprolactone Acrylate	■	■				■	■			■	■			■
Hydroxypropyl Acrylate	■	■								■	■		■	■
Lauryl Acrylate	■			■	■	■		■	■					■
2-Propylheptyl Acrylate	■			■							■			■
Stearyl Acrylate	■			■		■		■	■					■
<b>Methacrylate Monomers</b>														
Behenyl Methacrylate	■		■	■		■		■	■		■		■	■
Behenyl Polyethyleneglycol Methacrylate						■							■	
<i>tert</i> -Butyl Methacrylate	■			■			■			■	■	■	■	■
Cyclohexyl Methacrylate	■		■	■			■			■				■
<i>iso</i> -Decyl Methacrylate	■		■	■				■	■		■			■
2-Ethylhexyl Methacrylate	■		■	■		■		■			■			■
Stearyl Methacrylate	■		■	■		■		■	■		■		■	■
Stearyl Polyethyleneglycol Methacrylate						■							■	
<i>iso</i> -Tridecyl Methacrylate	■		■	■				■	■		■		■	■
Ureido Methacrylate		■									■		■	



## Application Fields

	Automotive coatings	Architectural coatings	Industrial coatings	Construction	Plastics	Paper	Personal care	Adhesives	UV curables	Oil field	Inks
<b>Acrylate Monomers</b>											
Behenyl Acrylate	■	■		■		■	■	■	■	■	
<i>iso</i> -Butyl Acrylate	■	■	■		■	■		■			
<i>tert</i> -Butyl Acrylate	■	■	■		■	■	■	■		■	■
<i>iso</i> -Decyl Acrylate	■	■	■		■		■	■	■		■
Dihydrodicyclopentadienyl Acrylate			■		■				■		■
Ethyldiglycol Acrylate	■		■					■	■		■
Heptadecyl Acrylate	■	■	■		■		■	■	■	■	■
4-Hydroxybutyl Acrylate	■		■		■			■	■		
2-Hydroxyethyl Acrylate	■	■	■	■			■	■	■		■
Hydroxyethylcaprolactone Acrylate	■	■	■					■	■		■
Hydroxypropyl Acrylate	■	■	■	■			■	■	■		■
Lauryl Acrylate		■	■		■		■	■	■		■
2-Propylheptyl Acrylate		■	■		■			■	■	■	■
Stearyl Acrylate	■	■	■		■		■	■	■	■	
<b>Methacrylate Monomers</b>											
Behenyl Methacrylate	■	■	■				■		■	■	■
Behenyl Polyethyleneglycol Methacrylate		■				■	■	■			
<i>tert</i> -Butyl Methacrylate	■	■	■		■		■				
Cyclohexyl Methacrylate	■	■	■				■	■			
<i>iso</i> -Decyl Methacrylate	■	■	■		■		■	■	■		■
2-Ethylhexyl Methacrylate	■	■	■		■		■	■		■	
Stearyl Methacrylate	■		■		■		■	■	■	■	
Stearyl Polyethyleneglycol Methacrylate		■				■	■	■			
<i>iso</i> -Tridecyl Methacrylate		■						■			
Ureido Methacrylate		■					■	■			

## Listing

	REACH	TSCA	DSL	CHEMINV	IECSC	AICS	ENCS	ISHL	ECL	NZIOC	PICCS
<b>Acrylate Monomers</b>											
Behenyl Acrylate 1822 F (BEA 1822 F) 4813-57-4 (C18); 18299-85-9 (C22)	■	■	■	■	■	■			■	■	■
<i>iso</i> -Butyl Acrylate (IBA) 106-63-8	■	■		■	■	■	■	■	■	■	■
<i>tert</i> -Butyl Acrylate (TBA) 1663-39-4	■	■	■	■	■	■	■	■	■	■	■
<i>iso</i> -Decyl Acrylate F (IDA F) 1330-61-6	■	■	■	■	■	■	■	■	■	■	■
Dihydrodicyclopentadienyl Acrylate (DCPA) 12542-30-2	■	■		■	■	■	■	■	■		
Ethyldiglycol Acrylate (EDGA) 7328-17-8	■	■	■	■	■	■	■	■	■	■	■
Heptadecyl Acrylate (C17A) 1473386-36-5	■	■									
4-Hydroxybutyl Acrylate (4-HBA) 2478-10-6	■	■	■	■	■	■	■	■	■	■	■
2-Hydroxyethyl Acrylate (HEA) 818-61-1	■	■	■	■	■	■	■	■	■	■	■
Hydroxyethylcaprolactone Acrylate (HECLA) 110489-05-9	■	■	■		■				■	■	
Hydroxypropyl Acrylate (HPA) 25584-83-2	■	■	■	■	■	■	■	■	■	■	■
Lauryl Acrylate 1214 (LA 1214) 2156-97-0 (C12); 21643-42-5 (C14)	■	■		■	■	■	■	■	■	■	
2-Propylheptyl Acrylate (2-PHA) 149021-58-9	■	■					■	■			
Stearyl Acrylate 1618 (SA 1618) 13402-02-3 (C16); 4813-57-4 (C18)	■	■		■	■				■	■	■
Stearyl Acrylate 18 (SA 18) 4813-57-4	■	■		■	■	■	■	■	■	■	■

	REACH	TSCA	DSL	CHEMINV	IECSC	AICS	ENCS	ISHL	ECL	NZIOC	PICCS
<b>Methacrylate Monomers</b>											
Behenyl Methacrylate 1822 F (BEMA 1822 F) 32360-05-7 (C18); 16669-27-5 (C22)	■	■	■	■	■				■		
Behenyl Polyethyleneglycol Methacrylate 1100 (BEPEGMA 1100) 125441-8-4	■	■	■	■	■				■	■	■
<i>tert</i> -Butyl Methacrylate (TBMA) 585-07-9	■	■	■	■	■		■	■	■	■	
<i>tert</i> -Butyl Methacrylate low acid (TBMA LA) 585-07-9	■	■	■	■	■		■	■	■	■	
<i>tert</i> -Butyl Methacrylate low stabilizer (TBMA LS) 585-07-9	■	■	■	■	■		■	■	■	■	
Cyclohexyl Methacrylate (CHMA) 101-43-9	■	■	■	■	■	■	■	■	■	■	■
<i>iso</i> -Decyl Methacrylate (IDMA) 29964-84-9	■	■	■	■	■	■	■	■	■	■	■
2-Ethylhexyl Methacrylate F (2-EHMA F) 688-84-6	■	■	■	■	■	■	■	■	■	■	■
Lauryl Methacrylate 1214 F (LMA 1214 F) 142-90-5 (C12); 2549-53-3 (C14)	■	■	■	■	■	■	■	■	■	■	■
Lauryl Methacrylate 1215 F (LMA 1215 F) 90552-02-6	■	■	■	■	■	■	■	■		■	■
Stearyl Methacrylate 1618 F (SMA 1618 F) 2495-27-4 (C16); 32360-05-7 (C18)	■	■	■	■	■	■	■	■	■	■	■
Stearyl Methacrylate 1618 F HS (SMA 1618 F HS) 2495-27-4 (C16); 32360-05-7 (C18)	■	■	■	■	■	■	■	■	■	■	■
Stearyl Polyethyleneglycol Methacrylate 1100 (SPEGMA 1100) 70879-51-5	■	■	■	■	■	■	■	■	■	■	■
<i>iso</i> -Tridecyl Methacrylate (C13MA) 85736-97-6	■	■	■	■	■		■	■	■		
Ureido Methacrylate 25 % in MMA (UMA 25 %) 86261-90-7	■	■	■	■	■	■	■	■	■	■	■

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