

# Chlorinated Polyethylene (CPE)

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**Application: Rubber (Wire & Cable, Industrial and Automotive Hoses, Additives)**

**PVC Products (Rigid and semi-soft PVC profiles, pipes & fittings, FR-ABS)**

**Magnetic Products (Refrigerator sealing strips, magnetic cards)**

## Control:

- Molecular Weight
- Molecular Weight Distribution
- Chlorine Content
- Crystallinity
- Heat of Fusion
- Mooney Viscosity
- Partitioning Agent

## For:

- Rubber: Excellent heat resistance, oil and weather resistance, and inherent flame retardancy for a wide range of applications.
- Economical impact modifier used in processing rigid and semi-soft PVC profiles and extrusions.
- Increase isotropic flame retardant performance as a modifier to ABS without sacrificing physical properties such as how other inorganic flame retardants would do.
- Ability to allow high loading of ferrite magnetic powder with good low temperature flexibility for refrigerator sealing strips and magnetic cards.



# Chlorinated Polyethylene (CPE) for Rubber Applications

| Type     | Application  |
|----------|--|
| CM5513   | Huge molecular weight, highest Mooney viscosity, excellent mechanical properties, suitable for rubber with extra mechanical property requirements. |
| CM1354   | High Mooney viscosity, suitable for rubber wire or other rubber products, high tensile stress at a given elongation.                               |
| CM6360   | Huge molecular weight, high Mooney viscosity, excellent mechanical properties, suitable for rubber with extra mechanical property requirements.    |
| CM8360   | High molecular weight, high Mooney viscosity, good mechanical properties, suitable for rubber products that demands good mechanical properties.    |
| CM6605   | High molecular weight, high Mooney viscosity, good mechanical properties, suitable for rubber with higher mechanical property requirements.        |
| CM1360   | Used in rubber products such as cable and wires or other rubber products.  |
| CM135B   | Used in rubber products such as cable and wires or other rubber products.  |
| CM2354   | Used in rubber products such as cable and wires or other rubber products.  |
| CM3354   | Used in rubber products such as cable and wires or other rubber products.  |
| CM5633   | Used in rubber products such as cable and wires or other rubber products.  |
| CM135B-L | Low Mooney viscosity, easy to be processed and used in formulation. Suitable for rubber products that demands lower mechanical properties.         |
| CM140B   | Mooney viscosity is moderate, better processing performance. Suitable for oil proof and flame resistant products.                                  |



# Chlorinated Polyethylene (CPE) for Rubber Applications

| Item                          | Unit | Type    |         |         |         |         |         |         |         |         |         |           |         |
|-------------------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|
|                               |      | CM 5513 | CM 1354 | CM 6360 | CM 8360 | CM 6605 | CM 1360 | CM 135B | CM 2354 | CM 3354 | CM 5633 | CM 135B-L | CM 140B |
| Chlorine Content              | %    | 35±1    | 35±1    | 36±1    | 36±1    | 36±1    | 36±1    | 35±1    | 35±1    | 35±1    | 35±1    | 35±1      | 40±1    |
| Heat of Fusion                | J/g  | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0   | ≤ 1.0     | ≤ 1.0   |
| Shore Hardness                | A    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60    | ≤ 60      | ≤ 60    |
| Tensile Strength              | Mpa  | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0   | ≥ 8.0     | ≥ 8.0   |
| Elongation at Break           | %    | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800   | ≥ 800     | ≥ 650   |
| Volatile Content              | %    | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40  | ≤ 0.40    | ≤ 0.40  |
| Mooney Viscosity (1+4, 125°C) | ML   | 92-98   | 94-102  | 94-100  | 86-94   | 80-85   | 75-80   | 72-80   | 65-72   | 55-65   | 47-55   | 42-47     | ≤ 100   |



