



Pharmaceutical primary packaging

Plastic packaging solutions
for ophthalmic and nasal applications

gerresheimer.com

gerresheimer

innovating for a better life

About Gerresheimer

Innovating for a better life

Gerresheimer is an innovative system and solution provider and a global partner for the pharma, biotech, and cosmetic industries. The company offers a comprehensive portfolio of pharmaceutical containment solutions, drug delivery systems and medical devices as well as solutions for the health industry. The product range includes digital solutions for therapy support, medication pumps, syringes, pens, auto-injectors, and inhalers as well as vials, ampoules, tablet containers, infusion, dropper and syrup bottles and more. Gerresheimer ensures the safe delivery and reliable administration of drugs to the patient. With 36 production sites in 16 countries in Europe, America, and Asia, Gerresheimer has a global presence and produces locally for regional markets. With over 11,000 employees, the company generated revenues of around €1.82bn in 2022. Gerresheimer AG is listed in the MDAX on the Frankfurt Stock Exchange ISIN: DE000AOLD6E6.

Plastic packaging solutions for diverse pharmaceutical applications

Gerresheimer Primary Packaging Plastics specializes in the widely varied spectrum of pharmaceutical plastic packaging within solid, liquid and ophthalmic applications, plastic vials and plastic bottles for personal care.

Our leading brands Duma®, Dudek™ and Triveni for solid dosage, edp-branded PET bottles for liquid dosage and our ophthalmic products form part of a comprehensive and innovative product range. Our monolayer plastic vials are based on COP and offer inert contact surface and deliver a unique packaging safety feature to manufacturers of

toxic or high potency drug solutions. Our standard range includes a wide choice of different types of containers and closures, PET bottles, eye droppers, nasal sprays, nebulizers, applicators, accessories as well as numerous customized developments.

Using our ideas and experience to produce intelligent, increasingly safe and user-friendly packaging solutions has enabled us to become an innovative partner to the global pharmaceutical industry. We know, understand and reinforce our customers business.

Ophthalmic and nasal applications



Liquid formulations



Solid formulations





Strong regulatory approach

We ensure full conformity of our products with the European pharmacopoeia, the United States pharmacopeia and the requirements for FDA registration with a Drug Master File as the standard. Knowing the extensive requirements of our customers we focus on providing a high level of documentation with our products.

- High level of documentation and registration
- Standard product database
- FDA and world-wide registration of all products
- US and Canada Drug Master File
- Product registrations in Russia, China and the Ukraine
- Food approval

Strong quality culture

A strong quality culture supports our efforts to deliver excellent quality. The culture is defined by our shared beliefs, values and behaviour patterns.

- Quality attitude and team work
- Continuous improvements
- Systematic problem solving
- Quality by design
- Stable, robust, reliable and validated processes
- Risk-based approach

Specialist and quality leader in primary plastic packaging

Our manufacturing operations use state-of-the-art technology and apply the most rigorous quality and hygiene standards. They cover all production technologies from injection moulding and injection blow moulding to blow moulding processes. The majority of our production

operations are carried out in modern classified clean-rooms or in clean conditions. All plants apply the rules of Good Manufacturing Practice (GMP) and are certified in accordance with ISO standards.

- Solution providing
- Good Manufacturing Practice (GMP)
- ISO certifications
(ISO 9001, ISO 15378, ISO 14001, ISO 45001)
- Automated in-line controls
- Vision-based inspection system
- Class 7 (10,000) + class 8 (100,000) clean-rooms



Innovating for a better life



Success through constant innovation

- Cover your needs with wide product family
- Full solutions with less material and same properties
- Competitive advantage via product differentiation
- Solution provider to customer challenges
- Vision for identifying future customer needs



Reliability through excellent quality

- Strong quality culture based on right first time
- Deliver best-in-class products and services and a high level of documentation
- Strong regulatory platform and conform with EP and USP
- Certified according to relevant ISO standards and operate in classified clean rooms
- Deep understanding of patient safety and customer requirements



Understanding through technical competence

- Complete solution provider and partner for new projects
- Extensive experience and know-how
- Optimized processes with high quality molds and machines
- Support with auxiliary processes e.g., sterilization
- Excellent technical support in order to run your production smoothly



Flexibility through global presence

- One supplier and one responsibility
- Understanding local market needs and regulations
- Uniform and state-of-the-art manufacturing conditions
- Global lean organization increasing the speed to market
- Easy transfer of production to another region



Performance through commitment to sustainability

- We Rethink our processes and products for a more sustainable future
- We recycle our production waste 100%
- We design for recycling for over 20 years
- We challenge our suppliers social and economic impacts on carbon footprint
- We are standing for the healthy and social well-being of our employees

Ophthalmic and nasal applications

Our products for ophthalmic and nasal applications include bottles and droppers in LDPE and nasal sprays with pumps.

