

CELEX 5200HF

PC/ABS Alloy

Overview CELEX** 5200HF is a non-halogen ignition resistant PC/ABS alloy. It combines the superior physical properties of PC and the excellent processability of ABS. CELEX 5200HF is designed with excellent flow for use in monitor housing and instrument panel.

English Units Physical Properties⁽¹⁾ Test Method SI Units Melt Flow Rate, 230°C/3.8 kg ASTM D 1238 17 g/10 min 17 g/10 min Specific Gravity ASTM D 792 1.18 1.18 Mold Shrinkage ASTM D 955 0.005 - 0.007 mm/mm 0.005 - 0.007 in/in **Mechanical Properties** 7,900 psi Tensile Strength at Yield ASTM D 638 55 MPa Tensile Modulus **ASTM D 638** 2,450 MPa 355,000 psi Elongation at Break **ASTM D 638** 100 % 100 % Flexural Strength ASTM D 790 88 MPa 12,700 psi ASTM D 790 2,600 MPa Flexural Modulus 376,000 psi Izod, Notched @ 23°C ASTM D 256 750 J/m 14.0 ft-lb/in Izod, Notched @ -20°C ASTM D 256 220 J/m 4.0 ft-lb/in **Thermal Properties** Deflection Temperature Under Load ASTM D 648 83 °C @1.82 MPa, unannealed 181 °F 100 °C Vicat Softening Point @ 120°C/hr ASTM D 1525 212 °F Flammability⁽²⁾ UL94 Classification **UL94** V-0 V-0 @ 1.6 mm UL94 5VB 5VB @ 1.6 mm **Processing Recommendations** 80 °C 175 °F **Drying Temperature** Drying Time 3 – 4 hrs 3 – 4 hrs Barrel Temperature 205 - 220 °C Rear Zone 400 - 430 °F 210 - 225 °C Middle Zone 410 - 440 °F Front Zone 205 - 215 °C 400 - 420 °F Nozzle 200 - 210 °C 390 - 410 °F Mold Temperature 40 – 60 °C 105 - 140 °F

1. Typical properties, not to be construed as sales specifications. Properties developed on 0.125 inch (3.2 mm) injection molded specimens unless otherwise noted.

2. This rating is not intended to reflect hazards presented by this or any other materials under actual fire conditions.

Safety and Handling Considerations	Material Safety Data (MSD) sheets are available for all resins from The Dow Chemical Company. MSD sheets are updated regularly and are available on <u>www.dow.com</u> or can be requested through the Dow Customer Information Group. Always review the most current MSD sheet before handling or using any product. The following comments are general and apply only to all engineering plastics resins as supplied by Dow. Various additives and processing aids used in fabrication and other materials used in finishing steps have their own safe use profile and must be investigated separately.
Hazards and Handling Precautions	Engineering plastics resins have a very low degree of toxicity and under normal conditions of use should pose no unusual problems from ingestion, eye or skin contact. However, caution is advised when handling, storing, using or disposing these resins. Good housekeeping and controlling of dust are necessary for safe handling. Workers should be protected from the possibility of contact with molten resin.
	Handling of engineering plastic resins can result in the generation of vapors and dust including small particles of glass fibers when dealing with glass filled resins. Dust resulting from sawing, filing and sanding in post-molding operations may cause irritation of eyes and upper respiratory tract. Use an approved dust respirator in dusty atmospheres. Slight itching and irritation may result from skin contact of glass filled resins. Repeated exposure to particles generated by grinding glass fiber-reinforced materials may result in implantation of particles in the skin.
	Processing may release fumes which can be irritating. Good general ventilation should be sufficient for most conditions. In addition, local exhaust ventilation may be necessary for some operations. For high heat ABS resins, local exhaust ventilation above the dies and vent ports of processing equipment such as injection molding and extrusion machines is necessary to keep the airborne dust levels below the exposure guidelines.
	Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator. Use gloves with insulation for thermal protection, when needed. Processing fumes will condense in the air extraction system and can deposit on equipment surfaces close to the emission points. Fume deposits of high heat ABS resins can cause skin irritation and skin damage. Wear chemical resistant gloves when in contact with surfaces contaminated with these deposits and when cleaning the deposits.
	To accelerate cooling of large polymer masses of ignition resistant resins, RETAIN* post consumer recycle content plastic resin and high heat ABS resins, quench purge patties in water. If quenching is not possible, move the purge patties from the working area to a well-ventilated area to cool. Do not purge the processing equipment with these materials.
Combustibility	Although engineering plastics resins may contain ignition resistant chemical additives, they will, once ignited, burn rapidly under the right conditions. Do not permit dust to accumulate. Dust layers can be ignited by spontaneous combustion or other ignition sources. When suspended in air, dust can also pose an explosion hazard. Dense black smoke and toxic fumes are produced when product burns. Water fog or fine spray is the preferred extinguishing media. Carbon dioxide or dry chemicals may also be used.
Disposal	Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with Federal, State/Provincial, and local laws and regulations. The Dow Customer Information Group can provide lists of companies which recycle, reprocess, or manage plastics waste.
Environment	Generally speaking, pellets lost in the environment are not a problem since they are inert and benign in terms of their physical environmental impact. However when they enter the marine environment and are ingested by waterfowl or aquatic life, they may mechanically cause adverse effects. Spills should be minimized and they should be cleaned up when they happen.
Medical Applications	DOW MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful and technically suitable for the intended use.
Ропсу	 Dow Engineering Plastics will not knowingly sell or sample any products into any commercial or developmental application intended for: Long term contact with internal body fluids or internal body tissues. (Long term is a use which exceeds 72 continuous hours, or 30 days for PELLETHANE* thermoplastic polyurethane elastomers); Use in cardiac prosthetic devices regardless of the length of time involved (Cardiac prosthetic devices include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems and ventricular bypass assisted devices); Use as a critical component in medical devices that support or sustain human life; Use specifically by pregnant women or in applications designed to promote or interfere with human reproduction. In addition, new business opportunities require a business assessment prior to sale or sampling.
For additional information contact the Dow Customer Information Group: Asia/Pacific: 800-7776-7776 China: 10-800-600-0015 Brazil: 55-11-5188-9373 Europe: 32-3-450-2240 Mexico: 95-800-441-4369 U.S./Canada 1-800-441-4369 www.dowep.com	NOTICE: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

