

SMART CAPS & CLOSURES

MATERIALS FOR SECURE SEALING AND EASY DISPENSING



CAPS AND CLOSURES SOLUTIONS FOR YOUR PERFORMANCE AND SUSTAINABILITY GOALS

SABIC offers a one-stop-shop of innovative polymer materials for caps, closures and product delivery mechanisms for still water, carbonated soft drinks, JETS (juices, energy drinks, teas, syrups), dairy, household, personal care, and other food and non-food applications.



PORTFOLIO



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We offer one of the broadest portfolio in the industry for caps and closures including materials based on polypropylene (PP), high-density polyethylene (HDPE), low-density polyethylene (LDPE), linear low-density polyethylene (LLDPE), and engineering thermoplastics such as PC, ABS, and PMMA.

These materials offer potential benefits such as

- Very good organoleptic properties to provide highest purity water without un-intended taste or smell
- Very high environmental stress cracking resistance for weight optimization
- Lower processing temperatures than many commonly used materials, enabling potential reduction in cycle times and energy consumption
- Good balance of stiffness, impact strength, and aesthetics.
- Availability within SABIC's TRUCIRCLE™ portfolio and services for circular solutions







SABIC® PE PRODUCTS

SABIC® HDPE ORGANOLEPTIC POLYMER

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|------------------|----------------------|---------|--|
| CC027C / CC027SL | 0.8 | 953 | CSD (Carbonated Soft Drink) caps, light weight Closures. Multimodal |
| CC254 | 2.1 | 954 | Slightly Carbonated Beverages, teas and juices. Multimodal |
| CC453 / CC453G | 4 | 953 | Slightly Carbonated Beverages, teas and juices, still water |
| CC860 | 7 | 956 | Still Water |
| CC860V | 8 | 960 | Still Water |

SABIC® HDPE NON-ORGANOLEPTIC POLYMER

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|------------------|----------------------|---------|--|
| B6246LS | 0.5 | 962 | UN Closures, chemicals |
| M40053S | 4 | 953 | Chemicals, slightly carbonated beverages |
| M40060S | 4 | 960 | General purpose caps |
| M80064 / M864E | 8 | 964 | General purpose caps, overcaps, dairy |
| M80064S / M864SE | 8 | 964 | General purpose caps, overcaps, dairy |
| M1053 | 10 | 953 | General purpose caps, overcaps, spouts, dairy |
| CC2056 / M200056 | 20 | 956 | Milk, dairy, oil caps |
| CC3054 / M300054 | 30 | 954 | Milk, dairy, cosmetic overcaps, thin wall articles |

SABIC® LDPE POLYMER

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|--------|----------------------|---------|--|
| HP7022 | 7 | 922 | HOD caps, glass bottle lids, sports caps, spouts |
| HP7023 | 7 | 923 | HOD caps, glass bottle lids, sports caps, spouts |
| 2308N0 | 7.5 | 924 | HOD caps, glass bottle lids, sports caps, spouts |
| 1965NO | 65 | 919 | Lids |
| 1922NO | 22 | 919 | HOD caps, glass bottle lids |
| 2102X0 | 2 | 921 | Foamed liners |
| 2502X0 | 2 | 925 | Foamed liners |

SABIC® LLDPE POLYMER

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|---------|----------------------|---------|--|
| M200024 | 20 | 924 | Glass bottle caps, spouts, flexible lids |
| M300024 | 30 | 924 | Glass bottle caps, spouts, flexible lids |
| M500026 | 50 | 926 | Glass bottle caps, spouts, thin wall lids, edible oil caps |

SABIC® HDPE PCG HEALTHCARE PRODUCTS

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|---------|----------------------|---------|---|
| PCG453 | 5 | 953 | High impact healthcare caps and closures |
| PCG863 | 8 | 963 | High stiffness heathcare caps and closures |
| PCG3054 | 30 | 954 | High flow, high gloss heathcare caps and closures |