Other materials, sizes and designs are available, as are closures with child-resistant or senior-friendly features.



Ophthalmic and nasal applications



1
Dropper bottles – System A
Standard bottle



2
Accessories System A
Caps with short droppers



3
Dropper bottles – System B
Special bottle design



4
Accessories System B
Caps with long droppers



5
Dropper bottles – System D
Special bottle design



6
Accessories System D
Caps with short droppers



7
Dropper bottles – System E / F
Standard US bottle



8
Accessories System E / F
Cap with fixed TE-ring
Sleeved cap

Nasal

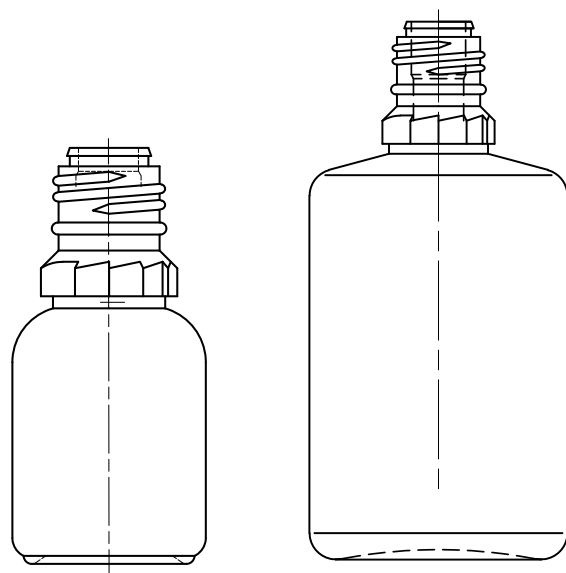


9
Spray and pump systems:
Snap-on bottles / Crimp bottles

Dropper bottles – System A (LDPE / HDPE / PET)



specifications



Dropper bottles – System A (LDPE / HDPE / PET)

Ref.#					
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LDPE

35034	2,0	3,0	17,0	34,5	11,0
35036	5,0	7,7	21,2	42,4	14,0
35035	10,0	12,5	24,1	51,8	14,0
35048	10,0	12,2	24,1	51,8	14,0
35037	15,0	18,5	25,3	63,0	14,0
35225	25,0	26,4	30,7	65,3	14,0
35038	30,0	34,9	30,8	75,0	14,0
35080	50,0	62,0	39,1	81,4	14,0
32266	60,0	68,5	39,0	87,8	14,0
32293	110,0	120,0	45,3	107,0	14,0
32295	120,0	140,0	45,0	120,5	14,0
32271	280,0	317,0	60,0	147,5	14,1

HDPE

35046	5,0	8,0	21,2	42,5	14,0
35003	10,0	13,2	24,1	51,8	14,0
35032	15,0	18,5	25,3	63,0	14,0
35041	30,0	34,9	30,6	75,0	14,0
32333	50,0	61,5	39,1	81,4	14,0
32334	60,0	68,3	39,1	87,8	14,0
32331	110,0	125,0	45,3	107,5	14,0
32327	285,0	301,0	58,2	147,5	14,0
33067	360,0	382,0	58,2	181,0	14,0

PP

35047	5,0	7,7	21,2	42,4	14,0
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PET

37010	10	13,2	24,1	51,8	14,0
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Product features

- 23 sizes ranging from 2 to 360 ml
- Material: bottle LDPE, HDPE, PP, PET
- Available in other materials, sizes and designs
- Accessories see page 12 and 13
- Gerresheimer offers full solution for irradiated products incl. validation
- ETO sterilization on request

