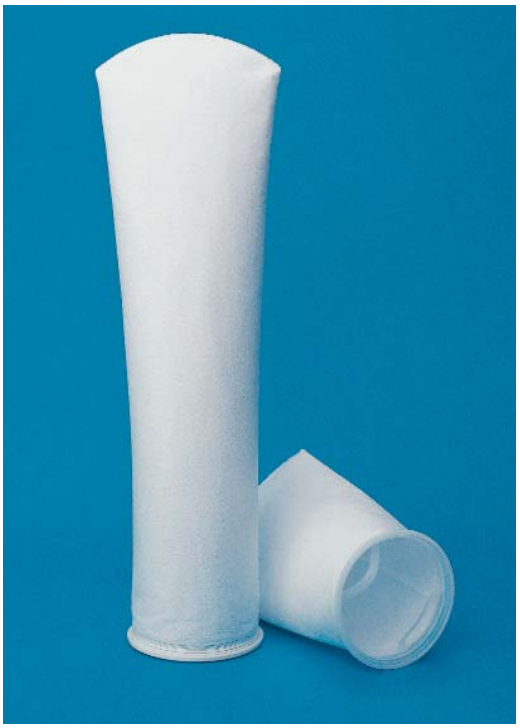
LENNTECH
info@lenntech.com Tel. +31-152-610-900
www.lenntech.com Fax. +31-152-616-289

CLEARGAF™ Assured performance for food, beverage and pharmaceutical industries



CLEARGAF™ is the series of filter bags specifically designed for the requirements of the food, beverage and pharmaceutical industries. Comprised of several filter styles, CLEARGAF delivers:

- FDA compliant materials per 21CFR177
- EC compliant per 2002/72/EC
- Independent testing and certification
- Special single packaging and warehouse control

What is migration from plastics?

Many plastics are made of substances which can diffuse out when in contact with fluids: migration. Some polymers which appear to be inert have significant migration, especially into oils or alcoholic fluids. These migrating substances can come from surfaces (e.g., fiber spin finishes) or from within the solid plastic material.

How does it affect filter use?

Most filter components are made from polymers polyester, polypropylene, polyamide, etc. Migration from a filter material will end up in the fluid passing the media. If this fluid is to be consumed as food, it must be safe for the consumer. So, migration can seriously limit the materials which may be used for filter media.

How can it be stopped?

Migration cannot be completely stopped. It can, however, be reduced by careful selection of polymers. Or, it can be limited to substances which are safe for foods.

What do the regulations say?

Both US (21CFR177) and EC (Directive 2002/72/EC) regulations require that only plastics approved for food use may be used in direct contact. Both regulations maintain positive lists of material which can be used. Both regulations prohibit the use of other materials. Both regulations limit the allowed migration.

What are the differences between FDA and EC requirements?

All CLEARGAF™ filter bags are made from FDA-compliant materials. FDA limits on migration are proportional to weight. EC limits, however, are based on area and must be demonstrated in tests on finished articles. For some materials, the EC limits can be up to 50x more restrictive. To satisfy EC requirements, some CLEARGAF™ filters are subject to a small Minimum Processing Quantity (MPQ). In these cases, a minimum amount of fluid (<600 kg) must pass through the bags to dilute migration.

CLEARGAF™ Features deliver Advanced Benefits

- **Compliant material** ..... assure compatibility with all food applicatons. Sewn bags use special lubrificant-free thread
- **Independent verification** ..... guarantees conformity to EC and FDA requirements
- **Low-migration Media** ..... minimizes substances introduced to fluids

- **SENTINEL® Ring Bag Seals** ..... eliminate fluid bypass
- **All welded construction** ..... eliminates fluid bypass through needle holes on felt and multi-layer bags
- **Controlled production** ..... eliminates contamination from handling and environmental conditions
- **Single Packaging** ..... keeps bags free from contamination during shipping, storage and installation

- **Special Handling & Storage** ..... ensures that there is no contamination after packaging

Selection Chart

	Max. Temp. (°C)	Sizes				Available Grades												Ring Style
		01	02	03	04	1	5	10	25	50	80	100	150	200	250	400	600	800	
PEF*	140	■	■			■	■	■	■										Z
PEXLF*	140	■	■			■	■	■											Z
POF*	90	■	■			■	■	■	■	■		■		■					E
POXLF*	90	■	■				■	■	■	■									E
NMOF*	140	■	■						■	■	■	■	■	■	■	■	■	■	Z
AGF*	90	■	■			51 - 53 - 55 - 57 - 59													E
PGF*	90		■			50 - 51 - 55													E

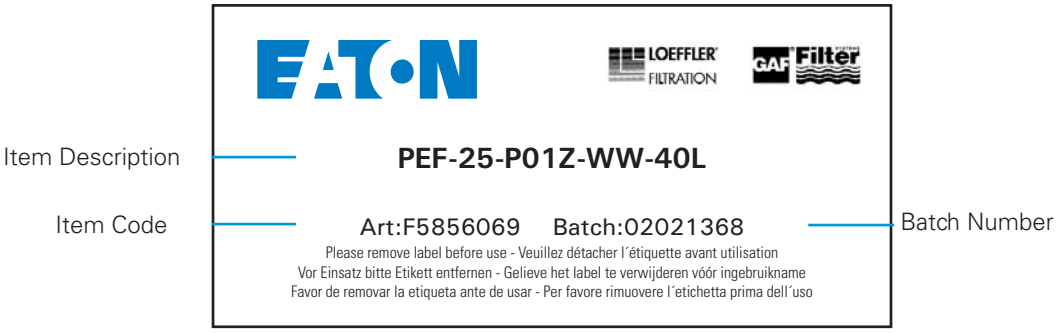
*Products subject to MPQ in Europe applications. See Technical Bulletin TB990801 for full details.

Nomenclature: Product Code:

PEF-25-P01Z-WW-40L

PEF:	- Polyester needlefelt
PEXLF:	- Extended life polyester needlefelt
POF:	- Polypropylene needlefelt
POXLF:	- Extended life polypropylene needlefelt
NMOF:	- Nylon monofilament
AGF:	- Polypropylene meltblown
PGF:	- Polypropylene meltblown

- PEF — Bag Material
- 25 — Micron Rating µm (1, 5, 10, 25, 50, etc.)
- P — Bag Cover Layer (E: Extruded mesh (for AGF, PGF); P: Plain (no cover))
- 01 — Bag Size (Code 01: Ø 180 mm x with 430 mm length; 02: Ø 180 mm x with 810 mm length)
- Z-WW — Collar/Ring Type (E: SENTINEL® Ring, Polypropylene; Z-WW: SENTINEL® Ring, Santoprene)
- 40 L — Packaging (Bags/Box 10-50; Box Size S, M, L)



LENNTECH
info@lenntech.com Tel. +31-152-610-900
www.lenntech.com Fax. +31-152-616-289