Guide to the UL Solutions Yellow Card™

Understanding the Plastics Recognition Program

What is a UL Solutions Yellow Card™?

The UL Yellow Card Plastics Recognition Program is a globally recognized program that provides third-party certification of the quality, safety and performance of plastic materials.

Contact us for more information

The UL Solutions Yellow Card (or Plastics Recognition Program) is a digital product information card that lists substantial safety and performance-related properties for a polymeric material tested by UL Solutions to appropriate standards. A Yellow Card is automatically issued when polymeric materials receive a UL Recognized Component Mark.

The additional UL Solutions White Card provides information with respect to testing performed to international standards (ISO, IEC).

Certified materials are added to the UL Product iQ® and UL Prospector® databases, which are used by thousands of designers, engineers and suppliers to find providers of recognized materials and components.

Benefits for material manufacturers

The Yellow Card is the ideal recognition for manufacturers of materials or components to promote products and their tested properties to global markets and potential customers.

Benefits for material users

The Yellow Card provides confidence that a material will continue to meet requirements for specific applications. Using UL Solutions tested and certified components — identifiable through the UL Recognized Component Mark on the Yellow Card — can also save time and money. By eliminating the need for further material testing, it can shorten the path to certain certifications.

Datasheet view of a UL Solutions Yellow Card on **iq.ulprospector.com**

Reading the Yellow Card™

Guide information and access to UL Solutions Yellow Cards

Contact us for more information

Here is an example of a UL Solutions Yellow Card.

You can find relevant safety and performance ratings such as:

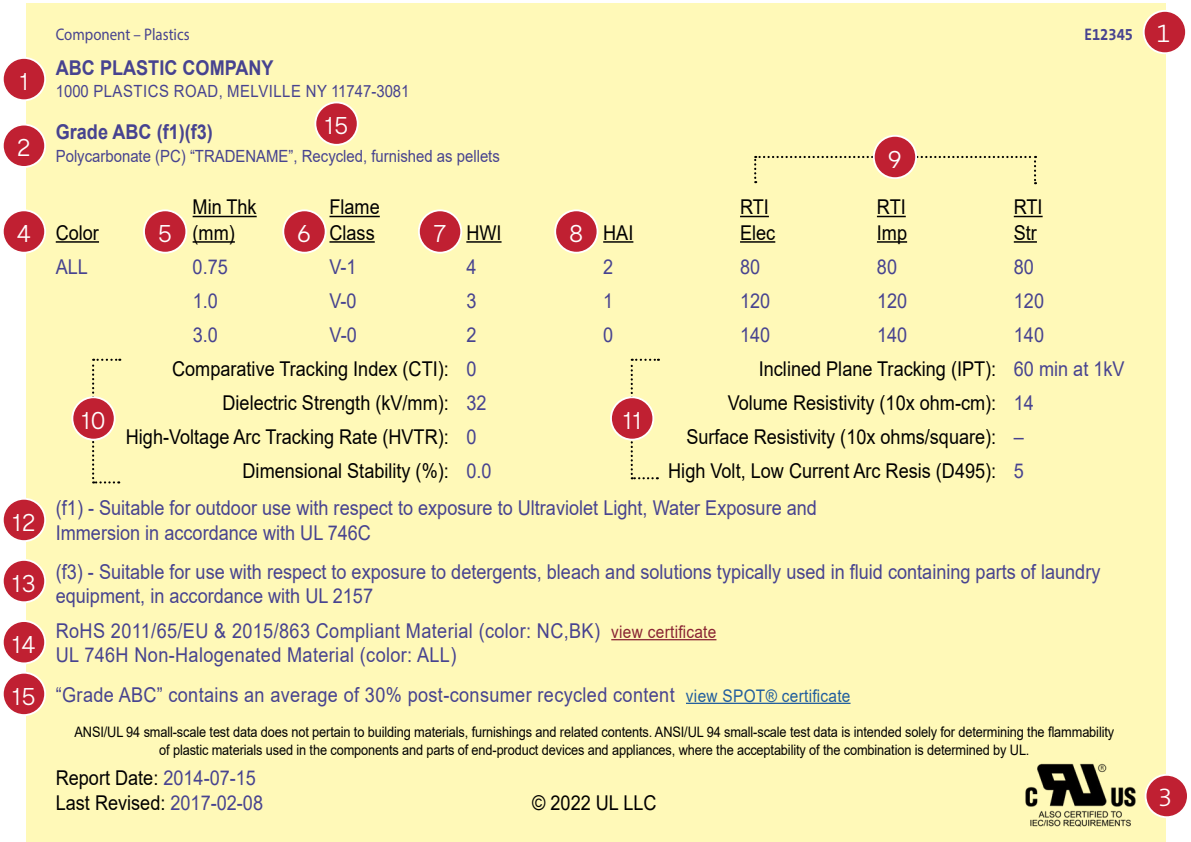
- Ignition and burning characteristics from open flame and electrical sources
- Electrical, physical and mechanical characteristics
- The effect of exposure to elevated temperatures, water, ultraviolet rays, chemical fluids, etc.

