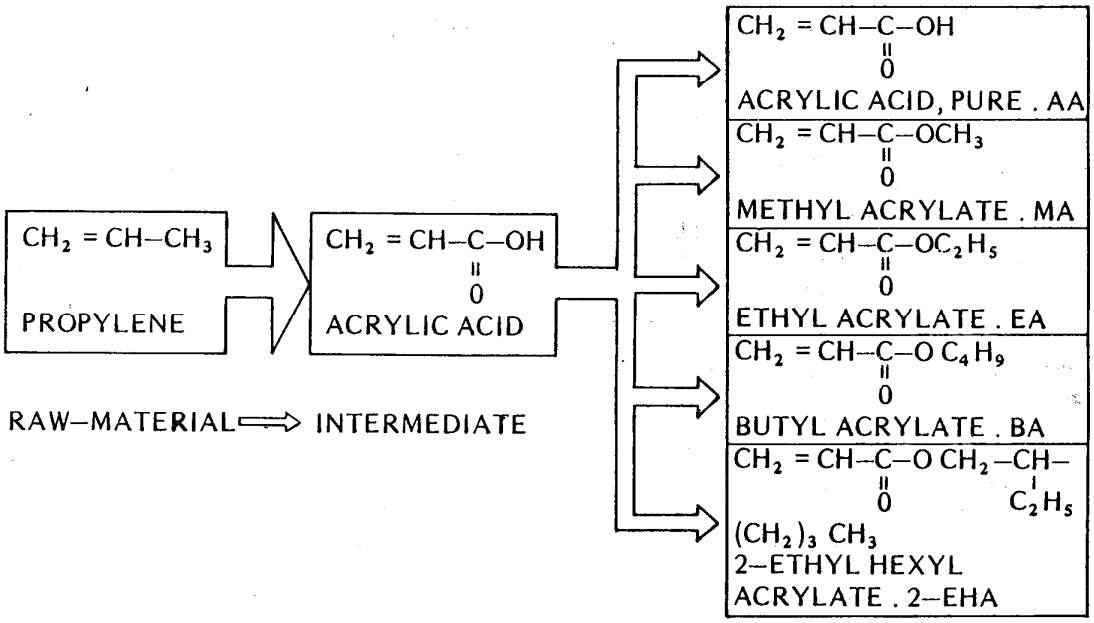
ACRYLIC ACID & ESTERS

1. PRODUCT INTRODUCTION



2. SPECIFICATIONS

PRODUCTS / QUALITY, CLASS.		AA	MA	EA	BA	2 — EHA
PURITY (WT%)		99.0 ↑	99.5 ↑	99.5 ↑	99.5 ↑	99.5 ↑
COLOR (APHA)		10 ↓	10 ↓	10 ↓	10 ↓	10 ↓
SP . GR . (20℃/20℃)		1.0511	0.9561	0.9233	0.8986	0.8870
ACIDITY (AS AA WT %)		—	0.01 ↓	0.01 ↓	0.01 ↓	0.01 ↓
WATER CONTENT (WT%)		0.2 ↓	0.05 ↓	0.05 ↓	0.05 ↓	0.05 ↓
INHIBITOR (MEHQ . PPM)	BULK	200 ± 20	15 ± 5	15 ± 5	15 ± 5	15 ± 5
	DRUM	200 ± 20	100 ± 20	100 ± 20	100 ± 20	100 ± 20
ALCOHOL (WT%)		—	0.01 ↓ (Me — OH)	0.01 ↓ (Et — OH)	0.1 ↓ (N — Bu — OH)	0.1 ↓ (2 — EHOH)

3. PACKING

PRODUCTS \ FILLING TYPE	DRUM (NET)
ACRYLIC ACID (AA)	200 KG
METHYL ACRYLATE (MA)	180 KG
ETHYL ACRYLATE (EA)	180 KG
BUTYL ACRYLATE (BA)	180 KG
2–ETHYL HEXYL ACRYLATE (2EHA)	170 KG

4. PHYSICAL PROPERTIES

PROPERTIES \ PRODUCTS		AA	MA	EA	BA	2–EHA
M. W.		72.06	86.09	100.12	128.17	184.16
SP. GR.	20°C/20°C	1.0511	0.9561	0.9233	0.8986	0.8870
APPEARANCE	(ABOVE+13°C)	COLORLESS LIQUID	COLORLESS LIQUID	COLORLESS LIQUID	COLORLESS LIQUID	COLORLESS LIQUID
ODOUR		PUNGENT	PUNGENT	PUNGENT	FRUITY	SWEETISH
BOILING POINT	°C (760 mmHg)	141.3	80.3	99.6	148.0	213.5
FREEZING POINT	°C	13.2	<–75	<–75	<–64	<–90
REFRACTIVE INDEX	N_D^{20}	1.4224	1.4003	1.4033	1.4153	1.4330
VISCOSITY	C.P.S (25°C)	1.156	0.503	0.569	0.856	1.540
SPECIFIC HEAT	CAL/g°C (20 – 30°C)	0.50	0.48	0.47	0.46	0.46
HEAT OF POLYMERIZATION	KCAL/MOL.	18.5	19 – 20	15.6	18.5	14.5
LATENT HEAT OF VAPORIZATION	KCAL/MOL.	10.8	7.9 ±0.4	8.3 ±0.4	9.1 ±0.5	10.3 ±0.5
FLASH POINT	CLOSED CUP	51	–3	9	35 – 40	75 – 80
	OPEN CUP °C	68	2	29.4	43	89
EXPLOSIVE LIMITS WITH AIR	LOWER VOL	5.5	2.2	1.7	1.1	0.7
	UPPER VOL %	20.5	25	15.5	10	6.5
SOLUBILITY	g/100g (20°C) IN WATER	∞	5.48	1.5	0.32	<0.01
	OF WATER IN	–	2.29	1.24	0.53	0.14
VAPOUR PRESSURE (mm Hg)	20°C	3	66	31	3.3	0.1
	40°C	10.5	165	80	11.5	0.5
	60°C	30	372	192	32	1.8
	80°C	75	760	400	77	5.7
	100°C	174	–	787	165	16.0
	140°C	756	–	–	580	75