

R-Cast® ice & textures



Applications

- Decorative paneling
- Partitions
- Water features
- Signage
- Furniture
- Displays
- and more...

Attributes

- Excellent UV properties
- High impact resistance - 17x greater than glass and 4x greater than concrete
- Superb weatherability - won't yellow or show signs of aging
- Can be illuminated to enhance effect
- Customizable textures

Material Availability

- R-Cast® Acrylic
- R-Cast® Resin-based

Sizes

48" x 96" (1.22m x 2.44m)

Custom sheet sizes available upon request

Base Thicknesses

Ice	0.50" (12.7mm) • 1.00" (25.4mm)
Wave	1.00" (25.4mm)
Frost	0.25" (6.35mm)
Mist	0.25" (6.35mm)
Ovals	0.25" (6.35mm)
Squares	0.25" (6.35mm)

Custom gauges available upon request

Color Availability

- Clear
- Wave: frosted, R-Cast® Palette® library, black opaque, & white opaque
- Ice: frosted and light blue

Custom colors & tints available by special order

Textures

- Ice (Acrylic only)
- Wave (Acrylic only)
- Frost (Resin only)
- Mist (Resin only)
- Ovals (Resin only)
- Squares (Resin only)

R-Cast® ice & textures



Edge Finishes

- Saw cut
- Polished edge

Surface Finishes

- Gloss finish
- Frosted finish

Fabrication Options Available

- Forming
- Bonding
- Drilling
- Routing
- CNC Machining
- Various surface finishes
- Cutting

Warranty

2 years when using R-Cast® Palette® colors
10 years for all other materials

Care & Cleaning

To polish out scratches and restore original lustre to non-colored face, we recommend our R-Cast® Care Kit to maintain your R-Cast® Ice & Textures panels. Standard soap and water is also acceptable. Avoid using solvent-based cleaners on R-Cast® Ice & Textures. Please contact us with any questions regarding cleaners.

Manufacturing

R-Cast® Ice & Textures base materials are either monolithically cast polymethyl methacrylate (PMMA), monolithically cast from methacrylate resin, or thermoplastic polyester material. R-Cast® Ice & Textures are manufactured to meet strict internationally accepted structural standards.

FDA Approval (Acrylic & Resin)

R-Cast® Ice & Textures are approved by the U.S. Food and Drug Administration for use as a surface suitable for food preparation.

R-Cast[®] ice & textures



*Blå Lounge • Radisson Blu • Bucharest, Romania
R-Cast[®] Ice, frosted finish*

R-Cast[®] ice & textures

R-Cast[®] Acrylic Physical Properties

Property

ASTM Method

US Customary Units

Average Value

Metric Units

Average Value

MECHANICAL

Tensile Strength	ASTM-D638	psi	10800	Kg/cm ²	759
Tensile Modulus	ASTM-D638	psi	450000	Kg/cm ²	31 x 10 ³
Tensile Elongation	ASTM-D638	%	4.0	-	-
Flexural Strength	ASTM-D790	psi	16000	Kg/cm ²	1125
Compression Strength	ASTM-D695	psi	17500	Kg/cm ²	1230
Shear Strength	ASTM-D732	psi	10000	Kg/cm ²	703
IZOD Impact Strength, notched @ 1/8"	ASTM-D256	ft-lbs/inch	0.414	J/m	22.1
Rockwell Hardness (M Scale)	ASTM-D785	-	103	-	-
Deformation Under Load @ 4,000 psi @ 73°F	ASTM-D621	%	0.85	-	-

THERMAL

Heat Deflection Temperature	ASTM-D648	°F	226	°C	108
Coefficient of Expansion @ 60°F	ASTM-D696	in/in/°F	4.0 x 10 ⁻⁵	mm/mm/°C	7.2x10 ⁻⁵

MISCELLANEOUS

Water Absorption, Equilibrium, 24 hrs @ 73°F	ASTM-D570	%	0.2	-	-
Specific Gravity	ASTM-D792	-	1.19	-	-

R-Cast[®] ice & textures

R-Cast[®] Resin Physical Properties

Property

ASTM Method

US Customary Units

Average Value

Metric Units

Average Value

MECHANICAL

Tensile Strength at Break	ASTM-D638	psi	7700	Mpa	26
Tensile Modulus	ISO-527	psi	320000	Mpa	2200
Tensile Elongation	ASTM-D638	%	54	-	-
Flexural Strength	ASTM-D790	psi	11200	Mpa	79
Compression Strength	ASTM-D695	psi	8000	-	-
Shear Strength	ASTM-D732	psi	9000	-	-
IZOD Impact Strength, notched @ 1/8"	ASTM-D256	ft-lbs/inch	1.7	KJ/m ²	3.6
Rockwell Hardness (M Scale)	ASTM-D785	-	115	-	-
Deformation Under Load @ 4,000 psi @ 73°F	ASTM-D621	%	-	-	-

