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## EGASOL MET

<b>Character</b>	Leveling agent with strong migration and synchronization effect for dyeings PES / Wool, PES/cellulose, and PES /PUE type.
<b>Chemical Structure</b>	Aromatic carboxylic acid ester
<b>Appearance</b>	Clear, yellow liquid
<b>Ionic Character</b>	Anionic
<b>pH Value</b>	6.0 – 8.0
<b>Specific Weight at 20 °C</b>	~ 1.05
<b>Stabilities</b>	EGASOL MET is stable to the auxiliaries and chemicals used for PES dyeing.  The product is sensitive to frost to a certain extent; changes occurring at low temperatures disappear on warming and after thorough stirring.
<b>Storage</b>	On proper storage in closed original containers, the product is stable for at least 12 months.

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## Properties

EGASOL MET is a low-foaming leveling agent which has dispersing, washing, and migrating properties.

EGASOL MET does not develop an unpleasant odor during dyeing or drying.

The product has an affinity to dye and fiber. Differences caused by the material are leveled out to a large extent.

EGASOL MET is a dyeing accelerant that is used for dyes that hardly migrate.

## Application Technique

### Diluting Instructions

EGASOL MET can be emulsified by pouring 5 to 10 times the amount of warm water (60 – 70 °C) over it and stirring thoroughly. The stock emulsion produced like this can be used right away. Cooled-down stock emulsions deposit and have to be stirred thoroughly before use.

## Application Fields

EGASOL MET can be used for dyeing wovens made of PES on HT piece dyeing machines. It is highly suited for Trevira CS, PES microfibres, and CDP (Coolmax = PES for cationic dyeing). However, SARABID OL has to be added to prevent precipitations in the presence of cationic dyes.

EGASOL MET can be applied for all common dyeing procedures on PES and PES /Wool, PES/Cellulose, and PES /PUE such as yarn dyeing, jet, and overflow dyeing.

## Application Recommendations

### Dyeing of PES

Normally, the application amounts of the product are as follows:

0.5 – 4.0 % EGASOL MET

The pre-emulsified product is added to the warm dye bath (50 - 60 °C) together with the other chemicals and auxiliaries. The dispersion dyes are added after a short pre-run and then heated up to 80 - 90 °C. After having reached this temperature, heat up at 1.5 °C/min until a dyeing temperature of 130 °C is achieved. Light colors are dyed for 20 - 30 min, and medium to dark shades for 30 - 40 min at the final temperature, to achieve an optimum dye fixation.

EGASOL MET in combination with CHT DISPERGATOR XHT S gives very good results on critical yarn dyeings. It boosts dye penetration of the intersection points on very tightly wound, big cones. Particularly turquoise and yellow combinations benefit from the distinct synchronisation effect. Shorter process times can be realized on the jet by higher heating rates and shorter migration phases.

Greige dyeing is possible on knitwear. Differences in the fixation degree can be largely compensated with EGASOL MET.

### Dyeing of PES/WO

EGASOL MET can be used as a diffusion accelerator for PES/WO blends. Dyeings can be done between 98 and 120 °C.

Dyeing temperature	Depth	Liquor ratio	
		10:1	20:1
98°C	pale	3%	3.5%
98°C	medium	4.5%	5.2%
98°C	dark	6%	8%
106°C	pale	1.5%	1.7%
106°C	medium	2.2%	2.6%
106°C	dark	3.5%	4.3%
120°C	pale	0,6%	0.8%
120°C	medium	1.0%	1.2%
120°C	dark	1.5%	2.0%

Dyeing proposal for PES/WO in one bath at 108 °C, dark dyeing

X	%	BEMACRON
Y	%	BEMAPLEX / BEMACID
1.0	%	KERIOLAN A2N
2.0	g/l	MEROPAN TWS B (wool protection)
4.0	%	EGASOL MET

pH 4.0 – 5.0      NEUTRACID BO 45

Application proposal for CDP (Coolmax = PES suitable for cationic dyeing)

The normal dyeing temperature is between 98 and 110 °C for fiber protection. Under these conditions, a strongly migrating product such as EGASOL MET has to be applied.

Recipe for dyeing CDP fibers:

2.0	%	SARABID OL (precipitation prevention agent)
2.0	%	BIAVIN BPA (crease prevention agent)
0.0 - 1.0	%	TUBACRYL RI (retarder)
6.0	%	Glauber's salt
4.0	%	EGASOL MET (leveling agent)

pH 4.0 - 5.0 NEUTRACID BO 45

x %                      cationic dye

Initial temperature:	60 °C, 10 min
Homogenizing:	60 °C, 10 min
Heating with 1 °C/min:	80 °C, 30 min
Dyeing:	80 °C, 10 min
Heating with 1 °C/min:	110 °C, 30 min
Dyeing:	110 °C, 45 min
Cooling down with 2 °C/min:	70 °C, 20 min
Drainage	

After cleaning

2.0 %                      CHT DISPERGATOR XHT S

20 min, 60 °C, rinse warm and cold

PES/CDP blends are dyed at 110 – 120 °C and the amount of EGASOL MET is reduced to 2.0 – 3.0 %.

**We reserve the right to modify the product and technical leaflet.**

**Our department for applied technique is always at your service for further information and advice.**

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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