**BEMACRON RS DYES**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Yellow RS</th>
<th>Golden Yellow RS</th>
<th>Golden Orange RS</th>
<th>Red RS</th>
<th>Carmine RS</th>
<th>Rubine RS</th>
<th>Royal RS</th>
<th>Blue RS</th>
<th>Navy RS</th>
<th>Black RS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.15 %</td>
<td>0.10 %</td>
<td>0.24 %</td>
<td>0.15 %</td>
<td>0.15 %</td>
<td>0.10 %</td>
<td>0.15 %</td>
<td>0.20 %</td>
<td>0.75 %</td>
<td>1.30 %</td>
</tr>
<tr>
<td></td>
<td>0.75 %</td>
<td>0.55 %</td>
<td>1.40 %</td>
<td>0.85 %</td>
<td>0.85 %</td>
<td>0.60 %</td>
<td>0.80 %</td>
<td>1.15 %</td>
<td>1.50 %</td>
<td>3.90 %</td>
</tr>
</tbody>
</table>

**ECONOMIC BEMACRON RS TERNARY**

BEMACRON Golden Yellow RS/Carmine RS/Royal RS:
Colour intensive rapid dyeing dyes with excellent dispersion stability and a very good colour build-up already at a dyeing temperature of 120°C. Very good levelling dying power. High fastnesses to light, washing and chlorine.

The dyes of BEMACRON RS ternary range are bluesign® approved.

**TIMEBOOST PROCESS**

HIGH END levelness with BEMACRON RS dyes and CHT auxiliary system.
**TIMEBOOST PROCESS**

The products of the CHT brand Bezema Colour Solutions provide you with optimal combinations of dyes and auxiliaries which help you achieve safe and perfect results.

**PES HT Dyeing 5 °C / min – Application recommendation – LR 1:7**

**EGASOL UP**

**PES LEVELLING AGENT**

**BEMACRON RS**

**PES DISPERSION DYES**

**CHT-DISPERGATOR XHT-S**

**PES DISPERSING / LEVELLING AGENT**

**POLYGLYCOL ETHER DERIVATE N/A, LIQUID**

**Properties**

- As EGASOL UP has an affinity to fibres, it has to be separately added to the dyeing bath in emulsified form at 50 – 60 °C before the dye.
- EGASOL UP has an excellent synchronising effect on dispersion dyes.
- A very good colour levelness is obtained because of the excellent levelling and migration power of EGASOL UP.

**CHT-DISPERGATOR XHT-S or CHT-DISPERGATOR XHT-S + EGASOL UP**

**Savings**

- No prewashing is needed
- Reduced process by 30 min

**Significantly shortened heating time**

- From 60 °C to 130 °C with 2.0 °C / min (up to 5 °C / min possible depending on fabric and machinery)
- Reduced process by 1 h

**Shorter migration time**

- From 40 min to 45 min or from 45 min to 30 min process shortening by 15 min

**Total time saving**

- 1 h 45 min

Levelling agents for rapid dyeings by reduced heating time on PES and its blends at HT conditions especially on jet, but also on other machines and apparatuses.

**Verification of the dispersion stability by means of the HPX test**

---

**Fatty acid ethoxylates and aromatic carboxylic acid esters a, liquid**

**Application fields**

- Problem solver in case of streakiness on PES dyeings. For PES woven fabrics on jet, critical colours like green, olive, brown. Advantageous in combination with a dispersing agent like CHT-DISPERGATOR XHT-S.
- For heavy articles with a high sqm weight, microfibre article, Trevira CS
- In the automotive field with quantities of 1 – 2 %
- For levelling out of dyeings with 3 % EGASOL UP

**Properties**

- As EGASOL UP has an affinity to fibres, it has to be separately added to the dyeing bath in emulsified form at 50 – 60 °C before the dye.
- EGASOL UP has an excellent synchronising effect on dispersion dyes.
- A very good colour levelness is obtained because of the excellent levelling and migration power of EGASOL UP.

