

## Realan<sup>®</sup> Black MF – PV

A quantum leap in the dyeing of black on wool



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Mordant black dyes are still widely used in the market for high quality wool goods, the most common dye in this sector being the Black PV type (CI Mordant Black 9). Until now, retailers have been unable to substitute Black PV types due to their processing fastnesses used in wool finishing (potting and cross dyeing).

Even though Black PV types can be dyed without ecological and health and safety issues, textile manufacturers are pressured by retailers to avoid mordant dyes.

Moreover, dyes based on CI Reactive Black 5 are unable to reach high levels of processing requirements. They are also very red under various color sources and in addition, they provide very poor fiber coverage.

Realan<sup>®</sup> Black MF - PV is DyStar's perfect solution to these problems.

### **Features and benefits**

- ☞ A completely new patented black for wool that is not based on CI Reactive Black 5
- ☞ Identical in shade and metamerism to CI Mordant Black 9 types (e.g. Black PV types)
- ☞ Wet processing fastnesses (potting, X-dyeing, hot water and milling) even better than CI Mordant Black 9 types
- ☞ Excellent fiber coverage, far superior to CI Reactive Black 5 types and even better than Mordant blacks

### **ECO Profile**

- ☞ No MAK amines generated by reductive cleavage according to EU Directive 2002/61/EEC and German Consumer Goods Ordinance
- ☞ APEO and AOX free
- ☞ Heavy metal free
- ☞ Full compliance with Oeko-Tex<sup>®</sup> Standard 100
- ☞ Meets relevant Restricted Substance Lists (RSL)
- ☞ bluesign<sup>®</sup> approved



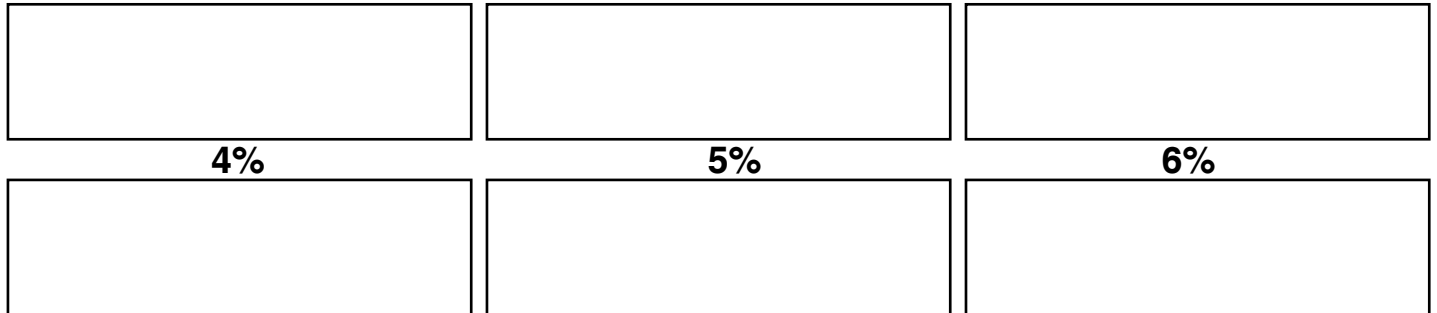
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## The shade and metamerism are identical to CI Mordant Black 9