SABIC® LDPE PCG HEALTHCARE PRODUCTS

| Grade | MFR (190°C, 2.16 kg) | Density | Applications |
|-------|----------------------|---------|---|
| PCG07 | 7.5 | 920 | Additive free healthcare caps, lids, spouts |
| PCG09 | 7.5 | 924 | Additive free healthcare caps, lids, spouts |
| PCG22 | 22 | 919 | Additive free healthcare caps, lids, spouts |

SABIC® PP PRODUCTS

SABIC® PP HOMOPOLYMER

| Grade | MFR (230°C, 2.16 kg) | IZOD +23°C | Modulus | Applications |
|--------------|----------------------|---------------|---------|---|
| 571P | 5.7 | 3 | 1700 | General Purpose (hinged caps) |
| 570P | 8 | 3 | 1600 | General Purpose (hinged caps) |
| 575P / 5703P | 11 | 3 | 1600 | General Purpose (hinged caps, deodorant balls) |
| 576P / 576S | 19 | 3 | 1800 | General Purpose (hinged caps, pump parts) |
| 5707N | 24 | 3 | 1700 | High Stiffness Caps |
| 578L | 25 | 3 | 1700 | Hinged caps (low opening force & scratch resistance) |
| 579S | 47 | 2.5 | 1900 | Wide mouth and detergent caps |
| FPH50 | 50 | 2.5 | 2050 | Wide mouth, high stiffness caps, thin walled articles |

SABIC® PP RANDOM COPOLYMER

| Grade | MFR (230°C, 2.16 kg) | IZOD +23°C | Modulus | Applications |
|------------------|----------------------|---------------|---------|---|
| QR672K / QR6701K | 11 | 6 | 1050 | Flip top caps, cosmetic caps, transparent overcaps, sports drink caps |
| QR673K / QR6731K | 25 | 5 | 1050 | Flip top caps, cosmetic caps, transparent overcaps, sports drink caps |
| QR674K / QR6711K | 40 | 4 | 1150 | Flip top caps, cosmetic caps, transparent overcaps, sports drink caps |
| RA12MN40 | 40 | 4 | 1000 | Flip top caps, cosmetic caps, transparent overcaps |
| QR675K | 60 | 4 | 1100 | Cosmetic caps, thin wall transparent overcaps |

SABIC® PP IMPACT COPOLYMER

| Grade | MFR (230°C, 2.16 kg) | IZOD +23°C | IZOD -20°C | Modulus | Applications |
|---------------|----------------------|---------------|---------------|---------|---|
| 46MNK45 | 6 | 8 | 3.5 | 1500 | 2-piece CSD caps |
| PHC26 | 8 | No Break | 10 | 1250 | High impact resistant caps |
| 57MNK10 | 12 | 11 | 6 | 1150 | General Purpose (hinge caps) |
| PHC27 | 14 | No Break | 9 | 1000 | High impact resistant caps (child resistant) |
| PHC31 | 15 | 11 | 5 | 1300 | High impact resistant caps (child resistant) |
| 48M40 | 15 | 8 | 5 | 1400 | General Purpose (hinge caps) |
| 58MNK10 | 15 | 11 | 6 | 1550 | General Purpose (hinge caps) |
| PPA20 | 20 | 5 | 2 | 1550 | High gloss, scratch resistance, low stress whitening, ABS replacement |
| 412MN40 | 37 | 8 | 5 | 1300 | Sprayer, wide mouth and hinged caps |
| 412MK49 | 45 | 5 | 3 | 1450 | General Purpose (hinge caps) |
| FPC45 | 45 | 7 | 3.5 | 1700 | Sprayer, wide mouth and hinged caps |
| FPC70 / FPC75 | 70 | 6 | 3 | 1700 | Thin wall caps |

