HexBond™ HP655P

High Temperature Primer for Metal Bonding
with HexBond™ HP655 BMI Film Adhesive

HEXCEL

Product Data Sheet

Description

HexBond™ HP655P is a tough, solvent-based primer designed for enhancing the adhesion of bonded metal substrates with HexBond™ HP655 BMI high strength, high temperature adhesive for advanced applications. It improves the wetting of adherend surface, protects the adherend surface from oxidation after surface pretreatment, thus extending the time that may elapse between metal surface preparation and adhesive application. HexBond™ HP655P significantly improves shear strengths of HexBond™ HP655 BMI adhesive on metal adherends especially at RT and sub-ambient conditions.

Surface Preparation of Metal Adherends

It is essential that all substrates to be used are free of contamination and to ensure maximum strength, reproducibility and long-term durability of bonded joints, a chemical pretreatment of the metal adherends is required to modify the metallic surface, or surface chemistry, in such a way as to make it suitable for structural adhesive bonding. For metallic adherends most of these pretreatments either involve acid etching or an acid etch followed by an acidic anodizing process. Please refer to Hexcel publication “HexBond™ Bonding Technology” for optimal procedures for adhesive bonding in general and pretreatments for metallic bonding. This document can be found on Hexcel website www.hexcel.com.

HexBond™ HP655P Primer Application

Apply thin, uniform coat of primer to a pretreated metal surface using a brush or spray to a primer thickness of approximately 0.0001” to 0.0005”. Dry in 350±10°F air forced oven for 30±10 minutes. Once plates are cool, apply HP655 adhesive and assemble parts to be bonded.

To adjust primer viscosity, thin with N-methyl pyrrolidone (NMP) solvent. Thinning the primer solution too much can cause inadequate coverage of the primer requiring more coats to be applied; this is not preferred. Some mottling appearance of the primer after drying is typical. All equipment and spray guns should be cleaned with NMP before and after use. Methylene chloride may also be used for cleaning. HexBond™ HP655P is not soluble in common solvents such as acetone or methyl ethyl ketone (MEK) and primer will precipitate out of solution if these solvents are used.

Storage

HexBond™ HP655P primer should be stored in sealed containers at -10°F. Upon removal from cold storage, allow material to reach room temperature (no condensation) before opening the container. HexBond™ HP655P has a shelf life of 30 days minimum at room temperature and 6 months minimum at -10°F without any degradation in performance.

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HiMax™ multiaxial reinforcements
- HexPly® prepregs
- HexMC®-i molding compounds
- HexFlow® RTM resins
- HexBond™ adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products
- Polyspeed® laminates & pultruded profiles
- HexAM™ additive manufacturing

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

http://www.hexcel.com/contact

RTU 408 JN17