Verified ratings related to Sustainability or Restricted Substances can also be found on the Yellow Card, such as:

- Recycled material, including source and percentage of the recycled content
- Restriction of Hazardous Substances (RoHS) compliance
- Non-Halogenated material compliance

Click on a number to learn more about ratings and how they can help reduce testing in the end-product application.

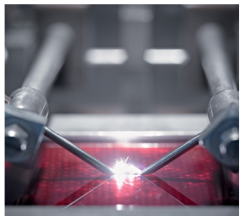
Click a number to learn more



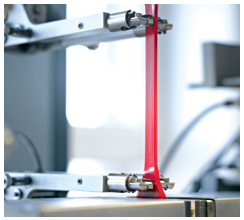
Example Yellow Card – other information and ratings may be shown.

Reading the White Card™

IEC Glow-Wire Flammability/
IEC Glow-Wire Ignition



IEC Comparative Tracking Index



ISO Tensile Strength

The White Card provides information regarding testing performed to international standards (ISO, IEC).

Test results include:

- IEC test method based flammability rating, which is harmonized with UL 94 flammability testing.
- The Glow-Wire Test measures the materials ability of resistance to ignition as well as ability to extinguish once ignition occurs. The Glow-Wire Flammability Index (GWFI) is the temperature at which the material will extinguish within 30 seconds after the glow wire tip removal. The Glow-Wire Ignition Temperature (GWIT) is the temperature at which ignition occurs.
- The IEC standard for the Comparative Tracking Index (CTI) differs from the ASTM standard in the evaluation of the results, among other things. An IEC Material Group (classing system) is applicable for the results.
- The ball pressure temperature and the heat defelection are both short-term thermal softening evaluation methods.
- Other mechanical testing such as tensile strength, flexural strength and three different impact tests.

IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.4	V-0 (BK)
			0.75	V-0 (BK)
			1.5	V-0 (BK)
			3.0	V-0 (BK)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	0.4	960
			0.75	960
			1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	0.4	960
			0.75	960
			1.5	700
			3.0	700
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	3.0	CTI600
		Material Group		I
IEC Ball Pressure	IEC 60695-10-2	°C	3.0	130
ISO Heat Deflection (1.80 MPa)	ISO 75-2	°C	3.0	124
ISO Tensile Strength	ISO 527-2	MPa	3.0	60
ISO Flexural Strength	ISO 178	MPa	3.0	55
ISO Tensile Impact	ISO 8256	kJ/m^2	3.0	40
ISO Izod Impact	ISO 180	kJ/m^2	3.0	70
ISO Charpy Impact	ISO 179-2	kJ/m^2	3.0	9.0

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ALSO CERTIFIED TO IEC/ISO REQUIREMENTS

Example White Card – other information and ratings may be shown

Overview of UL Standards

Guide information and access to UL Solutions Yellow Cards

Contact us for more information

UL 94
Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

Access to standard

UL 746A
Standard for Polymeric Materials – Short Term Property Evaluations, including:

- HWI – Hot Wire Ignition
- HAI – High Arc Ignition
- Short term thickness independent properties

Access to standard

UL 746B
Standard for Polymeric Materials – Long Term Property Evaluations, including:

- RTI – Relative Thermal Index

Access to standard

UL 746C
Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, including:

- Outdoor-Use Suitability

Access to standard

UL 746D
Standard for Polymeric Materials – Fabricated Parts, including:

- Evaluations of Recycled Materials

Access to standard

UL 746H
Outline of Investigation for Non-Halogenated Materials

Access to standard

UL 746R
Outline of Investigation for Restricted Use Substances in Polymeric Materials

- RoHS

Access to standard

UL 2809
Environmental Claim Validation Procedure (ECVP) for Recycled Content

Access to standard

UL Solutions Follow-Up Services

Learn more

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