# Multi-Level Targeted Specification

go the distance™

| Specification | Rev. | Description | Current on date | Status | Approved by | |
|---|---|---|---|---|---|---|
| GM_ST706003 | 1 | FM Tread All-season UHP USA | 2019/06/12 | CRRNT QR2 | B Sathishkumar | GYO |
| | | | 2019/06/12 | CRRNT QR2 | B Sathishkumar | GYO |

| Format No | FS-R&D-Final mix compound LIMS overview | Electronically generated copy. No signature required. |
|---|---|---|

Properties

**MDR vulcanisation properties, 190°C**

| | UoM | Apollo test code |
|---|---|---|
| ML 190°C | dNm | TP013B |
| MH 190°C | dNm | TP013B |
| t90% 190°C | min | TP013B |

Controlplan / General

**Controlplan FM**

| | Sampling detail | Sampling interval | Interval type | Apollo test code |
|---|---|---|---|---|
| MDR vulcanisation properties 190°C, 0.5° | 1 | 1 | Batch | TP013B |
| RPA vulcanisation properties, 160°C | 1 | 1 | Week | TP013A |
| Durometer hardness shore A | 1 | 1 | Week | TP001AA |
| RPA payne effect | 3 (first middle last) | 1 | Run | TP014A |
| Tear strength (delft) cured 20' at 160°C | 1 | 1 | Week | TP004AB |
| Density (water dipping method) | 2 (first last) | 1 | Run | TP050A |
| Tensile testing 20' 160°C | 1 | 1 | Week | TP002AN |
| Ash content and color | 1 | 1 | Run | TC007C |

Controlplan / Gyongyoshalasz

**Controlplan FM**

| | Sampling detail | Sampling interval | Interval type | Apollo test code |
|---|---|---|---|---|
| MDR vulcanisation properties 190°C, 0.5° | 1 | 1 | Batch | TP013B |
| RPA vulcanisation properties, 160°C | 1 | 1 | Week | TP013A |
| Durometer hardness shore A | 1 | 1 | Week | TP001AA |
| RPA payne effect | 1 | 1 | Run | TP014A |
| Tear strength (delft) cured 20' at 160°C | 1 | 1 | Week | TP004AB |
| Density (water dipping method) | 3 (first middle last) | 1 | Run | TP050A |
| Tensile testing 20' 160°C | 1 | 1 | Week | TP002AN |

Processing Gyongyoshalasz / General

**Extruded densities**

| | UoM | Value |
|---|---|---|
| Extruded density PEXT-01: Quadruplex | g/cm³ | 1.162 |
| Extruded density PEXT-02: Quintoplex | g/cm³ | 1.162 |

**work away methods**

| | Value |
|---|---|
| Work away compound | 22% compensated rework in ST7018 |

**Weight tolerances Mixing**

| | UoM | Value |
|---|---|---|
| Master batch | g | 800 |
| Individual chemicals (>100 gram) | g | 10 |
| Individual chemicals (<100 gram) | g | 5 |
| Chemical bag | g | 150 |

Processing Gyongyoshalasz / MMXFB1: BM305N - Final Mixer

**volgnummer**

| | Value |
|---|---|

**apollo**

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**volgnummer**    **10**

## Recipe no.

| | Value |
|---|---|
| Recipe no. | GMST706003 |

## BOM alternative

| | Plant | Usage |
|---|---|---|
| BOM alternative | Gyo | Prod |

## Mixerproperties

| | UoM | Target |
|---|---|---|
| Load factor | % | 73.40 |
| Mixervolume | liter | 269.00 |
| Total batch weight | kg | 240.00 |
| Total batch volume | liter | 197.45 |
| First component weight | kg | 236.39 |

## Mixing instruction

| | Mixing cycle | Ram position | Rotor speed (rpm) | Time (s) |
|---|---|---|---|---|
| Step 1 | Add masterbatch and chemicals | Up | 30 | 20 |
| Step 2 | Ram Down | . | . | . |
| Step 3 | Ram up / Ram down | . | . | . |
| Step 4 | Ram up / Ram down | . | . | . |
| Step 5 | Ram floating | . | . | . |

## Process parameters dump mill

| | UoM | LSL |
|---|---|---|
| Temperature surface stockblender roll | °C | 40 |
| Temperature surface mill | °C | 35 |

## Process parameters Hold mill

| | UoM | LSL |
|---|---|---|
| Temperature surface stockblender roll | °C | 40 |
| Temperature surface mill | °C | 35 |

## Process parameters sheeting mill

| | UoM | LSL |
|---|---|---|
| Temperature surface stockblender roll | °C | 45 |
| Gauge sheet | mm | 5 |
| Temperature surface mill | °C | 35 |

## Temperature TCU

| | UoM | LSL |
|---|---|---|
| Temperature TCU rotor | °C | 40 |
| Temperature TCU body / chamber | °C | 40 |

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Processing Gyongyoshalasz / MMXFB2: BM305N - Final Mixer

**volgnummer**

| | Value |
|---|---|
| **volgnummer** | **20** |

**Recipe no.**

| | Value |
|---|---|
| **Recipe no.** | **GMST706003** |

**BOM alternative**

| | Plant | Mixer |
|---|---|---|
| **BOM alternative** | **Gyo** | **MMXFB2** |

**Mixerproperties**

| | UoM | Target |
|---|---|---|
| **Load factor** | **%** | **73.40** |
| **Mixervolume** | **liter** | **269.00** |
| **Total batch weight** | **kg** | **240.00** |
| **Total batch volume** | **liter** | **197.45** |
| **First component weight** | **kg** | **236.39** |

**Mixing instruction**

| | Rotor speed (rpm) |
|---|---|
| **Step 1** | **30** |
| **Step 2** | **30** |
| **Step 3** | **25** |
| **Step 4** | **15** |
| **Step 5** | **30** |

**Temperature TCU**

| | UoM | LSL |
|---|---|---|
| **Temperature TCU rotor** | **°C** | **40** |
| **Temperature TCU body / chamber** | **°C** | **40** |
| **Temperature TCU discharge door** | **°C** | **55** |

SAP information

**Article group PG**

| | Value |
|---|---|
| **Article group PG** | **JD: EINDMENGSEL** |

**Packaging PG**

| | Packaging | Amount |
|---|---|---|
| **Packaging PG** | **CRM3** | **1200** |

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**Physical in product**

| | Value |
|---|---|
| **Physical in product** | Yes |

**Weight**

| | Value |
|---|---|
| **Weight** | 240 |

**Article type**

| | Value |
|---|---|
| **Article type** | I: Halffabrikaten Alternatief |

**Aging SAP**

| | UoM | Value |
|---|---|---|
| **Aging (minimal)** | hours | 8 |
| **Aging (Maximal)** | day | 15 |

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