---

**CHT-DISPERGATOR XHT-S**

- Does not contain any antifoaming agent.
- It has a very good dispersing and levelling power.
- Due to the maximal fine dispersion the dyes have a still higher dissolving speed than conventional products.
- The oil dispersion of CHT-DISPERGATOR XHT-S in the dyeing bath is exceptionally high.

**BEMACRON RS**

- For exhaust and continuous procedures
- Excellent dispersion stability, also under most difficult conditions (packaging apparatus & beam)
- Excellent “rapid dyeing” properties
- All dyes are perfectly combinable
- Excellent levelling power
- Excellent migration power
- Very high reproducibility
- Good dry heat fixing fastnesses
- Dyeing at 120 °C also possible (Diagram)

---

**Dispersion dyeing**

| Temperature [°C] | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
|-----------------|---|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Time [min]      | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |

**Neutralisation**

<table>
<thead>
<tr>
<th>Temperature [°C]</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time [min]</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

**Reductive cleaning**

<table>
<thead>
<tr>
<th>Temperature [°C]</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time [min]</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

**Rinse**

<table>
<thead>
<tr>
<th>Temperature [°C]</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time [min]</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

---

**Total time saving**

- 1 h 45 min

**BIAVIN BPA**

- 1.0 %

**EGASOL UP**

- 1.0 – 2.0 %

**NEUTRACID BO 45**

- pH 4.0 – 5.0

**CHT-DISPERGATOR XHT-S**

- 1.0 – 2.0 %

**BEMACRON RS**

- dye x

**INTENSOL OLI**

- 1.0 – 2.0 %

**NaOH 50 °Bé**

- 2.0 – 4.0 %

**REDULIT GIN**

- 2.0 – 4.0 %

**NEUTRACID BO 45**

- 0.5 – 1.0 %

**1.00**

**2.00**

**3.00**

**4.00**

**0.00**

---

**2.0 – 5.0 °C / min**

**BEMACRON RS**

- Pressure / bracketleft.casebar/bracketright.case

**Commodities**

- Pressure / bracketleft.casebar/bracketright.case

**Temperature / bracketleft.caseC°/bracketright.case**

---

**140**

**120**

**100**

**80**

**60**

**40**

**20**

**0**

---

**0.50**

**1.00**

**1.50**

**2.00**

**2.50**

**3.00**

**3.50**

**4.00**

---

**“Temperature [°C] — Commodities — Pressure [bar] — BEMACRON RS — Pressure [bar]”**
**BEMACRON RS DYES**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Yellow RS</th>
<th>Golden Yellow RS</th>
<th>Golden Orange RS</th>
<th>Red RS</th>
<th>Carmine RS</th>
<th>Rubine RS</th>
<th>Royal RS</th>
<th>Blue RS</th>
<th>Navy RS</th>
<th>Black RS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage (%)</td>
<td>0.15%</td>
<td>0.10%</td>
<td>0.24%</td>
<td>0.15%</td>
<td>0.15%</td>
<td>0.10%</td>
<td>0.15%</td>
<td>0.20%</td>
<td>0.75%</td>
<td>1.30%</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.75%</td>
<td>0.55%</td>
<td>1.40%</td>
<td>0.85%</td>
<td>0.85%</td>
<td>0.60%</td>
<td>0.80%</td>
<td>1.15%</td>
<td>1.50%</td>
<td>3.90%</td>
</tr>
</tbody>
</table>

**ECONOMIC BEMACRON RS TERNARY**

BEMACRON Golden Yellow RS / Carmine RS / Royal RS: Colour intensive rapid-dyeing dyes with excellent dispersion stability and a very good colour build-up already at a dyeing temperature of 120°C. Very good levelling dyeing power. High fastnesses to light, washing and chlorine.

The dyes of BEMACRON RS ternary range are bluesign® approved.

**TIMEBOOST PROCESS**

HIGH END levelness with BEMACRON RS dyes and CHT auxiliary system