Product Datasheet

SP&S Specialty Polymers and Services

RoHS 76/769/EEC

Ultralane® 753TF-A/B

SHORE 65D POLYURETHANE CASTING SYSTEM

Ultralane® 753TF-A/B is a tough, abrasion resistant, bonding and potting system that seals and protects electronic components. It contains no MOCA or TDI, yet develops exceptional tensile strength and tear strengths even when used without heat curing. It provides exceptional adhesion to metals, glass, and most rigid plastics. It provided good thermal conductivity and exceptional impact and thermal shock resistance. It is resistance to moisture, weak acids & bases,hydrocarbons, and most other common chemicals.

The Ultralane 753TF system has a standard black color, but can be supplied in many other colors upon request. The standard gel time is around 12-15 minutes, but this can also be adjusted from about 1 minute to over 60 minutes if that would be desirable. Other custom variations are possible, please contact us to discuss a variant if a customized version would be helpful for your application.

SUGGESTED APPLICATIONS:

- Bonding and sealing
- Encapsulating & Potting Electronic Devices

HANDLING PROPERTIES	VALUE	TEST METHOD
Ultralane 753TF-A (resin)		
Visual Appearance	Brown liquid	
Density, Part A	1.22 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	100 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Ultralane 753TF-B (hardener)		
Visual Appearance	Black Liquid	
Density,	1.68 g/cm³	ASTM E-201
Viscosity, Part B, @ 25ºC	24,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Mixed Viscosity @ 25ºC	1,800 cps	ASTM D-2393
Mix Ratio by weight	18.5A : 100B	
Mix Ratio by volume	25A : 100B	
Gel Time, 70 gram mass	12 - 15 minutes	
Demolding time:	4-8 hours @ room temperature or allow to gel 30 – 60 minutes then heat for 2 hours at150ºF **or** 1 hour @ 80ºC. Allow to cool prior to demolding.	
Cure Schedules:	24 hours @ 25ºC (Full properties may take 3-7 days to fully develop) **or** gel at 25ºC for 1 hours then cure for 8 hours @ 80ºC.	

Product Datasheet

CURED PROPERTIES	ROOM TEMP. CURE	HEAT CURE	TEST METHOD
Density	1.1 g/cm^3	1.6 g/cm^3	ASTM D-792
Hardness, Shore A			
at 25°C (77°F)	65D	68D	ASTM D-2240
at 65°C (150°F)	60D	64D	
at 80°C (175°F)	58D	61D	
at 93°C (200°F)	57D	60D	
at 121°C (250°F)	55D	57D	
at 138°C (280°F)	42D	46D	
at 150°C (300°F)	36D	39D	
After cycling to 150°C, cooled then re-tested @ 25°C	66D	68D	
Ultimate Tensile Strength	4,500 psi	5,200 psi	ASTM D-638
Tensile Elongation	80%	90%	ASTM D-638
Coefficient of Thermal Expansion			ASTM E-381
(-30°C to +30°C)	72 ppm/°C	-	
(0°C to 80°C)	114 ppm/°C	-	
Water Absorption by weight			ASTM D-570
24 hrs at 25°C	0.38%	-	
7 days at 25°C	0.91%	-	
2 hours in boiling water	1.06%	-	
Thermal conductivity	0.65 W/mK	0.65 W/mK	ASTM D-2214

PROCESSING AND APPLICATION INSTRUCTIONS :

The Ultralane 753TF part B component may settle slightly during storage or transportation. Stirring the container of 753TF part B prior to use will ensure that the material is uniform.

To use, weigh Part A and Part B into a clean mixing container. Mixing containers should preferably be made of polypropylene, polyethylene, glass, or non-corroding metal. (Stainless steel, aluminum, etc.). Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Parts A & B thoroughly using a spatula or stirring stick for at least 2 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

This system may also be processed using meter-mix equipment. It is necessary to ensure that the both components are protected from moisture using dessicants or other methods to process any air introduced into the storage tanks. It is also helpful to ensure a slow continuous agitiation of the 753TF-B to ensure that all of the filler remains uniformly dispersed. The part B is mildly abrasive and so the dispensing equipment should be monitored for maintainence that might be required due to abrasion. The use of abrasion resistance seals and piping is recommended.

PACKAGING AVAILABLE:

This product is available in 5-gallon pails as well as gallon, and quart kits. It can be supplied in dual syringe cartridges of approximately 50ml or 400ml. The dual syringe cartridges eliminate the need for hand mixing and allow for almost air free injection into your mold.

Please call use with any special packaging requests or for information on custom kitting.

STORAGE GUIDELINES:

Store these materials in a clean, cool and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF). Crystallization may occur if the material is exposed to cold for extend periods. If this occurs, heat the entire container for 4 hours at 70ºC to re-liquefy the material. Allow to cool to ambient temperature prior to using. Also protect the EpoPro 104A&B from exposure to moisture or high humidity. Tightly re-seal containers after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS & PERSONAL HYGENIE

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

Ultralane 753TF-A: **WARNING!** Can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Can be Harmful if inhaled. May cause eye & skin irritation. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

Ultralane 753TF-B: **CAUTION!** In accord with good industrial practice, handle with due care. Could cause eye, skin, and respiratory irritation. Prolonged or repeated skin contact or inhalation of vapors may cause allergic skin or respiratory reactions. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

Specialty Polymers & Services, Inc. (SP&S)
27822 Fremont Court **Tel: 661-294-1790**
Valencia, CA 91355 **Fax : 661-294-0640**
www.spolymers.com **info@spolymers.com**