NGC
Next Generation Chemical

CATALOGUE · UK AND EUROPE

NGC Polyester Polyols

NGC Ester polyester polyols for rigid foam, hot-melt adhesives, adhesives and coatings, TPU and elastomers, footwear soles and flexible foam. 63 grades, sorted by what you make.

Rigid PIR and PUR | Hot-melt adhesives | Adhesives, coatings, PUD | TPU and elastomers | Footwear soles | Flexible foam



ABOUT THIS CATALOGUE

Polyester polyols, sorted by what you make

Next Generation Chemical Ltd (NGC) is a UK company based in Croydon, London. We supply polyols and polyurethane systems made by our manufacturing partner to manufacturers in the UK and Europe. You get one named person to talk to, the TDS and SDS for each grade, and lead times in writing.

63	6	TDS	UK · EU
polyester polyol grades	uses, one section each	on request for every grade	supply and support

Pick your use

You make	What we offer	Grades	Page
Rigid foam: PIR and PUR	Aromatic polyester polyols for PIR and PUR panels, boardstock, spray, appliance and one-component foam.	21	3
Hot-melt adhesives	Crystalline, amorphous and liquid polyester polyols to build reactive (PUR) hot melts.	14	4
Adhesives, coatings and dispersions	Aliphatic polyester polyols for adhesives, coatings, sealants and PU dispersions (PUD).	8	5
TPU, elastomers and synthetic leather	Aliphatic polyester polyols for TPU resins, cast elastomers and PU synthetic leather.	6	6
Footwear soles	Aliphatic polyester polyols for microcellular PU soles, midsoles and sandals.	8	6
Flexible foam	Aliphatic polyester polyols for flexible slabstock foam and flame lamination.	6	7

How to read the tables

- **Typical values, not a specification.** The agreed specification is the TDS for your order. Always trial before use.
- OH value in mg KOH/g. Acid value in mg KOH/g. Avg MW = average molecular weight in g/mol. f = functionality (given where we hold it).
- Viscosity in mPa·s (= cP) at the temperature shown. Compare grades at the same temperature.
- Rigid uses: App = appliance, Spray = spray foam, Disco = discontinuous panel and block, Cont = continuous panel and block, OCF = one-component foam, PUR = PUR systems.
- Bio-based = our manufacturing partner lists the grade as bio-based. We state no bio content until we can send you a document for it.
- Some grades suit more than one use. Each grade sits in one section and is cross-listed where it also fits.
- A dash (—) means we do not hold that value yet. It is on the TDS or on request.
- Every grade: **TDS on request**. SDS for GB or EU on request.

Supply

Drums and IBCs. REACH status and lead time confirmed with each quote. Samples for trials. No prices in this catalogue: ask us for a quote.

POLYESTER POLYOLS · 01

For rigid foam: PIR and PUR

Aromatic polyester polyols for PIR and PUR panels, boardstock, spray, appliance and one-component foam. 21 grades.

