HOT CURE RETREADING
Process and product data
HOT CURE RETREADING
process – advantages - disadvantages

Hot cure retreading involves vulcanisation of the tyre to be reconditioned in a mould at a temperature of 150°C. The tread and sidewalls of the tyre are constructed of an uncured rubber mixture. Shaping and tread formation take place in a tyre press.

ADVANTAGES
- Suitable for all tyre uses, also for passenger car and aircraft tyres.
- Material prices lower than for higher grade products processed using cold cure retreading.
- Hot cure retreading allows extensive repairs on the tyre carcass (e.g. belt renewal).
- Diagonal carcasses can also be reconditioned using hot cure retreading without any problem.

DISADVANTAGES
- Each tread and each dimension of tyre A requires its own mould. This involves a high investment in the mould programme which needs to be continually updated.
- Production must be geared to a large number of units. This requires a central production plant, a wide activity radius and consequently a relatively high logistics spend.
- The mileage results are generally lower than for cold cure retreading.

www.kraiburg-retreading.com
### HOT CURE RETREADING
Passenger car summer tyres – tread compounds

#### PRODUCT DESIGNATION
- PK-ASE
- PK-S
- PK-E
- PK-EV
- PK-HR

#### Short description
- Speed Index up to and including
- Delivery forms

#### Tyre properties
- Hardness in Shore A
- Mileage
- Grip on dry and wet road

#### Processing properties
- Extrudability on
  a) Stripwinding extruder
  b) Raw rolling strip extruder
- Bondability of the tyres
  a) to each other
  b) to the carcass
- Solvent-free processing
- Vulcanisation speed

#### Tyre properties
- Area of application
- Hardness in Shore A
- Mileage
- Grip on dry and wet road
- Winter properties
- Suitable for all year profile

#### Processing properties
- Extrudability on
  a) Stripwinding extruders
  b) Raw rolling strip extruders
- Bondability of the tyres
  a) to each other
  b) to the carcass
- Solvent-free processing
- Vulcanisation speed

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### HOT CURE RETREADING
Passenger car - winter tyres – tread compounds

#### PRODUCT DESIGNATION
- KR-S
- KR-TH
- KR-H
- KR-SITEC

#### Short description
- Speed Index up to and including
- Delivery forms

#### Tyre properties
- Area of application
- Hardness in Shore A
- Mileage
- Grip on dry and wet road
- Winter properties
- Suitable for all year profile

#### Processing properties
- Extrudability on
  a) Stripwinding extruders
  b) Raw rolling strip extruders
- Bondability of the tyres
  a) to each other
  b) to the carcass
- Solvent-free processing
- Vulcanisation speed

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*Very often dependent on the age of the extruder!
### HOT CURE RETREADING

#### Truck standard - rolling surface mixtures

<table>
<thead>
<tr>
<th>PRODUCT DESIGNATION</th>
<th>ECON-H-02</th>
<th>ECON-H-03</th>
<th>ECON-H-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td>Truck standard</td>
<td>Truck - tear-resistant</td>
<td>Truck - wear-resistant</td>
</tr>
<tr>
<td>- Recommended use</td>
<td>Mixed use (road, building site)</td>
<td>Mixed use (road, building site)</td>
<td>Local traffic (road)</td>
</tr>
<tr>
<td>- Axle position</td>
<td>Traction and rolling tyres</td>
<td>Traction and rolling tyres</td>
<td>Traction and rolling tyres</td>
</tr>
<tr>
<td>- Delivery forms</td>
<td>Lining strips/raw rolling strips</td>
<td>Lining strips/raw rolling strips</td>
<td>Lining strips/raw rolling strips</td>
</tr>
</tbody>
</table>

#### Tyre properties

- **Area of application**
  - Mixed use (road, building site)
  - Traction and rolling tyres
  - Lining strips/raw rolling strips

- **Hardness in Shore A**
  - 63 satisfactory, acceptable, conditionally for high continuous speed and high ambient temperatures suitable
  - 64 good, acceptable, conditionally for high continuous speed and high ambient temperatures suitable
  - 62 good, acceptable, conditionally for high continuous speed and high ambient temperatures suitable

