

Technical - Information

AVCO-LON NAL

LEVELLING AGENT FOR POLYAMIDE DYEING

AVCO-LON NAL is an anionic levelling agent for dyeing polyamide fibres.

AVCO-LON NAL has an affinity to the dye-sites of the polyamide fibre and overcomes barriness problems when dyeing with acid and metal-complex dyes.

SPECIFICATION:

Appearance	Yellow- brownish clear liquid.
Chemical nature	Aqueous solution of a long chain alkyl sulphonate.
Ionicity	Anionic.
Density (gr/cc)	App. 1.1.
Solubility	Miscible with water at any ratio.
pH (of 10% sol.)	6 – 7
Compatibility	Good with mild alkalies, mild acids, electrolytes, anionics and nonionics, water hardness. Is not compatible with strongly cationic products.
Storage	The product is sensitive to frost. Can be reused after thawing and agitating.

PROPERTIES & USES:

1. Anionic surfactant with moderate affinity to the cationic dye-sites on the polyamide fibres.
2. Excellent levelling properties with good migrating capacity which enables level dyeing of polyamide micro-fibres, and other polyamide fibres which have severe affinity differences (barriness).
3. Suitable for dyeing acid dyes as well as metal complex dyestuffs.
4. Suitable for dyeing at the boil and at HT conditions.
5. Recommended for both exhaustion and continuous dyeing procedures.
6. AVCO-LON NAL does not impair the fastness properties of the dyed fibres.
7. Recommended for dyeing all types of polyamide goods such as fibres, yarns, fabrics, and ready-made garments.
8. Recommended for dyeing blends of polyamide with other fibres such as cellulose and wool.
9. In special cases it is recommended to use AVCO-LON NAL in combination with slightly cationic levelling agents such as AVCO-LON REK.

Technical - Information

APPLICATION:

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

Recommended dosages are the following:

Type of dye	% on weight of fabrics		
	Pale Shade	Medium Shade	Dark Shade
Acid dyes (good migration)	2 - 3%	1 - 2%	0.5 - 1%
Acid dyes (low migration)	3 - 4%	2 - 3%	1 - 2%
Metal complex dyes	4 - 5%	3 - 4%	2 - 3%

I. Dyeing PA fabrics:

1. The dye bath is set at 40°C with the necessary acid or buffer and circulate for 10 minutes.
2. Add AVCO-LON NAL and circulate for 10 minutes.
3. Add well dissolved dyes by linear dosing over 15 minutes.
4. Run for 5 min. and heat-up to the desired temperature: 98 - 115°C. Heating rate 1 - 2 deg. C /min.
5. Dye for 45 - 60 min. CHECK for final exhaustion and pH.
6. Cool down, drop bath and rinse.

II. 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.

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

III. Levelling of unlevel dyeing:

1. Treat at the boil with 3 - 4 gr/l AVCO-LON NAL 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.