NGC name	Uses	OH value mg KOH/g	Viscosity mPa·s, 25 °C	Acid value mg KOH/g	f	Avg MW g/mol	What it does	TDS
NGC Ester 78315	App, Spray, Cont, PUR	310	2,600	2.4	2	360	General rigid foam, good thermal efficiency	On request
NGC Ester 77310 Bio-based	App, Spray, Disco, Cont, PUR	315	2,200	< 2.0	2	356	Good flow, high fire, works with most blowing agents	On request
NGC Ester 78235	App, Cont, PUR	235	3,000	< 1.0	2	480	Good flow, HFC and HC compatible; PIR boardstock and continuous panels	On request
NGC Ester 78241	App, Cont, PUR	240	3,000	< 2.5	2	470	Thermal efficiency, green strength, HC and HFC	On request
NGC Ester 78235TA	Spray, Disco, Cont, PUR	235	3,500	< 1.0	2	480	High fire, HC and HFC compatible	On request
NGC Ester 78250TA	Spray, Disco, Cont	240	4,000	< 1.0	2	470	High fire at medium-high index PIR	On request
NGC Ester 79240TA	Spray, Cont, PUR	240	8,500	≤ 1.5	2.3	540	High fire continuous PIR, better adhesion	On request
NGC Ester 78245	Disco, Cont, PUR	245	11,000	< 1.5	2	460	High fire at medium-high index PIR	On request
NGC Ester 79235	App, Disco, Cont, PUR	240	9,500	< 1.0	2.7	640	Discontinuous panel and block, PIR	On request
NGC Ester 79285	Spray, Disco, Cont	300	5,000	< 1.0	2.3	430	Discontinuous sandwich panel and block, PIR	On request
NGC Ester 79300	Spray, Cont, PUR	300	5,500	< 1.0	2	375	ASTM E84 class, spray and PIR boardstock	On request
NGC Ester 7300BR	App, Disco, Cont, PUR	300	9,500	< 1.0	3	560	Brominated polyester polyol	On request
NGC Ester 79350	Spray, Disco, Cont, PUR	350	3,000	< 1.0	2.5	400	Strong and good fire in low-index PIR and PUR	On request
NGC Ester 79360	Disco, Cont, PUR	360	9,000	< 1.0	2.4	375	Strong and good fire in low-index PIR and PUR	On request
NGC Ester 72350	Disco, Cont, PUR	350	5,500	< 1.0	3	480	Strong, good fire, PUR hybrid	On request
NGC Ester 77350	Disco, PUR	350	5,000	< 1.5	2.2	352	Strong, good fire, PUR hybrid	On request
NGC Ester 79250	Spray, OCF, PUR	250	5,500	< 1.0	2	450	1K and 2K foam to DIN 4102 B1	On request
NGC Ester 78190K	OCF	190	3,000	< 1.5	2	590	1K foam to DIN 4102 B2	On request
NGC Ester 78175	Cont	170	3,000	< 0.8	2	660	PIR metal panel; flexible foam textile flame lamination	On request
NGC Ester 7270FCO	Spray, Disco, Cont, PUR	270	450	< 1.5	—	—	Adhesion, less friability in water-blown PUR and PIR foam	On request
NGC Ester 72190AP	Spray, Disco, Cont, OCF	190	1,000	≤ 1.0	2.1	620	Viscosity reducer and adhesion promoter	On request

POLYESTER POLYOLS · 02

For hot-melt adhesives

Crystalline, amorphous and liquid polyester polyols to build reactive (PUR) hot melts. 14 grades.

Crystalline

Hexanediol and butanediol adipates. They crystallise as the bond line cools, so the joint sets fast and holds early. Higher MW gives a tougher, more elastic film.

Amorphous

Isophthalic/adipic polyester. Adds hot tack and green strength, and helps adhesion to wood, paper and metal.

Liquid

Liquid and low-melt adipates. Longer open time, a softer bond line and better adhesion to plastics.

How to build a blend: start with a crystalline grade as the largest part, add an amorphous grade for tack and a liquid grade for open time. Melt, dry under vacuum, then react with MDI. General guidance only: trial on your own line.