- **Heat build-up**
  - very good
  - very good
  - adequate

- **Tear and break-resistance**
  - good
  - very good
  - adequate

#### Processing properties

- **Extrudability on**
  - Stripwinding extruders: very good
  - Raw rolling strip extruders: very good

- **Bondability of the tyres**
  - a) to each other: very good
  - b) to the carcass: very good

- **Solvent-free processing**
  - possible without using a cushion plate: Standard
  - only possible in connection with cushion plate: Standard

- **Vulcanisation speed**
  - Standard

@ KRAIBURG 01.01.2014 * Very often dependent on the age of the extruder!

### HOT CURE RETREADING

#### Truck high performance - rolling tyres trailer

<table>
<thead>
<tr>
<th>PRODUCT DESIGNATION</th>
<th>BASE-H-11</th>
<th>TECH-H-29</th>
<th>PLUS-H58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td>SUPERMILER-cool running</td>
<td>SUPERMILER-cool running</td>
<td>SUPERMILER-Long-distance traffic</td>
</tr>
<tr>
<td>- Recommended use</td>
<td>Mixed use (road, building site)</td>
<td>Mixed use (road)</td>
<td>Local and long distance traffic (road)</td>
</tr>
<tr>
<td>- Axle position</td>
<td>Traction and rolling tyres</td>
<td>Tractors and semi-trailers</td>
<td>Tractors and semi-trailers</td>
</tr>
<tr>
<td>- Delivery forms</td>
<td>Lining strips/raw rolling strips</td>
<td>Lining strips/raw rolling strips</td>
<td>Lining strips/raw rolling strips</td>
</tr>
</tbody>
</table>

#### Tyre properties

- **Area of application**
  - Mixed use (road, building site)
  - Local and long distance traffic (road)
  - Trailers and semi-trailers

- **Hardness in Shore A**
  - 62 satisfactory, low heat development for continuous operation and high ambient temperatures suitable
  - 63 good, very low heat development; for continuous operation and high ambient temperatures suitable
  - 66 very good, very low heat development; for continuous operation and high ambient temperatures suitable

- **Heat build-up**
  - very good
  - very good
  - very good

- **Tear and break-resistance**
  - good
  - very good
  - very good

#### Processing properties

- **Extrudability on**
  - Stripwinding extruders: restricted* good
  - Raw rolling strip extruders: restricted* good

- **Bondability of the tyres**
  - a) to each other: good
  - b) to the carcass: good

- **Solvent-free processing**
  - possible without using a cushion plate: Standard
  - possible without using a cushion plate: Standard

- **Vulcanisation speed**
  - Standard

@ KRAIBURG 01.01.2014 * Very often dependent on the age of the extruder!
### PRODUCT DESIGNATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short description</strong></td>
<td>SUPERMILER-Allround Mixed use (road, building site) Traction</td>
<td>SUPERMILER-Long-distance tr. Local and long distance traffic (road) Traction</td>
<td>SUPERMILER-Long-distance tr. Local and long distance traffic (road) Traction</td>
<td>SUPERMILER-Long-distance tr. Local and long distance traffic (road) Traction</td>
</tr>
<tr>
<td>- Recommended use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Axle position</td>
<td>Lip running strips</td>
<td>Lip running strips</td>
<td>Lip running strips</td>
<td>Lip running strips</td>
</tr>
<tr>
<td>- Delivery forms</td>
<td>Lining strips/ raw running strips</td>
<td>Lining strips/ raw running strips</td>
<td>Lining strips/ raw running strips</td>
<td>Lining strips/ raw running strips</td>
</tr>
<tr>
<td><strong>Tyre properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Area of application</td>
<td>highly tear-resistant mixture</td>
<td>balanced allround mixture suitable for retreading heavily pleated treads</td>
<td>high performance mixture suitable for retreading block treads</td>
<td>high performance mixture suitable for retreading heavily pleated treads</td>
</tr>
<tr>
<td>- Hardness in Shore A</td>
<td>64 good</td>
<td>66 satisfactory</td>
<td>67 very good</td>
<td>66 very good</td>
</tr>
<tr>
<td>- Winter properties</td>
<td>very good</td>
<td>very good</td>
<td>satisfactory</td>
<td>very good</td>
</tr>
<tr>
<td><strong>Processing properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Extrudability on a) Stripwinding extruders</td>
<td>restricted good</td>
<td>restricted good</td>
<td>restricted good</td>
<td>restricted good</td>
</tr>
<tr>
<td>b) Raw rolling strip extruders</td>
<td>restricted good</td>
<td>restricted good</td>
<td>restricted good</td>
<td>restricted good</td>
</tr>
<tr>
<td>- Bondability of the tyres a) to each other</td>
<td>very good</td>
<td>very good</td>
<td>very good</td>
<td>very good</td>
</tr>
<tr>
<td>b) to the carcass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Solvent-free processing</td>
<td>possible without using a cushion plate</td>
<td>possible without using a cushion plate</td>
<td>possible without using a cushion plate</td>
<td>possible without using a cushion plate</td>
</tr>
<tr>
<td>- Vulcanisation speed</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
</tr>
</tbody>
</table>

