CLEAR HARD COATINGS FOR ACRYLIC AND POLYCARBONATE DISPLAY FILTERS

API’s optical hard coatings are available in clear and non-glare finishes. Our hard coatings can greatly improve the chemical and scratch resistance of both acrylic and polycarbonate.

Clear Hard Coatings
Gardner Gloss Reading – N/A
Substrate Availability – Acrylic or Polycarbonate
Composition – Cross Linked Acrylic
Uses – Any application where scratch resistance is needed, but external light reflections are not an issue. Very good scratch resistance.

Anti-Glare Clear Hard Coatings
Gardner Gloss Reading – 75 and 54
Substrate Availability – Acrylic or Polycarbonate
Composition – Cross Linked Acrylic
Uses – 75 = Ideal for low to medium light applications. Display resolution is good.
54 = Ideal for very bright light applications. Display resolution is fair.

Hard Coating Performance Specifications
Scratch (Abrasion) Resistance 75 and 54 Gloss High Resolution Diffusion-Hard Coats (HRD-HC)
Haze% (1)
Steel-Wool Scratch (2) – Uncoated-31.1 – Coated-0.4
Taber Abrasion (3) – Uncoated-26.2 – Coated – 3-4 (4)
1. Haze: ASTM D-1003
2. Steel-Wool Scratch: Steel-wool rotary test representing severe scratching using a #0000 steel-wool pad at 24 psi for 100 rotations.
3. Taber Abrasion: ASTM D-1044 (CS10F wheel with 500-gram load).
4. 100 Cycles

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**Chemical Resistance**

- **Gasoline** – 75 and 54 Gloss – M
- **Toluene** – 75 and 54 Gloss – S
- **Acetone** – 75 and 54 Gloss – S
- **Ethanol** – 75 and 54 Gloss – L
- **Trichloroethylene** – 75 and 54 Gloss – S
- **5% Ammonia** – 75 and 54 Gloss – S
- **10% Caustic Soda** – 75 and 54 Gloss – S
- **50% Caustic Soda** – 75 and 54 Gloss – S
- **10% Sulfuric Acid** – 75 and 54 Gloss – L

- L- Long-term contact, 24+ hours
- S- Short-term contact, up to 1 hour
- M- Medium-term contact, up to 8 hours
- X- Immediate attack

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**Coating Composition**

*Clear Hard Coatings, 54 and 75 Gloss*

- Organic Cross Linked Acrylic
- Spray Coated
- Radiation Cured (UV)