NGC name and chemistry	OH value mg KOH/g	Acid max	Avg MW g/mol	Viscosity mPa·s at °C	State at 25 °C melting point or Tg	Role in the hot melt	TDS
Crystalline: set and green strength							
NGC Ester 76630HM 1,6-hexanediol adipate	28–32	≤ 0.5	3,700	5,500 at 60 °C	Solid (crystalline) approx. 55 °C	Main crystalline backbone; balanced open and set time; high green strength. Edge banding, profile wrapping, bookbinding	On request
NGC Ester 76620HM 1,6-hexanediol adipate	18–22	≤ 1.0	5,600	16,500 at 70 °C	Solid (crystalline) approx. 56 °C	Higher MW; tougher film; longer chains for flexibility	On request
NGC Ester 76617HM 1,6-hexanediol adipate	14–20	≤ 1.0	6,500	—	Solid (crystalline) approx. 57 °C	High MW crystalline for textile and flexible bonds	On request
NGC Ester 76612HM 1,6-hexanediol adipate	10–16	≤ 1.0	8,500	—	Solid (crystalline) approx. 57 °C	Highest MW crystalline; elastic bond lines	On request
NGC Ester 76637HM 1,6-hexanediol adipate	35–39	≤ 0.5	3,000	3,000 at 60 °C	Solid (crystalline) approx. 55 °C	Lower MW crystalline; lower melt viscosity; bookbinding	On request
NGC Ester 76656HM 1,6-hexanediol adipate	53–59	≤ 0.5	2,000	1,100 at 60 °C	Solid (crystalline) approx. 53 °C	Prepolymers; fast-crystallising soft segment	On request
NGC Ester 74445HM 1,4-butanediol adipate	43–47	≤ 0.5	2,500	2,200 at 60 °C	Solid (crystalline) approx. 55 °C	Contact and footwear adhesives; fast crystallisation	On request
NGC Ester 74457HM 1,4-butanediol adipate	54–58	≤ 0.5	2,000	1,400 at 60 °C	Solid (crystalline) approx. 55 °C	Contact adhesives; TPU-type adhesives	On request
NGC Ester 72235HM Ethylene glycol adipate	33–37	≤ 0.5	3,200	3,500 at 60 °C	Solid approx. 50 °C	Crystalline modifier	On request
Crystalline, fast-set							
NGC Ester 76930HM 1,6-hexanediol long-chain diacid polyester	28–32	≤ 0.5	3,750	2,400 at 80 °C	Solid (highly crystalline) approx. 70 °C	Very fast setting; edge banding and high line speed	On request
Amorphous: tack and adhesion							
NGC Ester 76135HM Isophthalic/adipic acid hexanediol polyester	33–37	≤ 0.5	3,200	7,600 at 60 °C	Solid Tg on TDS	Raises green strength and adhesion to polar substrates such as wood, paper and metal	On request
Liquid and low-melt: open time and flexibility							
NGC Ester 74537HM Butanediol/neopentyl glycol adipate	35–39	≤ 0.5	3,000	10,000 at 40 °C	Liquid Tg < −40 °C	Longer open time; flexibility; adhesion to plastics	On request
NGC Ester 76535HM Hexanediol/neopentyl glycol adipate	32–38	≤ 0.5	3,200	12,000 at 40 °C	Paste/solid Tg on TDS	Soft segment; open-time control	On request

NGC name and chemistry	OH value mg KOH/g	Acid max	Avg MW g/mol	Viscosity mPa·s at °C	State at 25 °C melting point or Tg	Role in the hot melt	TDS
NGC Ester 71145HM Diethylene glycol adipate	43–47	≤ 0.5	2,500	12,400 at 25 °C	Liquid Tg < −40 °C	Low-cost liquid soft segment; laminating adhesives	On request
Support grades (main section shown in brackets)							
NGC Ester 72120B Aliphatic polyester (TPU, elastomers and synthetic leather)	108–116	< 0.5	1,000	100–300 at 75 °C	—	TPU resins, adhesives, synthetic leather	On request
NGC Ester 72156B Aliphatic polyester (TPU, elastomers and synthetic leather)	50–55	< 0.5	2,250	1,350–1,650 at 60 °C	—	TPU resins, adhesives, synthetic leather	On request
NGC Ester 74310NH Aliphatic polyester (adhesives, coatings and dispersions)	106–118	< 1.0	1,200	500–800 at 75 °C	—	Coatings, adhesives, PUD	On request
NGC Ester 72140B Aliphatic polyester (adhesives, coatings and dispersions)	38–42	< 0.5	2,800	2,700–3,300 at 60 °C	—	Adhesives and TPU	On request

Melting points are approximate. A separate 2-page hot-melt sheet (NGC-Ester-HM-Hot-Melt-Polyols.pdf) shows uses by line: edge banding, profile wrapping, bookbinding and textile lamination.

POLYESTER POLYOLS · 03

For adhesives, coatings and dispersions

Aliphatic polyester polyols for adhesives, coatings, sealants and PU dispersions (PUD). 8 grades.

