

Technical - Information

AVCO-LON REK

LEVELLING AGENT FOR POLYAMIDE

AVCO-LON REK is a levelling agent with weakly cationic nature with affinity to acid dyestuffs. It enables better control of exhaustion of acid dyestuffs onto polyamide dye sites and improves acid dyestuffs migration properties.

SPECIFICATION:

Appearance	Yellowish clear liquid.
Chemical nature	Polyethoxylated surfactant.
Compatibility	Stable to acids, alkalis, water hardness and electrolytes. Compatibility with anionic products should be evaluated.
Ionicity	Weakly cationic.
pH (10% sol.)	8.5 ± 1
Solubility	Miscible in water at any ratio.
Storage	Below 0°C becomes viscous. Can be reused after thawing.

PROPERTIES & USES:

1. AVCO-LON REK has affinity to acid dyestuffs, and is slowing down the exhaustion rate onto the polyamide fibres. The result is much better migration properties of the dyestuffs, which yields better levelling of the dyeing process.
2. AVCO-LON REK can be used in combination with anionic levelling agent such as AVCO-LON NAL in order to overcome barriness.
3. AVCO-LON REK is a liquid product which can be metered by automatic dosing equipment.
4. AVCO-LON REK is slow foaming.
5. Improves staining of elasten component in PA/Elasten blends.

APPLICATION:

I. AVCO-LON REK should be added to the dyebath before the dyestuffs

Recommended dosages are:

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Type of dyes	% on weight		
	Pale Shades	Med. Shades	Dark Shades
Acid dyes (good migration)	1.5	1	0.5
Acid dyes (low migration)	3	2	1
Metal Complex dyes	2	1	0.5

REMARKS:

1. When there is a need to retard the rate of dyeing, and to improve compatibility between dyes, increase quantities for dark shades.
2. When there is a need to improve migration and levelling, increase dosage when dyeing pale shades.

II. Typical dyeing procedures

1. Dyeing polyamide fibres:
 - a. Add the following products to the dye bath:

AVCO-LON NAL	3.0 - 0.5 g/l
AVCO-LON REK	3.0 - 0.5 g/l
AVCO-CID HTA 200	1.0 - 3.0 g/l
 - b. Adjust pH according to the type of dyestuffs used.
 - c. Add pre-dissolved dyestuffs and circulate for 5 - 10 min.
 - d. Raise to the boil.
 - e. Run for 30 - 45 min.
 - f. Cool down and drop bath.
2. Dyeing PA fabrics with severe "barre" problems:

Good "barre" coverage can be obtained by pre-treating the fabrics at the boil with AVCO-LON NAL, and by using a slightly cationic co-leveller AVCO-LON REK in the dyeing bath.

 - a. Pre-treat the fabric with 2 - 5% AVCO-LON NAL for 20 - 30 minutes at the boil.
 - b. Cool down to 60°C, adjust pH to 5 - 5.5
 - c. Add 0.5 - 3% AVCO-LON REK run for 10 min.
 - d. Add pre-dissolved dyestuffs by linear dosing over 15 min.
 - e. Raise temperature to the boil.
 - f. Dye for 45 - 90 minutes. Coverage of barriness can be improved when dyeing under HT conditions.
 - g. Cool down and drop bath.
 - h. Rinse well.

III. Dyeing PA / EL blends

Special selection of dyes is required to get tone to tone dyeing of polyamide and spandex. However the two step process is mostly recommended.

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Step 1:

AVCO-LON NAL 2 – 3 g/l

AVCO-CID HTA 200 1 – 3 g/l

Acid Dyes X%

Dye at 98°C for 30 min.

Cool down to 80°C.

Step 2:

AVCO-LON REK 1 – 2 g/l

Heat to 98°C.

Run for additional 30 min. at 98°C.

Cool down.

Drop bath.

IV. Levelling of unlevel dyeing

1. Treat at the boil with 3 - 4 gr/l AVCO-LON REK for 30 minutes.
2. Cool down.
3. Add acetic acid to the desired pH according to type dyestuffs used. The acid should be added slowly by dosing method.
4. Raise temperature to the boil and treat at the boil for 30 minutes.
5. Cool down, drop bath and rinse.