

## Technical - Information

# AVCO-CID HTA 200

ACID DONOR AND pH REGULATOR FOR DYEING POLYAMIDE AND WOOL

AVCO-CID HTA 200 is an acid donor that creates acidity when solutions of the product are heated up. The pH of 0.1% AVCO-CID HTA 200 is 6.5 – 7.5, and when heated to the boil the pH decreases to 4.5 – 5.5. The rate of dissociation is slow in cold solutions, and increases while heating up. This slow dissociation process is useful for dyeing wool and polyamide fibers, as the dyes are exhausted very evenly and produce level dyed yarns and fabrics.

### SPECIFICATIONS:

<b>Appearance</b>	Yellowish clear liquid.
<b>Chemical nature</b>	Blend of organic esters.
<b>Solubility</b>	Miscible with water. Solutions are not stable and start to hydrolize.
<b>pH (10 %)</b>	7 + 0.5 (fresh solution)
<b>Ionicity</b>	Nonionic.
<b>Compatibility</b>	Is not compatible with strong alkalis.
<b>Storage</b>	Stored in a closed container in a cool place. Do not store in direct sun.

### PROPERTIES & USES:

1. AVCO-CID HTA 200 is an acid donor which evenly and slowly hydrolizes in hot aqueous solution to produce an organic acid.
2. During the hydrolizing process the organic acid produced is lowering the pH of the solution down to 4.5 – 5.5 according to the concentration in the liquor.
3. The rate of the dissociation is slow in cold solutions and increases when the temperature is raised.
4. This manner of pH control makes it useful for dyeing acid and metal complex dyes. As the exhaustion rate of acid dyes is pH dependent, the slow lowering of the pH in a dyeing solution containing AVCO-CID HTA 200, ensures more level dyeing, due to slower exhaustion rate of the dyestuffs onto the fibres.
5. AVCO-CID HTA 200 is recommended for even dying of polyamide, wool and blends of these fibres.
6. When using AVCO-CID HTA 200, the initial temperature of the dyeing can be increased, and the rate of heating up may be faster, thus reducing dyeing time.
7. AVCO-CID HTA 200 does not influence any of the fastness properties of the dyed fibres.

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### APPLICATION:

Following are some recommended dyeing procedures. The dosages, temperatures and procedures are suggestions which may be varied according to the type of dyestuffs used and properties of fibres to be dyed.

#### 1. Dyeing wool

Use the following recipe:

AVCO-LON PAN	0.5 - 2.0	%
Ammonium Sulphate	1.0 - 3.0	g/l
AVCO-CID HTA 200	0.5 - 1.5	g/l
DYESTUFFS	X	%

Start dyeing at 30°C, raise temperature to the boil at app. 45 min. Dye at the boil for 60 - 90 min, depending on the depth of the shade.

#### 2. Dyeing wool with an anti-shrink treatment

Use the following recipe:

AVCO-LON PAN	0.5 - 2.0	%
Ammonia sol. (25%)	1.0 - 2.0	g/l (adjust to pH 8 - 9).
AVCO-CID HTA 200	1.0 - 2.0	g/l
DYESTUFFS	X	%

Start dyeing at 30°C, raise temperature to 60°C at 1.5°C/min. Hold at 60°C for 10 min. Continue heating at 1°C/min to the boil. Dye at the boil for 60 - 90 min.

#### 3. Dyeing polyamide/wool blends

Use the following recipe:

AVCO-LON PAN	0.5 - 2.0	%
AVCO-CID HTA 200	0.5 - 2.0	g/l
DYESTUFFS	X	%

Start dyeing at 30°C, raise temperature to 60°C at 1.5°C/min. Hold for 15 min. Continue heating at 1°C/min to the boil. Dye at the boil for 60 min.

#### 4. Dyeing polyamide

Use the following recipe:

AVCO-LON PAN	0.5 - 2.0	%
Ammonia sol. (25%)	1.0 - 2.0	g/l (adjust to pH 7 - 8).
AVCO-CID HTA 200	0.5 - 1.5	g/l
DYESTUFFS	X	%

Start dyeing at 40 - 50°C, raise temperature to the boil at 0.5 - 1.5°C/min. Dye at the boil for 60 min. Cool down to 70°C and drop bath. Rinse with cold water.

#### Dosage of AVCO-CID HTA 200

LIGHT SHADES	0.5 - 0.75	g/l
MEDIUM SHADES	1.0 - 1.5	g/l
DARK SHADES	1.5 - 2.0	g/l