NGC name	OH value mg KOH/g	Acid value mg KOH/g	Viscosity mPa·s at °C	Avg MW g/mol	Use	TDS
NGC Ester 74055NP	55–60	< 0.5	1,500–3,500 at 35 °C	2,000	Coatings, adhesives, dispersions; UV stable	On request
NGC Ester 74256NH	53–57	< 0.5	6,000–8,000 at 60 °C	2,000	Coatings, adhesives, PUD	On request
NGC Ester 74310NH	106–118	< 1.0	500–800 at 75 °C	1,200	Coatings, adhesives, PUD	On request
NGC Ester 75255MPD	55–60	< 1.0	—	2,000	High hydrolysis resistance: coatings, adhesives, PUD, microcellular	On request
NGC Ester 75255PO	55–60	< 1.0	7,000–8,000 at 35 °C	2,000	High hydrolysis resistance: coatings, adhesives, PUD, microcellular	On request
NGC Ester 76113	55–60	< 1.0	7,000–8,000 at 35 °C	2,000	Medium hydrolysis resistance: coatings, adhesives, water-based PUD	On request
NGC Ester 72120-55	50–60	< 1.5	800–1,200 at 75 °C	2,050	General CASE: coatings, adhesives, sealants, elastomers	On request
NGC Ester 72140B	38–42	< 0.5	2,700–3,300 at 60 °C	2,800	Adhesives and TPU	On request

Also used here: NGC Ester 73272 (footwear soles, page 6); NGC Ester 72120B (TPU, elastomers and synthetic leather, page 6); NGC Ester 72156B (TPU, elastomers and synthetic leather, page 6).

POLYESTER POLYOLS · 04

For TPU, elastomers and synthetic leather

Aliphatic polyester polyols for TPU resins, cast elastomers and PU synthetic leather. 6 grades.

NGC name	OH value mg KOH/g	Acid value mg KOH/g	Viscosity mPa·s at °C	Avg MW g/mol	Use	TDS
NGC Ester 71255B	54–58	< 0.5	2,000–2,500 at 50 °C	2,050	TPU resins, footwear, synthetic leather	On request
NGC Ester 73255B	54–58	< 1.0	6,000–7,000 at 35 °C	2,000	TPU and footwear, better hydrolysis	On request
NGC Ester 72120B	108–116	< 0.5	100–300 at 75 °C	1,000	TPU resins, adhesives, synthetic leather	On request
NGC Ester 72156B	50–55	< 0.5	1,350–1,650 at 60 °C	2,250	TPU resins, adhesives, synthetic leather	On request
NGC Ester 71156	54–58	≤ 1.0	500–700 at 75 °C	2,000	TPU, synthetic leather	On request
NGC Ester 73160	58–63	< 1.6	19,000–24,000 at 25 °C	2,580	Hot-cast elastomer, footwear, flexible foam	On request

Also used here: NGC Ester 74055 (footwear soles, page **6**); NGC Ester 72140B (adhesives, coatings and dispersions, page **5**).

POLYESTER POLYOLS · 05

For footwear soles

Aliphatic polyester polyols for microcellular PU soles, midsoles and sandals. 8 grades.

NGC name	OH value mg KOH/g	Acid value mg KOH/g	Viscosity mPa·s at °C	Avg MW g/mol	Use	TDS
NGC Ester 72255	55–59	≤ 1.0	4,200–5,000 at 35 °C	2,000	Microcellular footwear soles	On request
NGC Ester 72250	50–55	< 0.8	4,500–5,500 at 35 °C	2,150	Microcellular footwear soles	On request
NGC Ester 72245T	44–48	< 1.0	6,800–7,800 at 35 °C	2,600	Footwear soles	On request
NGC Ester 72265T	64–68	< 1.0	4,000–4,600 at 35 °C	2,000	Footwear soles	On request
NGC Ester 71165DB	60–68	< 1.0	9,400–12,000 at 35 °C	2,010	Footwear soles	On request
NGC Ester 74050T	54–58	< 1.0	7,600–8,600 at 35 °C	2,100	Footwear soles	On request
NGC Ester 74055	54–58	< 0.7	2,900–3,600 at 35 °C	2,000	Footwear soles, synthetic leather	On request
NGC Ester 73272	70–75	< 0.8	2,000–4,000 at 35 °C	1,550	Low-density, high-hardness sandals; adhesives	On request

Also used here: NGC Ester 71255B (TPU, elastomers and synthetic leather, page **6**); NGC Ester 73255B (TPU, elastomers and synthetic leather, page **6**); NGC Ester 73160 (TPU, elastomers and synthetic leather, page **6**); NGC Ester 75255MPD (adhesives, coatings and dispersions, page **5**); NGC Ester 75255PO (adhesives, coatings and dispersions, page **5**).

