

Certificate of Analysis

Black Masterbatch

Product Description

CB40LLPA is suitable for use with polyolefins. CB40LLPA contains small particle size of carbon blacks that are easily incorporated into compounds, which bring an excellent dispersion and jet-ness properties with perfect Ultra Violet (UV) and weatherability characteristics for high density polyethylene pipes. The amount of masterbatch added depends on the performance requirements of the end usage application and the carbon black contents specified in the finished product.

Typical addition rates vary from 2% to 6% masterbatch.

General

Carrier · PE

Pigment · CB

Forms · Pellets

Packaging · 750-1500 Kg PE Bag

| Physical Properties | Nominal Value unit | Test Result | Test Method |
|------------------------------------|----------------------------|-------------|-------------|
| MFR(190°C – 21.6Kg) | 3-11 g/10min | | ISO 1872 |
| Ash content (600°C) | <0.5 % | | ISO 6964 |
| Carbon black content | 40±1.5 % | | ISO 6964 |
| Density | 1.2±0.03 kg/m ³ | | ISO 567 |
| Bulk density | 620-780 kg/m ³ | | ISO 567 |
| Moisture content | max 0.15 % | | Weight loss |
| Content of Pellets with size >4 mm | max 0.2 % | | - |
| Content of Pellets with size >2 mm | max 0.5 % | | - |

Storage

CB40LLPA is supplied in pellet form packed in 750-1500 kg PP big bags. CB40LLPA should be stored in a dry place, not exposed to sunlight, at temperature below 50 C⁰. Under these conditions the product can be hold at least 24 months.

PRODUCT NAME: BLACK MASTERBATCH CB40LLPA

REVISION: REV.1

DATE: 03 August 2023

TECHNICAL SPECIFICATION

COMPOSITION

| | | |
|---------------------|-----------------------------|---|
| Carrier LLDPE | MFR @ 190°C/21.6 Density | 1.5 ÷ 2.5 g/10 min 0.918 ÷ 0.922 g/l |
| Carbon Black Type P | Content Particle Size | 40% 20 ÷ 25 nm |
| Additives | Type | Antioxidants Processing Aid |

| PROPERTIES | SPECIFICATION LIMITS | UNITS | TEST METHODS |
|---|----------------------|-------------------|--------------|
| 1. Carbon Black Content | 38.5 ÷ 41.5 | % | ISO 6964 |
| 2. Microscopic Dispersion (< 100 µm) | 3 max. | | ISO 18553 |
| 3. MFR (HLMI) @ 190°C/21.6 kg | 3.0 ÷ 11.0 | g/10 min | ISO 1872 |
| 4. Moisture @ 105°C | 0.15 max | % | Weight loss |
| 5. Content of Pellets with size > 4mm Content of Pellets with size < 2mm | 0.2 max. 0.5 max. | % % | -- |
| 6. Bulk Density | 620 ÷ 780 | kg/m ³ | ISO 567 |
| 7. Phenolic Content | 1.60 ÷ 2.20 | % | by dosing |
| 8. Phosphite Content | 1.60 ÷ 2.20 | % | by dosing |
| 9. PVDF Content | 0.16 ÷ 0.22 | % | by dosing |

PACKAGING AND STORAGE

CB40LLPA is typically available in 750-1500 kg flexible big-bags

CB40LLPA must be stored in cool dry conditions

CB40LLPA® Black Masterbatch

Product Highlights

CB40LLPA® is a high-performance polyethylene based black masterbatch offering an excellent dispersion and tint strength for use in a wide range of applications, especially when plastics are come into contact with food. It is designed to provide superior pigmentation in compounding, extrusion and film applications and is particularly recommended for drinking water pipe applications. Since it can easily incorporate into compounds, that bring an excellent dispersion and jet-ness properties with perfect Ultra-Violet (UV) and weatherability characteristics for pipes. It also has **Antioxidant** and **Polymer processing aid** to improve the final product quality and simplify the production process.

Method of Use

CB40LLPA® is designed for ease of dilution and homogeneous mixing and is therefore suitable for direct addition using automatic dosing units or by pre-blending.

Addition rate

The amount of masterbatch added depends on the performance requirements of the final application. Typical addition rates vary from 1% to 6% masterbatch.



| PROPERTIES | | | |
|-------------------------------------|---------------------------|-------------------|----------------|
| PROPERTY | TYPICAL VALUE | UNITS | TEST METHOD |
| Carrier | Polyethylene | - | - |
| Carbon Black Content (20-25 nm) | 40±1.5% | % wt. | ISO 6964 |
| Compatibility | LDPE, LLDPE, HDPE, PP,... | - | - |
| Density @ 23°C | 1140 | kg/m ³ | ISO 1183 |
| HLMI (Melt Index at 190°C/21.6 kg) | 3-11 | g/10 min | ISO 1133 |
| Moisture content | <0.15 | % | Weight loss |
| Volatiles at 105 °C | 0,05 | % | ISO 787-2 |
| Content of Pellets with size > 4 mm | <0.2 | % | - |
| Bulk Density | 620-780 | kg/m ³ | SP-027-PR-015* |

Storage

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