### Tyre properties

- **Area of application**
  - balanced allround mixture suitable for retreading heavily pleated treads
  - high performance mixture suitable for retreading block treads
  - high performance mixture suitable for retreading heavily pleated treads
- **Hardness in Shore A**
  - 66 satisfactory
  - 67 very good
  - 66 very good
- **Tear and break-resistance**
  - very good
  - very good
  - very good

### Processing properties

- **Extrudability on**
  - a) Stripwinding extruders restricted good
  - b) Raw rolling strip extruders restricted good
- **Bondability of the tyres**
  - a) to each other very good
  - b) to the carcass good
- **Solvent-free processing**
  - possible without using a cushion plate
- **Vulcanisation speed**
  - Standard

*Very often dependent on the age of the extruder!
## HOT CURE RETREADING

**Side wall material and rubber solution**

<table>
<thead>
<tr>
<th>PRODUCT DESIGNATION</th>
<th>Side plate</th>
<th>Rubber solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td></td>
<td>KRAIBURG solution</td>
</tr>
<tr>
<td>- Recommended use</td>
<td>High quality bead-to-bead retreading of all tyre types</td>
<td>Assembly aid between carcass and rolling surface material or side wall contains petrol ★ Ensure work safety! Stir before use!</td>
</tr>
<tr>
<td>- Area of application</td>
<td>car, truck, EM tyres</td>
<td>- N-hexane-low solution (&lt;3% N-hexane) - for spraying and spreading - can be used in all common spray systems - Special petrol 60/95★</td>
</tr>
<tr>
<td>- Properties</td>
<td>wear-resistant, ozone-resistant, high dynamic strength</td>
<td>★ quick drying</td>
</tr>
<tr>
<td>- Designs</td>
<td>calendered plate</td>
<td>Petrol solution with 10%, 12% or 17% dry content</td>
</tr>
<tr>
<td>- Solvent-free processing</td>
<td>yes</td>
<td>under appropriate conditions</td>
</tr>
<tr>
<td>Delivery forms</td>
<td>Calendered plate, lining strip</td>
<td>Solution in buckets</td>
</tr>
<tr>
<td>- Perforation★</td>
<td>yes★</td>
<td>—</td>
</tr>
<tr>
<td>- Dusting (dull surface)★</td>
<td>yes★</td>
<td>—</td>
</tr>
<tr>
<td>- Roll width uncut★ (in mm)</td>
<td>1040</td>
<td>—</td>
</tr>
<tr>
<td>- Roll width cut to size★ (in mm)</td>
<td>from 30 to 220 mm in 5 mm steps*</td>
<td>—</td>
</tr>
<tr>
<td>- Sleeve diameter (in mm)</td>
<td>165, 320, 500</td>
<td>—</td>
</tr>
<tr>
<td>- Plate thickness★ (in mm)</td>
<td>1.0 – 1.2 = 1.6 – 2.0</td>
<td>—</td>
</tr>
<tr>
<td>- Foil colour</td>
<td>red</td>
<td>—</td>
</tr>
<tr>
<td>- Foil thickness</td>
<td>hash</td>
<td>—</td>
</tr>
<tr>
<td>- Container size</td>
<td>—</td>
<td>20 litres ± 17 kg</td>
</tr>
<tr>
<td>- Lining strip dimension</td>
<td>8 x 35</td>
<td>—</td>
</tr>
<tr>
<td>Storability</td>
<td>6 months (according to DIN 7858)</td>
<td>9 months</td>
</tr>
</tbody>
</table>