SABIC® PP PCG HEALTHCARE PRODUCTS

| Grade | MFR (230°C, 2.16 kg) | IZOD +23°C | Modulus | Applications |
|------------------|----------------------|---------------|---------|---|
| PCGH19 | 19 | 3 | 1800 | Healthcare caps and closures, 3-part syringes |
| PCGR40 / PCGR40L | 40 | 4 | 1150 | High flow transparent caps, syringe housing |

OTHER PRODUCTS

LEXAN™ RESIN - PC

| Grade | MVR (300°C, 1.2 kg) | Modulus | Applications |
|---------------|---------------------|---------|---|
| LEXAN 144R | 12 | 2350 | High Impact high heat transparent overcap |
| LEXAN 124R | 21 | 2350 | High Impact high heat transparent overcap |
| LEXAN HF1140R | 26 | 2350 | Non-refillable bottle caps |

CYCOLAC™ RESIN - ABS

| Grade | MFR (220°C, 10 kg) | Modulus | Applications |
|---------------|--------------------|---------|---------------------------------|
| CYCOLAC MG47F | 18 | 2300 | High impact high gloss closures |

VALOX[™] RESIN - PBT

| Grade | MVR (250°C, 2.16 kg) | Modulus | Applications |
|-------------------|----------------------|---------|-----------------------|
| Valox 325 / 325FC | 20 | 2400 | Labware, nozzles |
| Valox 420 | 12 | 8000 | 30%GF PBT for labware |

SABIC® PMMA

| Grade | MVR (230°C, 3.8 kg) | Modulus | Applications |
|-------|---------------------|---------|-----------------------|
| 140HF | 14 | 3300 | Luxury Packaging Caps |

SABIC® POM

| Grade | MVR (300°C, 1.2 kg) | Modulus | Applications |
|-------|---------------------|---------|---------------------------------------|
| 140S | 12 | 2900 | Mechanical parts for pumps and sprays |
| 280S | 24 | 2900 | Mechanical parts for pumps and sprays |



SABIC Caps and Closures Technology and Innovation Center

THE NEW STATE-OF-THE-ART FACILITY USES LEADING TECHNOLOGIES THAT ALLOW SABIC TO SIMULATE THE REALLIFE PERFORMANCE OF FINISHED PRODUCTS.

COLLABORATION ACROSS THE CAPS & CLOSURES INDUSTRY

SABIC's dedicated Caps and Closures Technology and Innovation Center located in SABIC's Global Technology Center on the Chemelot Campus, Geleen, The Netherlands is a demonstration of SABIC's commitment to develop new materials and technologies dedicated to the industry.

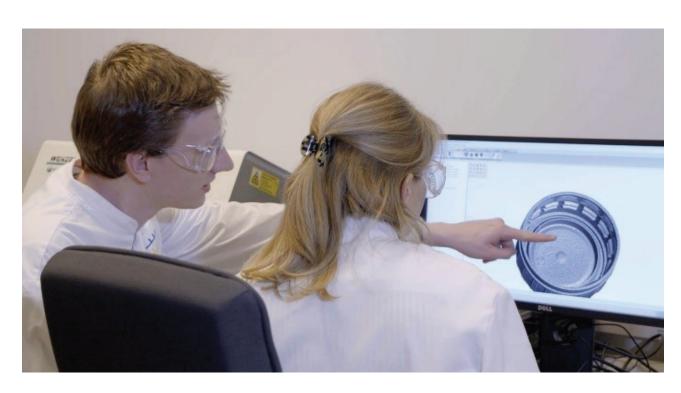
The new state-of-the-art facility uses leading technologies aimed at a range of related applications and allows SABIC to simulate the real-life performance of finished products.

Cap specimens can be produced inhouse for performance testing for potential applications and for the development of improved materials.

To assist our customers with application design, development and



process optimization, SABIC has a team of industry experts. SABIC Caps and Closures industry segment team can help with the selection of the most suitable materials and support to streamline and accelerate the transition into commercial production.



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