OPTICAL

Light Transmittance	ASTM-D1003	%	88	-	-
Haze	-	%	1.0	-	-
Refractive Index @ 77°F	ASTM-D542	-	1.57	-	-

THERMAL

Heat Deflection Temperature @ 264 psi	ASTM-D648	°F	157	°C	69
Coefficient of Expansion @ 60°F	ASTM-D696	in/in/°F	3.8 x 10 ⁻⁵	mm/mm/°C	6.8x10 ⁻⁵

MISCELLANEOUS

Water Absorption, Equilibrium, 24 hrs @ 73°F	ASTM-D570	%	-	-	-
Specific Gravity	ASTM-D792	-	1.27	-	-

R-Cast® ice & textures

Chemical Resistance - Acrylic

R = Resistant

R-Cast® Ice & Textures withstands this substance for long periods and at temperatures up to 120° F (49° C).

LR = Limited Resistance

R-Cast® Ice & Textures only resists the action of this substance for short periods at room temperature. The resistance for a particular application must be determined.

N = Non Resistant

R-Cast® Ice & Textures is not resistant to this substance. It either swelled, was attacked, dissolved or was damaged in some manner.

Plastic materials can be attacked by chemicals in several ways. The methods of fabrication and/or conditions of exposure of R-Cast® Ice & Textures as well as the manner in which the chemicals are applied, can influence final results even for "R" coded chemicals. Some of these factors are listed below.

Fabrication - Stress generated while sawing, sanding, machining, drilling, polishing, and/or forming.

Exposure - Length of exposure, stresses induced during the life of the product due to various loads, changes in temperatures, etc.

Chemical

Acetic Acid (5%)	R
Acetic Acid (Glacial)	N
Acetic Anhydride	LR
Acetone	N
Acrylic Paints & Lacquers	LR
Ammonia (aqueous solution)	R
Ammonium chloride (Saturated)	R
Ammonium Hydroxide (10%)	R
Ammonium Hydroxide (Conc.)	R
Aniline	N
Battery Acid	R
Benzaldehyde	N
Benzene	N
Bituminous Emulsion	N
Bromine	N
Butanol	LR
Butyl Acetate	N
Calcium Chloride (Saturated)	R
Calcium Hypochlorite	R
Carbon Tetrachloride	N
Cement	R
Chlorine Water	LR
Chloroform	N
Chromic Acid (40%)	N
Citric Acid (10%)	R
Cottonseed Oil (Edible)	R
Detergent Solution	R
Diesel Oil	R
Diethyl Ether	N
Dimethyl Formamide	N
Diethyl Phthalate	N
Ethyl Acetate	N
Ethyl Alcohol (50%)	LR
Ethyl Alcohol (95%)	N
Ethylene Dichloride	N
Ethylene Glycol	R
2-Ethylhexyl Sebacate	R
Formaldehyde (40%)	R
Formic Acid (2%)	R
Formic Acid (40%)	LR
Gasoline (Regular, Leaded)	LR
Glycerine	R
Glycerol	R
Glycol	R
Heptane	R
Hexane	R
Hot Bitumen	LR

Code

Chemical

Hydrochloric Acid	R
Hydrofluoric Acid (40%)	N
Hydrogen Peroxide (3%)	R
Hydrogen Peroxide (28%)	N
Isocetane	R
Isopropyl Alcohol	LR
Kerosene	R
Lacquer Thinner	N
Lactic Acid (80%)	LR
Methane	R
Methyl Alcohol (50%)	LR
Methyl Alcohol (100%)	N
Methyl Ethyl Ketone (MEK)	N
Methylene Chloride	N
Mineral Oil	R
Mortar	R
Motor Fuel (benzene-free)	R
Motor Fuel (with benzene)	N
Muriatic Acid (20%)	R
Nitric Acid (10%)	R
Nitric Acid (40%)	LR
Nitric Acid (Conc.)	N
Oil Paints (pure)	R
Olive Oil	R
Oxygen	R
Ozone	R
Phenol Solution (5%)	N
Phosphoric Acid (10%)	R
Plaster of Paris	R
Soap Solution (Ivory)	R
Sodium Carbonate (2%)	R
Sodium Carbonate (20%)	R
Sodium Chloride (10%)	R
Sodium Hydroxide (1%)	R
Sodium Hydroxide (10%)	R
Sodium Hydroxide (60%)	R
Stearic Acid	R
Sulfuric Acid (3%)	R
Sulfuric Acid (30%)	R
Sulfuric Acid (Conc.)	N
Thinners (general)	N
Toluene	N
Trichloroethylene	N
Turpentine	LR
Urine	R
Water (Distilled)	R
Xylene	N