## Chlorinated Polyethylene (CPE) for PVC Applications

| Type     | Characteristic   | Application   |
|----------|--|---|
| CPE135A  | Highest molecular weight, narrow molecular weight distribution, good mechanical properties, widely used for rigid and semi-soft PVC compounds.                         | PVC window profiles, fence, and pipes for boards and houses, folded plates, etc.  |
| CPE7035  | High molecular weight and suitable molecular weight distribution similar to Tyrin7000.   | PVC window profiles, fence, and pipes for boards and houses, folded plates, etc.  |
| CPEK135  | Suitable molecular weight, wide molecular weight distribution, and fast plasticizing.  | Fast extrusion of PVC window profiles.  |
| CPE3615E | Normal molecular weight and narrow molecular weight distribution similar to Tyrin3615P.  | PVC window profiles, pipes, injection fittings, sole materials, etc.  |
| CPE6035  | Low molecular weight and narrow molecular weight distribution similar to Tyrin6000.  | Film, profiles, sealing strips, soles, etc.   |
| CPE135C  | Low molecular weight and crystallinity, good compatibility with ABS, best flow-ability used for model products, and can improve flame resistance and impact toughness. | For flame resistant ABS compounds.  |
| CPE235C  | Low molecular weight and crystallinity, good compatibility with ABS, best flow-ability used for model products, and can improve flame resistance and impact toughness. | For flame resistant ABS compounds.  |
| CPE2500T | Low chlorinated content and crystallinity similar to Tyrin2500P.   | PVC window profiles, fence, pipes for boards, etc.  |
| CPE6025  | Low chlorinated content and high crystallinity, has good compatibility with general purpose plastic like PE.   | To improve the plasticization performance of the plastic, enhance aging resistance, low temperature resistance, and ozone resistance. |



# Chlorinated Polyethylene (CPE) for PVC Applications

| Item                                | Unit     | Type     |          |          |           |          |          |          |           |          |
|-------------------------------------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|----------|
|                                     |          | CPE 135A | CPE 7035 | CPE K135 | CPE 3615E | CPE 6035 | CPE 135C | CPE 235C | CPE 2500T | CPE 6025 |
| Chlorine Content                    | %        | 35±2     | 35±2     | 35±2     | 36±1      | 35±2     | 35±2     | 35±2     | 25±1      | 25±1     |
| Heat of Fusion                      | J/g      | ≤ 2.0    | ≤ 2.0    | ≤ 2.0    | ≤ 2.0     | ≤ 2.0    | ≤ 3.0    | ≤ 10.0   | ≤ 5.0     | 20-40    |
| Shore Hardness                      | A        | ≤ 65     | ≤ 65     | ≤ 65     | ≤ 65      | ≤ 65     | ≤ 65     | ≤ 75     | ≤ 65      | ≤ 70     |
| Tensile Strength                    | Mpa      | ≥ 8.0    | ≥ 8.0    | ≥ 8.0    | ≥ 8.0     | ≥ 8.0    | ≥ 6.0    | ≥ 6.0    | ≥ 8.0     | ≥ 8.0    |
| Elongation at Break                 | %        | ≥ 700    | ≥ 700    | ≥ 700    | ≥ 700     | ≥ 700    | ≥ 600    | ≥ 600    | ≥ 700     | ≥ 600    |
| Volatile Content                    | %        | ≤ 0.40   | ≤ 0.40   | ≤ 0.60   | ≤ 0.40    | ≤ 0.40   | ≤ 0.40   | ≤ 0.40   | ≤ 0.60    | ≤ 0.40   |
| Sieve Residue (30 mesh)             | %        | ≤ 2.0    | ≤ 2.0    | ≤ 2.0    | ≤ 2.0     | ≤ 2.0    | ≤ 2.0    | ≤ 2.0    | ≤ 2.0     | ≤ 2.0    |
| Non-Ferrous Particles               | pcs/100g | ≤ 40     | ≤ 40     | ≤ 40     | ≤ 40      | ≤ 40     | ≤ 20     | ≤ 20     | ≤ 40      | ≤ 40     |
| ML <sub>21.6</sub> <sup>190°C</sup> | g/10min  | 2.0-3.0  | 3.0-4.0  | 7.5-9.5  | --        | --       | --       | --       | --        | --       |

