

YOUR POLYMERS LABORATORY

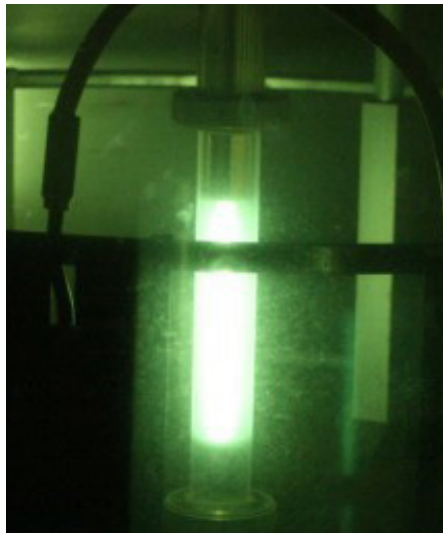
RESEARCH & DEVELOPMENT, TESTING, EVALUATION, EXPERTISE

CTT Group is a service center dedicated to polymers performance evaluation, compliance to specifications and durability evaluation.



■ WEATHERING AND AGING

- Heat aging
ASTM D3045, D573, D572
- Salt spray
ASTM B117
- Stress-cracking
ASTM D1693, D5397, F2136
- UV Exposure - Fluorescent UV
ASTM G154, D4329, D4587
- UV exposure - Xenon arc
ASTM G155, D2565, D4459, D6695
- UV exposure using carbon arc
ASTM G153
- Chemical immersion
ASTM D5322, EN 14414, EN 14030
- Creep resistance
ASTM D2990, D6992, D7361,
EN ISO 3431, ISO TR 20432
- Soil burial
ASTM G160, EN 12225
- Thermal cycling
ASTM D2126, D7615



■ MECHANICAL PROPERTIES

- Abrasion resistance - Taber
ASTM D4060, D1044
- Abrasion resistance - Coatings
ASTM D6279
- Compressive properties - Rubber
ASTM D575
- Compressive properties - Plastics
ASTM D695
- Compression set - Rubber
ASTM D395, D1229
- Flexural properties - Insulation
ASTM C203
- Flexural properties - Plastics
ASTM D790
- Flexural properties composites
ASTM D4476, D4476M, D 2344, D 2344M
- Impact resistance - Izod
ASTM D256
- Impact resistance - Plastic sheet
ASTM D5420, D4226, D3763

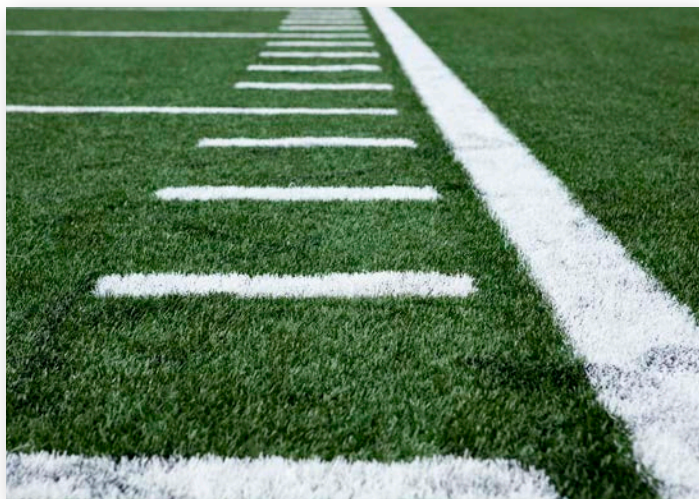


- Impact resistance - Plastic film
ASTMD1709, D7192
- Puncture resistance
ASTM D5748, F1306, FFTMS 101C-2065.1
- Static and kinetic coefficients of friction
ASTM D1894
- Tear resistance - Propagation tear
ASTM D1922
- Tear resistance - Trouser
ASTM D1938
- Tear resistance - Grave
ASTM D624, D1004

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■ PERMEANCE TESTING

- Water vapour transmission
ASTM F1249, E96, E96M
- Oxygen gas transmission rate
ASTM D3985
- Hydrocarbon transmission rate
ASTM D814
- Gas permeability (Methane, CO₂)
ASTM D1434

■ THERMAL ANALYSIS

- Coefficient of thermal expansion
ASTM E831, D696
- Composition analysis TGA
ASTM E1131
- Glass transition temperature DSC
ASTM E1356, D7426, E2602
- Melt/ Crystallisation characteristics
ASTM E794, E793, D3418
- Oxidative induction time DSC
ASTM E3895, D5885
- Thermal stability TGA
ASTM E2550

■ CHEMICAL

- Chemical exposure
- Permeation durability to challenge chemicals
- Toxicity
- VOCs Analysis

■ SPECIALIZED EQUIPMENT

- HPLC-MS
- GC-MS
- HS-GC-MS
- TD-GC-MS
- FT-IR

■ OPTICAL PROPERTIES

- Color, yellowness, whiteness
ASTM E308, ASTM E313, ASTM D2244, AATCC EP 9
- Gloss
ASTM D523 / D2457
- Haze & transparency
ASTM D1003, ASTM D1044
- Solar energy transmittance and reflectance
ASTM E424, ASTM E903, ASHRAE 74
- Reflectance
ASTM E1477

■ SURFACE PROPERTIES

- Wetting tension
ASTM D2578
- Resistance of organic coatings
ASTM D2794
- Adhesion of coatings by tape test
ASTM D3359

- Evaluation of paints
ASTM D1654-08, ASTM D661, ASTM D714, ASTM D772
- Surface tension of solid coatings
ASTM D7490-08
- Contact angle of polymer film
ISO15989:2008, ASTM D 5946
- Hydrophobic contamination on glass
ASTM C813 - 90 (2014)

■ PHYSICAL PROPERTIES

- Ash content
ASTM D5630, D2584
- Carbon black content
ASTM D1603, D4218, ISO/6964
- Density
ASTM D792, ISO 1183
- Hardness
ASTM D2240, ISO 868, ASTM D2583
- Melt flow index
ASTM D1238, ISO 1133
- Water absorption
ASTM D 570, D2842