ABOUT US

Incepted in the year 1995, "Kevichem Colour Pvt. Ltd." is amongst the leading name in the industry affianced in manufacturing clarifiers for polypropylene.

Manufactured in tune with the industry set norms and quality guidelines, our offered array of products are developed making use of best grade raw inputs along with latest and cutting edge tools, technology and machinery.
KEVICHEM’S Clarifying agents were introduced in the year - 2011 to reduce haze through polynucleation of the polymer by enhancing clarity of the polypropylene.

It also reduces manufacturing cost due increased production of polypropylene, enhances aesthetics and improves physical properties.

KEVICHEM’S 3rd Generation CLARIZOL® is a new High Performance Sorbitol based clarifying agent for Polyolefin which is aimed to buckle down the limitations of former generation clarifying agents with respect to:

- TRANSPARENCY
- ORGANOLEPTICS
- PROCESS ABILITY
- NUCLEATION CAPABILITY
<table>
<thead>
<tr>
<th>Characterization</th>
<th>Reduces haze &amp; enhances the clarity of polypropylene through polynucleation of the polymer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Bis(3, 4-Dimethylidibenzylidene)sorbitol (DMDBS)</td>
</tr>
<tr>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>386</td>
</tr>
<tr>
<td>Product form &amp; Appearance</td>
<td>White Powder</td>
</tr>
<tr>
<td>Application</td>
<td>Clarizol is used for clarifying polypropylene homopolymer &amp; random copolymer.</td>
</tr>
</tbody>
</table>

**Physical Properties**

<table>
<thead>
<tr>
<th>Purity</th>
<th>&gt;96%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Range</td>
<td>255° - 262° C</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>0.3 - 0.5 Kg. / dm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>g/100g Solvent, Water - NIL</td>
</tr>
<tr>
<td>Usage</td>
<td>Used in concentration between 0.1 - 0.3% in polypropylene homopolymer &amp; random copolymer.</td>
</tr>
<tr>
<td>Application</td>
<td>Clarizol is used for clarifying polypropylene homopolymer &amp; random copolymer</td>
</tr>
</tbody>
</table>
| Features / Benefits | - Clarizol is meant for producing high clarity polypropylene  
|                  | - The product acts as a nucleating agent       |
TEST REPORT NO. : 913
Dated : 03.02.2017

Sample: Standard M Chips (PP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Clause</th>
<th>Name of the test</th>
<th>Test Method</th>
<th>Unit</th>
<th>Specified value</th>
<th>Test Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>--</td>
<td>Izod</td>
<td>ASTM D 1066</td>
<td>%</td>
<td>12.67</td>
<td></td>
</tr>
</tbody>
</table>

Sample: Sample K Chips (PP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Clause</th>
<th>Name of the test</th>
<th>Test Method</th>
<th>Unit</th>
<th>Specified value</th>
<th>Test Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>--</td>
<td>Izod</td>
<td>ASTM D 1066</td>
<td>%</td>
<td>11.75</td>
<td></td>
</tr>
</tbody>
</table>

PART - D

REMARKS : NIL

NOTE : 1. The results related only to the items tested as supplied by the party.
2. The test certificate shall not be reproduced in full except with the written approval of the laboratory.

AUTHORIZED SIGNATORY

Page 2 of 2
**DSC-TAG COMPARISON**

**STANDARD M CHIP (MILLAD - 3988)**

- Sample: 8742 (1) - STANDARD
- Size: 5.0930 mg
- File: C_8742(1) - STANDARD-001
- Run Date: 10-Feb-2017 12:00
- Instrument: STD Q600 V20.9 Build 20

**Sample K CHIP (KEVICHEM) (CLARIZOL 3G)**

- Sample: 8742 (2) - SAMPLE
- Size: 5.0340 mg
- File: C_8742(2) - SAMPLE-001
- Run Date: 10-Feb-2017 13:58
- Instrument: STD Q600 V20.9 Build 20

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**DSC-TGA**

- **MILLAD - 3988**
  - 96.69% STEP-1 (4.925mg)
  - 359.93°C SET POINT
  - Residue: 3.086% (0.1572mg)
  - Temperature: 24.36°C

- **KEVICHEM**
  - 98.64% STEP-1 (4.965mg)
  - 352.53°C SET POINT
  - Residue: 1.368% (0.06889mg)
  - Temperature: 24.31°C
DSC-TAG COMPARISON

STANDARD M CHIP (MILLAD - 3988)

SAMPLE K CHIP (KEVICHEM) (CLARIZOL 3G)

1) Heat from 30.00°C to 20.00°C/min
2) Hold for 1.0 min at 200.00°C
3) Cool from 200.00°C to 30.00°C at 20.00°C/min
4) Hold for 1.0 min at 30.00°C
5) Heat from 30.00°C to 200.00°C/min

Sample Weight: 6.550 mg
Comment: POWDER

Sample Weight: 4.550 mg
Comment: POWDER
THE ULTIMATE CHOICE - POLYPROPELENE & CLARIZOL

Package designers get the ultimate of both the world, the clarity they require with all the inbuilt benefits of polypropylene (like lower cost, lower weight, increased chemical resistance) with better impact strength due to the new clarified polypropylene based on KEVICHEM'S latest clarification technology.

In applications where polypropylene clarified with CLARIZOL® replaces Glass, packagers & marketers will not only get the desired clarity, but also their choice of polypropylene over glass will ensure an overall weight reduction in the product causes corresponding drop in shipping costs.
THE FACE OF CLARITY

Imagine the number of food, beverage, drug & household chemical applications where polypropylene cleared with CLARIZOL® might replace traditional glass packaging or perhaps more costly or less functional plastic resin materials

**Useful in all processes:**
- Injection molding
- Blow molding or
- Extrusion

Polypropylene clarified with KEVICHEM’S CLARIZOL® offers:
- Highest Clarity, Gloss & Surface smoothness
- Impact strength, moisture barrier & living hinge qualities that can't be achieved with PS (polystyrene)
Polypropylene clarified with CLARIZOL® is the right choice for most applications where product clarity is essential; application range from medical devices to packaging to consumer items used in Food & Beverages, Electronics, Pharmaceuticals, Household etc.
ADVANTAGES

Sterling Appeal : Crystal Clear PP
- Highest Clarity
- Brilliant Gloss
- Superior Surface Smoothness

Easy Processing Characteristics :
CLARIZOL® resins can be used in any fabrication process without the temperature limitation's plat - out of former clarifying agent.

Excellent Taste & Odour Properties :
Suitable for odour sensitive applications & for food contact

Outstanding Nucleation Capability :
For enhanced physical properties, faster processing & replacement of conventional nucleation in opaque applications.

continued....
INTENSIFIED PRODUCTIVITY:

PP clarified with KEVICHEM’S CLARIZOL 3G® gives unreasonable throughput & productivity.

COST EFFECTIVENESS:

The cost efficiency of PP, combined with its low density, makes it an attractive alternative to other resins.

VERSATILITY:

PP clarified with KEVICHEM’S CLARIZOL 3G® offers an excellent combination of properties such as toughness, flexibility, rigidity, moisture barrier, chemical resistance, heat resistance & suitability for food conduct.

ENHANCED PROPERTIES:

PP clarified with KEVICHEM’S CLARIZOL 3G® offers improved physical properties, particularly higher stiffness & heat distortion temperature, as compared to non-clarified PP.

WIDER PROCESS ABILITY:

KEVICHEM’S CLARIZOL 3G® does not plate-out on cooling surfaces & does not produce objectionable odours during processing.
Clear vision, Clear choice... CLARIZOL

Contact us : www.kevicchem.in