



VALOX™ Resin DR51
Americas: COMMERCIAL

15% GR polyester, excellent mechanical, thermal and electrical performance. Non-flame retardant. Spotlights, appliance housings, handles, connectors

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	940	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1470	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	49200	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	118	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	54	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	210	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	190	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.16E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	2.16E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.41	-	ASTM D 792
Specific Volume	0.71	cm ³ /g	ASTM D 792
Water Absorption, 24 hours	0.07	%	ASTM D 570
Mold Shrinkage, flow, 1.5-3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Mold Shrinkage, flow, 3.2-4.6 mm (5)	0.6 - 0.9	%	SABIC Method
Mold Shrinkage, xflow, 1.5-3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Mold Shrinkage, xflow, 3.2-4.6 mm (5)	0.8 - 1.1	%	SABIC Method

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES (SELLER) ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates.

© 2017 Saudi Basic Industries Corporation (SABIC).



VALOX™ Resin DR51
Americas: COMMERCIAL

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
ELECTRICAL			
Volume Resistivity	3.3E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	19.6	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	23.2	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.6	-	ASTM D 150
Relative Permittivity, 1 MHz	3.4	-	ASTM D 150
Dissipation Factor, 100 Hz	0.002	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.71	mm	UL 94

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER : THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES (SELLER) ARE SOLD SUBJECT TO SELLER S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller s materials, products, services or recommendations for the user s particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller s Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates.

©2017Saudi Basic Industries Corporation (SABIC).



VALOX™ Resin DR51
Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 265	°C
Nozzle Temperature	245 - 260	°C
Front - Zone 3 Temperature	250 - 265	°C
Middle - Zone 2 Temperature	245 - 260	°C
Rear - Zone 1 Temperature	240 - 255	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 80	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.025 - 0.038	mm

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

PLEASE CONTACT YOUR LOCAL SALES OFFICE FOR AVAILABILITY IN YOUR AREA.

DISCLAIMER : THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES (SELLER) ARE SOLD SUBJECT TO SELLER S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller s materials, products, services or recommendations for the user s particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller s Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates.

©2017Saudi Basic Industries Corporation (SABIC).