### CI Mordant Black 9



### Realan® Black MF-PV

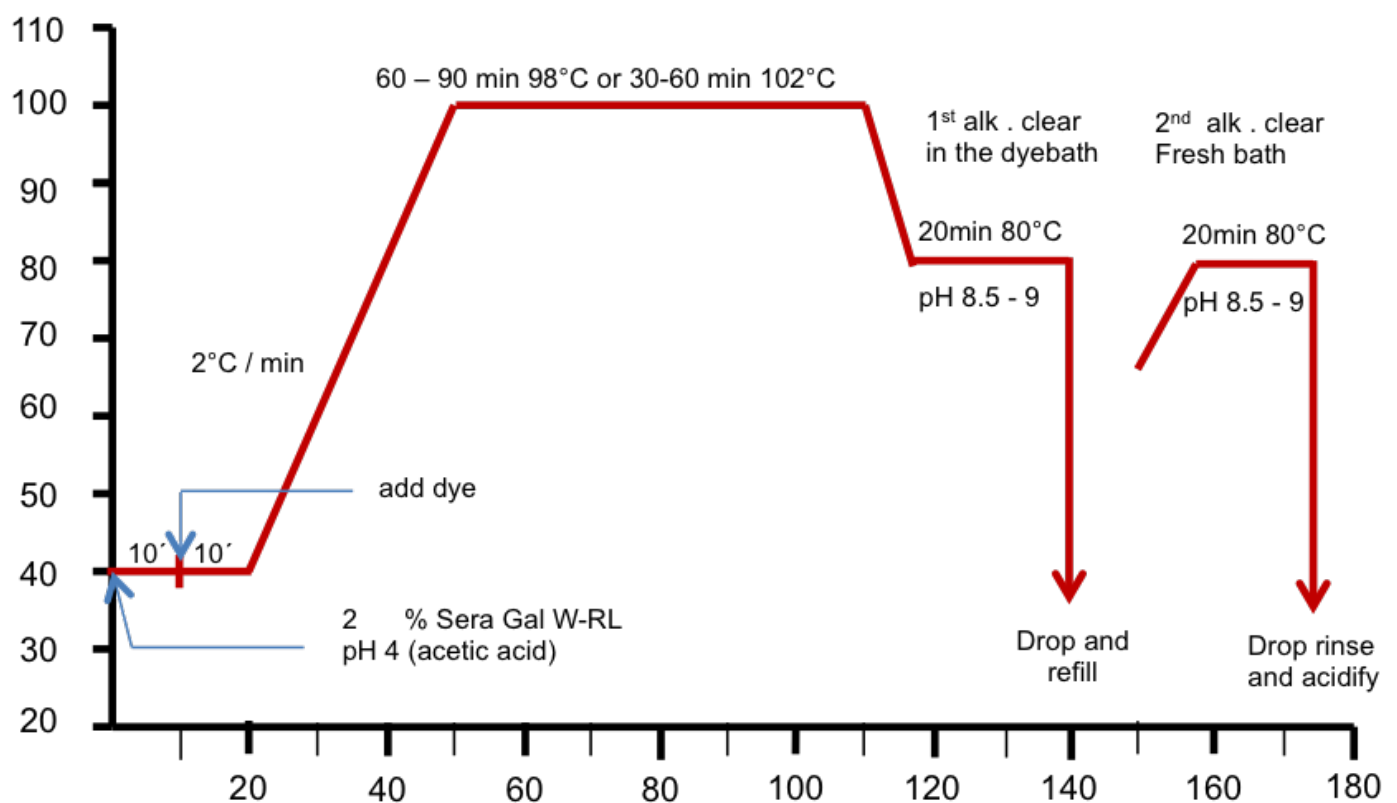
## CMC shade / strength difference

4% Black PV 200% types versus 4% Realan Black MF-PV

|         | $\Delta E$ | $\Delta L$ | $\Delta C$ | $\Delta H$ |
|---------|------------|------------|------------|------------|
| D65 10° | 0.38       | 0.16       | -0.24      | 0.25       |
| A 10°   | 0.49       | 0.13       | -0.34      | 0.33       |
| F11 10° | 0.46       | 0.13       | -0.38      | 0.23       |

## Dyeing Cycle

The dyeing cycle is a simple reactive dyeing process used for wool





## Wet fastness of Realan<sup>®</sup> Black MF-PV proves to be better than CI Mordant Black 9

Wet processing fastnesses (potting, X-dyeing, hot water and milling) are even better than CI Mordant Black 9 types.

### Realan<sup>®</sup> Black MF-PV

**X-Dyeing ISO 105-X07 (acetic)**

**Potting ISO 105-E09**

**4%**



**5%**



**6%**



### Fiber coverage

One major consideration in wool dyeing is solidity in black shades. As wool is a natural protein fiber that has been exposed to weathering during its growing cycle, it can dye skittery especially with CI Reactive Black 5 types. Furthermore, wool is often dyed in blends of various qualities that often show up in dyeing.

The illustration is a 50/50 mix of low quality coarse wool mixed together with very fine lambs wool. The fiber coverage is superb.



|                                     |              | Realan® Black MF-PV | Black PV types |
|-------------------------------------|--------------|---------------------|----------------|
| 1/1 Standard depth                  | % Dyestuff   | 4                   | 4              |
| Light fastness<br>ISO 105-B02       | 1/1 S.D.     | 6                   | 7              |
| Fastness to water (severe)          | Shade change | 5                   | 5              |
| ISO 105-E01                         | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Perspiration fastness (acid)        | Shade change | 5                   | 5              |
| ISO 105-E04                         | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Perspiration fastness<br>(alkaline) | Shade change | 5                   | 5              |
| ISO 105-E04                         | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Washing Fastness 50°C               | Shade change | 5                   | 5              |
| ISO 105-C02                         | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Washing Fastness 60°C               | Shade change | 5                   | 5              |
| ISO 105-C03                         | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Laundry 50°C                        | Shade change | 5                   | 5              |
| ISO 105-C06 B2                      | Stain Wo     | 5                   | 5              |
|                                     | Stain CO     | 5                   | 5              |
| Milling fastness alk. (severe)      | Shade change | 4-5                 | 4-5            |
| ISO 105-E12                         | Stain Wo     | 5                   | 4-5            |
|                                     | Stain CO     | 5                   | 4-5            |
| Hot water fastness 70°C             | Shade change | 4-5                 | 4-5            |
| ISO 105-E08                         | Stain Wo     | 5                   | 4-5            |
|                                     | Stain CO     | 5                   | 4-5            |
| Potting fastness                    | Shade change | 4-5                 | 4-5            |
| ISO 105-E09                         | Stain Wo     | 4-5                 | 4              |
|                                     | Stain CO     | 4-5                 | 4-5            |
| Cross dyeing (acetic)               | Shade change | 4-5                 | 4-5            |
| ISO 105-X07                         | Stain Wo     | 4-5                 | 4-5            |
|                                     | Stain CO     | 5                   | 3-4            |
| Carbonising neutralised             | Shade change | 4-5                 | 4-5            |
| ISO 105-X02                         |              |                     |                |
| Decatising (severe)                 | Shade change | 4-5                 | 4-5            |
| ISO 105-E10                         |              |                     |                |
| Rubbing dry/wet                     | Dry          | 4-5                 | 4-5            |
| ISO 105-X12                         | Wet          | 3                   | 3              |

*Committed to Sustainability.*

At DyStar, our products and services help customers worldwide reduce costs, shorten lead times and meet stringent quality and ecological specifications.



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