* = deviations from standard versions and dimensions only on request with minimum quantity or surcharge

**Cushion material and rolling surface plate**

<table>
<thead>
<tr>
<th>PRODUCT DESIGNATION</th>
<th>Cushion plate</th>
<th>Cushion lining strip</th>
<th>Rolling surface plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td>Bonding layer in the solvent-free retread (assembly bondability)</td>
<td>Bonding layer in the solvent-free retread (assembly bondability)</td>
<td>Truck plate</td>
</tr>
<tr>
<td>- Recommended use</td>
<td>Bonding layer in the solvent-free retread (assembly bondability)</td>
<td>Bonding layer in the solvent-free retread (assembly bondability)</td>
<td>Adaptation of the filling dimension to the mould dimension</td>
</tr>
<tr>
<td>- Area of application</td>
<td>car, truck, EM tyres</td>
<td>car, truck, EM tyres</td>
<td>Rolling surface repair material</td>
</tr>
<tr>
<td>- Properties</td>
<td>not ozone-resistant, very sticky</td>
<td>not ozone-resistant, very sticky</td>
<td>truck, EM tyres</td>
</tr>
<tr>
<td>- Designs</td>
<td>calendered plate</td>
<td>Lining strips</td>
<td>ozone-resistant, wear-resistant</td>
</tr>
<tr>
<td>- Solvent-free processing</td>
<td>yes</td>
<td>also possible for hand extruder</td>
<td>calendered plate cut/uncut</td>
</tr>
<tr>
<td>Delivery forms</td>
<td>Calandered plate</td>
<td>Lining strips</td>
<td>Calandered plate</td>
</tr>
<tr>
<td>- Roll width uncut* (in mm)</td>
<td>0.6 x 580 / 0.8 x 580</td>
<td>—</td>
<td>1.0 x 1040 / 1.2 x 1040 / 1.6 x 1040 / 1.8 x 1040 / 2.0 x 735</td>
</tr>
<tr>
<td>- Roll width cut to size* (in mm)</td>
<td>1.0 x 1040 / 1.2 x 1040 / 1.6 x 1040 / 1.8 x 1040 / 2.0 x 735</td>
<td>—</td>
<td>1.2 x 520</td>
</tr>
<tr>
<td>- Sleeve diameter (in mm)</td>
<td>1.2 x 155-260 in 10 mm steps</td>
<td>1.2 x 155-260 in 10 mm steps</td>
<td>1.2 x 155-260 in 10 mm steps</td>
</tr>
<tr>
<td>- Plate thickness* (in mm)</td>
<td>4.0 x 15 and 4.0 x 50</td>
<td>2.0 x 50 and 2.0 x 200</td>
<td>2.0 x 50 and 2.0 x 200</td>
</tr>
<tr>
<td>- Foil colour</td>
<td>blue</td>
<td>blue</td>
<td>blue</td>
</tr>
<tr>
<td>- Foil thickness</td>
<td>hash</td>
<td>hash</td>
<td>hash</td>
</tr>
<tr>
<td>- Container size</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>- Lining strip dimensions</td>
<td>7 x 40 / 10 x 50 / 5 x 25</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Storability</td>
<td>6 months</td>
<td>2 months</td>
<td>6 months</td>
</tr>
</tbody>
</table>

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