Technical features

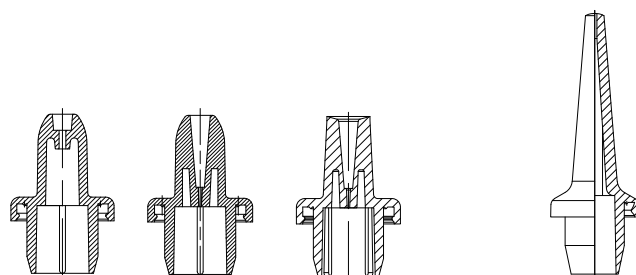
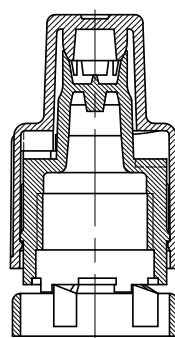
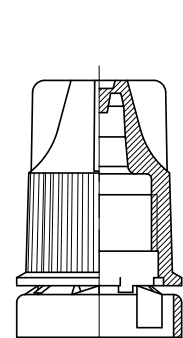
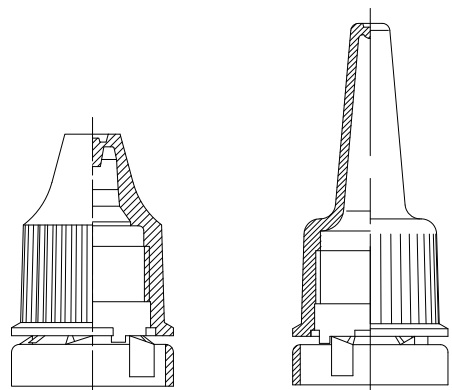
- Bottles produced by injection blow molding / extrusion blow molding / injection stretch blow molding
- Manufactured under clean-room conditions

Dropper bottles – System A Accessories



Dropper

Nozzle

Tamper-evident
screw capTamper-evident
wing screw capChild-resistant
tamper-evident
screw cap

specifications

	Ref.#	Drops / ml +/- 30%		Ref.#	comments
Dropper	14110	21	Tamper-evident screw cap white	15190	
	14166	23	Tamper-evident screw cap white	15197	fits ref 14214
	14182	23	Tamper-evident screw cap colored	15233	
	14223	21	Tamper-evident screw cap colored	15198	fits ref 14214
	14214	28	Tamper-evident screw cap	15255	Fits ref 14216, 35034
	14216	25	Tamper-evident screw cap for nozzle	15207	Fits ref 14180
Nozzle	14219	13	Tamper-evident wing screw cap	15250	Fits ref 14110, 14166, 14182, 14223, 14219
	14180	-	Child-resistant tamper-evident screw cap	91176	Fits ref 14110, 14166, 14182, 14223, 14219

Product features

- Material: dropper LDPE, nozzle LDPE, tamper-evident screw cap HDPE, tamper-evident wing screw cap HDPE, child-resistant tamper-evident screw cap HDPE / PP
- Available in other materials, sizes and designs
- Droppers, nozzles and caps fit bottle sizes on page 10 and 11
- DropAid as an application that helps to open the bottle makes it easy and simple to positioning the dropper correctly above the eye

Technical features

- Droppers, nozzle and caps produced by injection molding
- Manufactured under clean-room conditions

Dropper bottles – System B








specifications

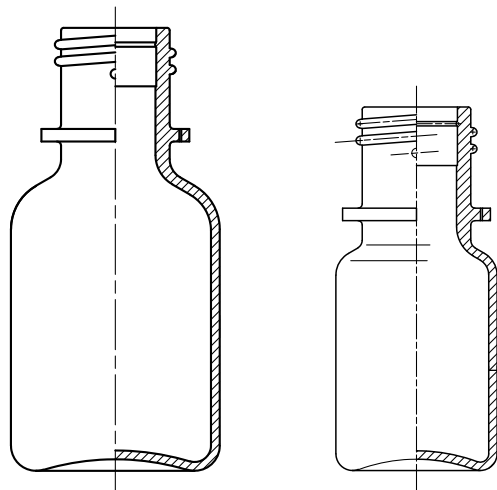
Product features

- 2 sizes ranging from 5 to 10 ml
- Material: bottle LDPE
- Available in other materials, sizes and designs
- Accessories see page 15
- Gerresheimer offers full solution for irradiated products incl. validation
- ETO sterilization on request

Technical features

- Bottles produced by injection blow molding
- Manufactured under clean-room conditions