Code

R-Cast® ice & textures

Chemical Resistance - Resin

R = Resistant

R-Cast® Ice & Textures withstands this substance for long periods and at temperatures up to 120° F (49° C).

LR = Limited Resistance

R-Cast® Ice & Textures only resists the action of this substance for short periods at room temperature. The resistance for a particular application must be determined.

N = Non Resistant

R-Cast® Ice & Textures is not resistant to this substance. It either swelled, was attacked, dissolved or was damaged in some manner.

Plastic materials can be attacked by chemicals in several ways. The methods of fabrication and/or conditions of exposure of R-Cast® Ice & Textures as well as the manner in which the chemicals are applied, can influence final results even for "R" coded chemicals. Some of these factors are listed below.

Fabrication - Stress generated while sawing, sanding, machining, drilling, polishing, and/or forming.

Exposure - Length of exposure, stresses induced during the life of the product due to various loads, changes in temperatures, etc.

Chemical

Acetic Acid (5%)	R
Acetic Acid (Glacial)	N
Acetic Anhydride	LR
Acetone	N
Acrylic Paints & Lacquers	LR
Ammonia (aqueous solution)	N
Ammonium chloride (Saturated)	R
Ammonium Hydroxide (10%)	R
Ammonium Hydroxide (Conc.)	R
Aniline	N
Battery Acid	N
Benzaldehyde	N
Benzene	N
Bituminous Emulsion	N
Bromine	N
Butanol	R
Butyl Acetate	LR
Calcium Chloride (Saturated)	R
Calcium Hypochlorite	LR
Carbon Tetrachloride	N
Cement	R
Chlorine Water	N
Chloroform	N
Chromic Acid (40%)	N
Citric Acid (10%)	LR
Cottonseed Oil (Edible)	R
Detergent Solution	R
Diesel Oil	R
Diethyl Ether	N
Dimethyl Formamide	R
Diethyl Phthalate	N
Ethyl Acetate	N
Ethyl Alcohol (40%)	R
Ethyl Alcohol (96%)	R
Ethylene Dichloride	N
Ethylene Glycol	R
2-Ethylhexyl Sebacate	R
Formaldehyde (40%)	R
Formic Acid (3%)	R
Formic Acid (50%)	R
Gasoline (Regular, Leaded)	R
Glycerine	R
Glycerol	R
Glycol	R
Heptane	R
Hexane	R
Hot Bitumen	LR

Code

Chemical

Hydrochloric Acid	LR
Hydrofluoric Acid (40%)	N
Hydrogen Peroxide (3%)	R
Hydrogen Peroxide (28%)	N
Isooctane	R
Isopropyl Alcohol	LR
Kerosene	R
Lacquer Thinner	N
Lactic Acid (80%)	LR
Methane	R
Methyl Alcohol (50%)	LR
Methyl Alcohol (100%)	N
Methyl Ethyl Ketone (MEK)	N
Methylene Chloride	N
Mineral Oil	R
Mortar	R
Motor Fuel (benzene-free)	LR
Motor Fuel (with benzene)	N
Muriatic Acid (20%)	R
Nitric Acid (10%)	R
Nitric Acid (40%)	R
Nitric Acid (Conc.)	N
Oil Paints (pure)	R
Olive Oil	R
Oxygen	R
Ozone	R
Phenol Solution (5%)	N
Phosphoric Acid (5%)	R
Plaster of Paris	R
Soap Solution (Ivory)	R
Sodium Carbonate (2%)	R
Sodium Carbonate (20%)	R
Sodium Chloride (10%)	R
Sodium Hydroxide (1%)	LR
Sodium Hydroxide (10%)	N
Sodium Hydroxide (60%)	N
Stearic Acid	R
Sulfuric Acid (3%)	R
Sulfuric Acid (30%)	R
Sulfuric Acid (Conc.)	N
Thinners (general)	N
Toluene	R
Trichloroethylene	N
Turpentine	R
Urine	R
Water (Distilled)	R
Xylene	N

Code



Way Beyond Ordinary®

reynoldspolymer.com