

# ALLEN® 2180HG

High Impact ABS, High Gloss Sheet

#### INTRODUCTION

ALLEN® 2180HG is a general purpose ABS that has high impact strength and a good cost to performance ratio to other materials like stainless steel and other thermoplastics.

# **GENERAL INFORMATION**

ALLEN® 2180HG has been tested under laboratory conditions and has achieved a UL94 HB rating at 0.060 in (1.52mm) and above and meets the requirements of Federal Motor Vehicle Safety Standard No. 302 (FMVSS 302).

# SUGGESTED APPLICATIONS

- · Mechanical covers and housings
- · Beverage dispensers
- · Food equipment housings

#### **FEATURES**

- Custom color matching
- · Good forming properties
- · Regrind compatible in future orders
- Excellent low temperature performance
- · High gloss finish, high impact

# ENVIRONMENTAL & SAFETY CONSIDERATIONS

SEKISUI KYDEX, LLC is committed to ensuring that its products can be manufactured, transported, stored, used, disposed and recycled with an appropriate regard for safety, health, and environmental protection. We support the safe handling of our products.

Please contact our appLab<sup>™</sup> department at 800.682.8758 for resources and Safety Data Sheets or visit our website: www.kydex.com.



#### **Customer Collaboration**

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| PROPERTY   | TEST METHOD                 | TYPICAL VALUE         |                         |
|--|-----------------------------|-----------------------|-------------------------|
| PHYSICAL   |                             |                       |                         |
| Specific Gravity   | ASTM D792                   | 1.06 g/cc             |                         |
| Moisture Absorption, 24 hr   | ASTM D570                   | 0.28%                 |                         |
| Rockwell Hardness, R-Scale   | ASTM D785                   | 98                    |                         |
| MECHANICAL   |                             |                       |                         |
| Tensile Strength, yield  | ASTM D638                   | 36.7 MPa              | 5,330 psi               |
| Tensile Modulus  | ASTM D638                   | 2020.2 MPa            | 293,000 psi             |
| Flexural Stress at 5% Strain                                       | ASTM D790                   | 61.5 MPa              | 8,920 psi               |
| Flexural Modulus   | ASTM D790                   | 2,116.7 MPa           | 307,000 psi             |
| Compressive Strength, yield  | ASTM D695                   | 49.6 MPa              | 7,190 psi               |
| Shear Strength   | ASTM D732                   | 40.1 MPa              | 5,810 psi               |
| Bearing Strength, 4% deflection                                    | ASTM D953                   | 180.6 MPa             | 4,040 psi               |
| Bearing Strength, max.   | ASTM D953                   | 358.8 MPa             | 26,200 psi              |
| Notched Izod Impact Resistance                                     | ASTM D256                   | 432 J/m               | 6.72 ft-lbs/in          |
| Gardner Drop Dart Impact, GE                                       | ASTM D5420                  | 34.0 J                | 301 in-lbs <sub>f</sub> |
| THERMAL  |                             |                       |                         |
| Heat Deflection Temperature (HDT)<br>264 psi (1.8 MPa), Unannealed | ASTM D648                   | 99.9°C                | 211.7°F                 |
| Heat Deflection Temperature (HDT)<br>66 psi (0.45 MPa), Unannealed | ASTM D648                   | 104°C                 | 219.1°F                 |
| Coefficient of Thermal Expansion (MD)                              | ASTM E831                   | 90.1 μm/m/°C          | 50.1 μin/in/°F          |
| ELECTRICAL   |                             |                       |                         |
| Dielectric Strength, oil   | ASTM D149                   | 17.4 kV/mm            | 442 V/mil               |
| FLAMMABILITY   |                             |                       |                         |
| Underwriters Laboratories., Inc ® Component Recognition            | UL Standard 94 <sup>2</sup> | HB @ 1.52mm (0.060in) |                         |
| Motor Vehicle Safety Standard                                      | FMVSS 302                   | Pass                  |                         |

<sup>1</sup> Values based upon injection molded resin...

Not intended for specification purposes.



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<sup>2</sup> ALLEN® 2180HG has been tested under laboratory conditions and has passed UL 94HB criteria. SEKISUI KYDEX, LLC makes no warranty or guarantee that these products will meet UL 94HB in the part's final, finished configuration.