Ref.#					
38005	5	7,0	19,3	43,5	14,5
38010	10	14,4	25,0	53,0	14,5



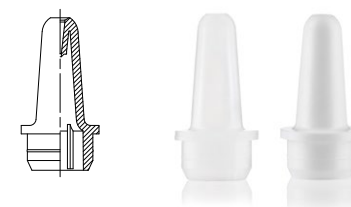
Dropper bottles – System B Accessories



Tamper-evident screw cap



Dropper



	Ref.#	Drops / ml +/- 30%
Tamper-evident screw cap	15015	–
Dropper	14004	25

Product features

- Material: dropper LDPE, tamper-evident screw cap HDPE
- Available in other materials, sizes and designs
- Dropper and cap fit bottle sizes on page 14

Technical features

- Dropper and cap produced by injection molding
- Manufactured under clean-room conditions

Dropper bottles – System D








specifications

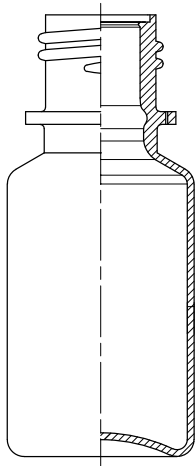
Product features

- 2 sizes ranging from 5 to 10 ml
- Material: bottle LDPE
- Available in other materials, sizes and designs
- Accessories see page 17
- Gerresheimer offers full solution for irradiated products incl. validation
- ETO sterilization on request

Technical features

- Bottles produced by injection blow molding
- Manufactured under clean-room conditions

Ref.#					
35083	5	7,6	20	43,5	14,7
35081	10	11,5	22	52,0	14,7

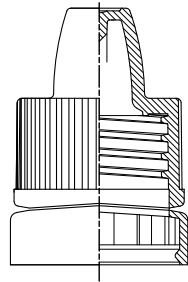


Dropper bottles – System D
Accessories

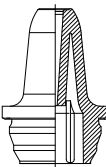



specifications

Tamper-evident
screw cap



Dropper



Ref.#		
Tamper-evident screw cap	15020	–
Dropper	14015	20

Product features

- Material: dropper LDPE, tamper-evident screw cap HDPE
- Available in other materials, sizes and designs
- Dropper and cap fit bottle sizes on page 16

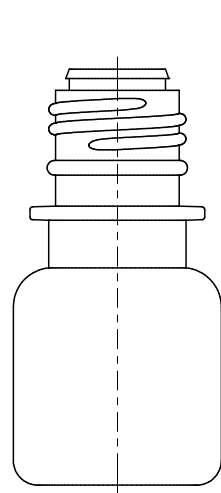
Technical features

- Dropper and cap produced by injection molding
- Manufactured under clean-room conditions

Dropper bottles – System E / F



specifications



Ref.#	ml	ml	mm	mm	mm
LDPE					
35178	5	7,2	21,2	42,4	14,0
35179	10	12,4	24,1	51,8	14,0
35180	15	18,2	25,3	63,0	14,0
35181	30	34,0	30,8	75,0	14,0
PP					
35182	5	7,5	21,2	42,4	14,0

Product features

- 5 sizes ranging from 5 to 30 ml
- Material: bottle LDPE, PP
- Accessories see page 19
- Gerresheimer offers full solution for irradiated products incl. validation
- ETO sterilization on request

Technical features

- Bottles produced by injection blow molding
- Manufactured under clean-room conditions

Dropper bottles – System E / F Accessories

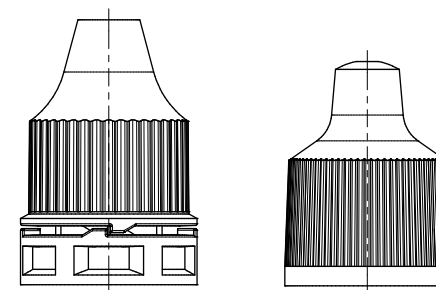
System E
Cap with fixed TE-ring



System F
Sleeved cap



specifications



System E
Cap with fixed
TE-ring

System F
Sleeved cap

Product features

- Material: dropper LDPE, tamper-evident screw cap and sleeved cap HDPE
- Caps and droppers fit bottle sizes on page 18

Technical features

- Caps produced by injection molding
- Manufactured under clean-room conditions

Droppers System E / F

Ref.#	Drops / ml +/- 30%
14166	23
14182	23
14110	21
14223	21
14219	13
14214	28

Caps System E

Ref.#	Comments
15033	Tamper-evident screw cap white
15035	Tamper-evident screw cap colored
15034	Tamper-evident screw cap white fits ref 14214
15036	Tamper-evident screw cap colored fits ref 14214