POLYESTER POLYOLS · 06

For flexible foam

Aliphatic polyester polyols for flexible slabstock foam and flame lamination. 6 grades.



Illustrative image

NGC name	OH value mg KOH/g	Acid value mg KOH/g	Viscosity mPa·s at °C	Avg MW g/mol	Use	TDS
NGC Ester 73160R	58–63	< 1.50	16,000–19,000 at 25 °C	2,500	Flexible foam	On request
NGC Ester 73160RLF	58–63	< 1.50	8,500–10,000 at 35 °C	2,500	Flexible foam, low fogging	On request
NGC Ester 73255AX	50–58	< 1.80	9,500–11,000 at 35 °C	2,700	Flexible slabstock foam, better anti-scorch	On request
NGC Ester 74255AX	50–58	< 1.0	14,000–16,000 at 25 °C	3,000	Flexible slabstock foam, better hydrolysis and anti-scorch	On request
NGC Ester 76182AX	80–85	< 1.0	6,500–8,500 at 25 °C	2,000	Flexible slabstock foam, better hydrolysis and anti-scorch	On request
NGC Ester 73196AX	195–215	< 4.0	18,500–27,500 at 25 °C	830	Flexible slabstock foam	On request

Also used here: NGC Ester 78175 (rigid foam, page 3); NGC Ester 73160 (TPU, elastomers and synthetic leather, page 6).

QUICK PICKS

Where to start

A first grade to trial for each job. Your own trial decides the final choice.

You make	Start with	Why
PIR boardstock and continuous panels	NGC Ester 78235, NGC Ester 78241	OH 235–240, 3,000 mPa·s, good flow, pentane compatible
High-fire continuous PIR	NGC Ester 78250TA, NGC Ester 79240TA, NGC Ester 78245	Fire performance at medium-high index
Discontinuous panels and blocks	NGC Ester 79285, NGC Ester 79235	Made for discontinuous PIR lamination
Spray foam	NGC Ester 79300, NGC Ester 77310	ASTM E84 class; good flow
One-component foam	NGC Ester 79250, NGC Ester 78190K	DIN 4102 B1 and B2
Reactive hot melts	NGC Ester 76630HM, NGC Ester 76135HM, NGC Ester 74537HM	Crystalline backbone, amorphous for tack, liquid for open time
Adhesives	NGC Ester 72140B, NGC Ester 72120B	High and low MW for strength or tack
Coatings and PUD	NGC Ester 75255PO, NGC Ester 74055NP	Hydrolysis resistance; UV stable
TPU	NGC Ester 71255B, NGC Ester 72156B	Low acid value
Footwear soles	NGC Ester 72255, NGC Ester 72250, NGC Ester 74050T	Microcellular sole grades
Flexible slabstock foam	NGC Ester 73255AX, NGC Ester 74255AX	Better anti-scorch; 74255AX adds hydrolysis resistance

Changing supplier?

Send us the TDS of the polyol you use today. We match OH value, viscosity, acid value and functionality, then send a sample and TDS for your trial.

CONTACT

Talk to Vinay

Tell us what you make and the grade you use today. We match a grade, send its TDS and SDS, and agree sample timing in writing.

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Request a sample, TDS or SDS at nextgenerationchemical.co.uk/contact/

How we work

1. **Tell us your process.** Product, line and the grade you use now.
2. **We match a grade.** With its TDS and SDS.
3. **Sample and trial.** On your own equipment.
4. **Written quote and lead time.** Before every order.
5. **Supply and support.** One named person for orders and documents.

Supply

Drums and IBCs. REACH status and lead time confirmed with each quote. Samples for trials. No prices in this catalogue: ask us for a quote.

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All figures are typical values, not a specification. They are given in good faith as a guide and do not replace your own trials. Check the current TDS and SDS before use. NGC Polyester Polyols, Issue 3, November 2026.