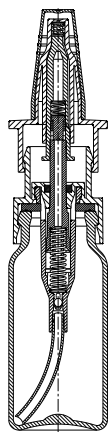
Caps System F






Ref.#	Comments
15009	Screw cap white
15031	Screw cap colored
15010	Screw cap white fits ref 14214
15032	Screw cap colored fits ref 14214

Spray and pump systems: Snap-on bottles / Crimp bottles



Snap-on bottles



Ref.#	 ml	 ml	 mm	 mm	 mm
35022	10,0	16,3	24,0	52,7	19,85
35023	15,0	18,0	24,0	58,0	19,85
35014	20,0	23,0	29,0	53,0	19,85
35176	20,0	25,5	31,0	50,7	19,95






Product features

- 4 sizes ranging from 10 to 20 ml
- Material: bottle HDPE
- Available in other materials, sizes and designs
- Reference to spray/pump supplier on request

Technical features

- Bottles produced by injection blow molding
- Manufactured under clean-room conditions

Crimp bottles

Ref.#	 ml	 ml	 mm	 mm	 mm
35175	15,0	19,5	25,5	54,4	20,0
35090	20,0	25,2	31,0	50,7	20,1

Product features

- 2 sizes ranging from 15 to 20 ml
- Material: bottle HDPE
- Dedicated for crimp pumps

Technical features

- Bottles produced by injection blow molding
- Manufactured under clean-room conditions



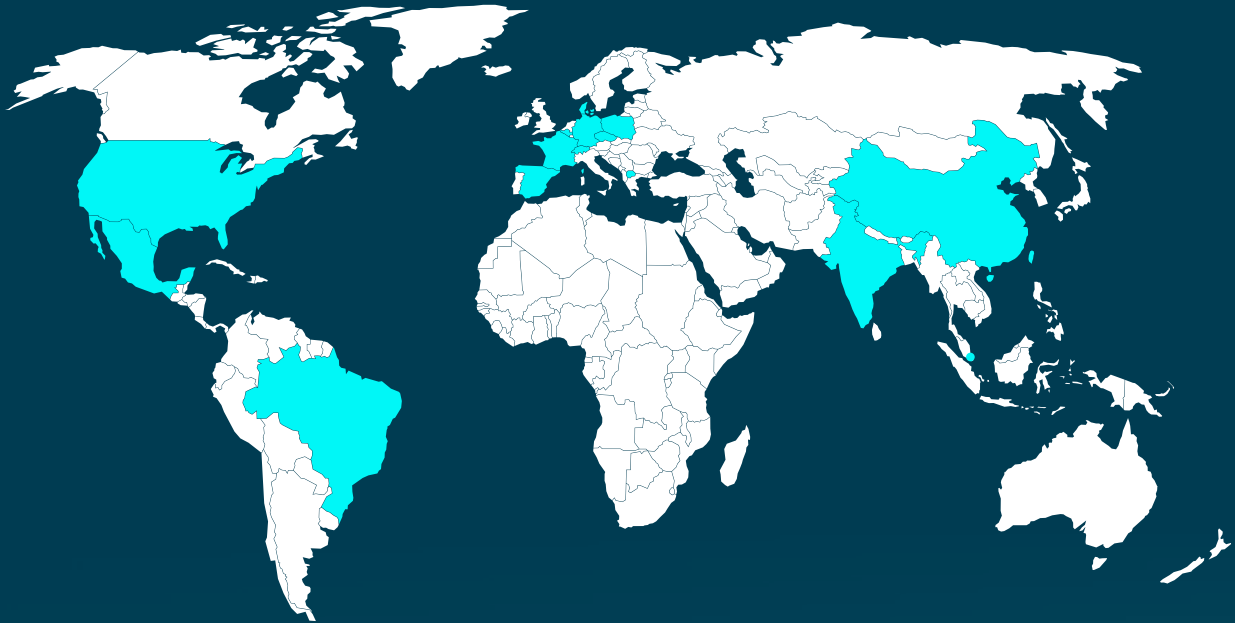


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Pharmaceutical Plastic Packaging
and Systems for South America is
to be found in a separate catalogue