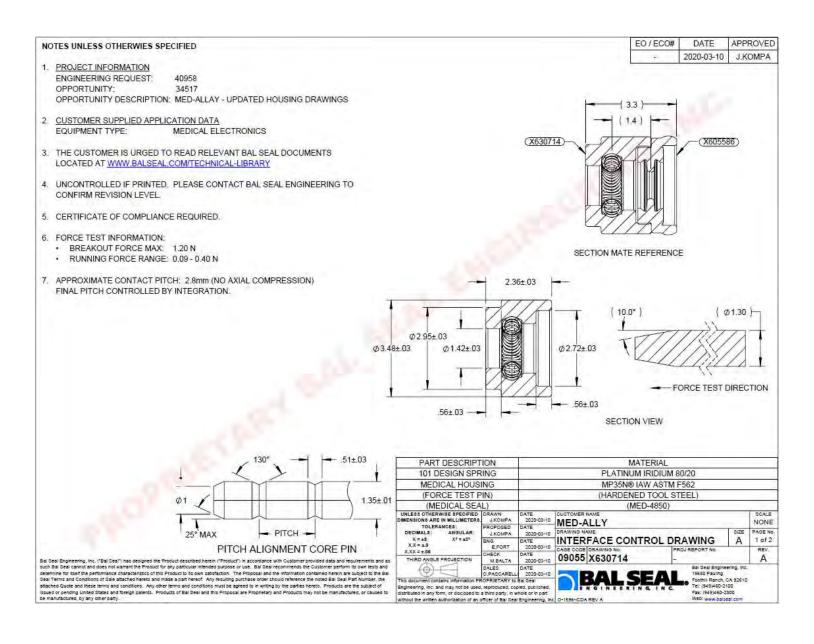


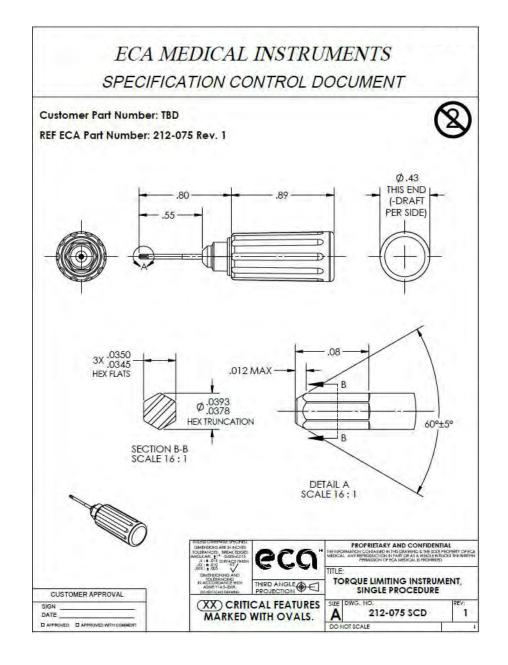
MED - ALLY	Drawing No:	7001	Revision:	2.0
	Part No:	7001	Created By:	C. Mannarino
	Part Description 1:	BalSeal 2.8mm pitch contact		
	Part Description 2:	Balseal Sygnus Neuro	2.8mm Pitch Con	tact
Med-Ally,LLC	Supplier Part No:	X630714 Rev A		
2040 Bushy Park Road, North Bldg 6 Goose Creek, SC 29445	Supplier Name:	BalSeal Engineering		
Goose Creek, SC 29445	Specification Control Drawing			

Rev	ECO Number	Description	Date
1.0	19-52	Initial release	12 Nov 19
2.0	19-14	Replace Newronika ICD with Med-Ally ICD.	23Mar2020



MED - ALLY	Drawing No:	7006	Revision:	2.0
	Part No:	7006	Created By:	C. Mannarino
	Part Description 1:	Torque Driver 5 in-oz Hex		
	Part Description 2:	Model 212-075 Torque Screwdriver		
Med-Ally,LLC	Supplier Part No:	212-075, Rev 1.0		
2040 Bushy Park Road, North Bldg 6 Goose Creek. SC 29445	Supplier Name:	ECA Medical		
Goose Cleek, SC 29443	Sp	ecification Cor	ntrol Drawi	ng

Rev	ECO Number	Description	Date
2.0	20-25	Change torque value from 12 in-oz to 5 in-oz	18May20





Drawing No:	7006	Revision:	2.0	
Part No:	7006	Created By:	C. Mannarino	
Part Description 1:	Torque Driver 5 in-oz Hex			
Specification Control Drawing				

# ECA MEDICAL INSTRUMENTS SPECIFICATION CONTROL DOCUMENT

1. INTENDED USE: TO TIGHTEN SCREW(S) OF NEUROSTIMULATOR DEVICE DURING SURGICAL PROCEDURE.



2. TORQUE SPECIFICATION:

UNI-DIRECTIONAL:

5.0 +/- 0.5 OZ-IN IN THE CLOCKWISE DIRECTION POSITIVE IN THE COUNTERCLOCKWISE DIRECTION

3. APPEARANCE

EXTERIOR SURFACES ARE SMOOTH AND FREE OF OBVIOUS SCRATCHES, SINK MARKS, CRACKS, FLASH, AND SPLAY PER EMS-0001.

4 CAP:

INSTALLED CAP HAS NO LOGO.

5. MATERIALS:

NOSE AND HANDLE: ULTEM HU1100-8H9D402, COLOR: WHITE SHAFT: CUSTOM 455 STAINLESS STEEL PER ASTM ASM 5617, TURNED FINISH, H-900 CONDITION, PASSIVATED PER AMS 2700

INTERNAL METAL COMPONENTS: 302 STAINESS STEEL PER ASTM A313, AND 17-7 PH STAINLESS STEEL PER AMS 5529

6. STERILIZATION:

DEVICE IS PROVIDED NON-STERILE.

7. SHELF LIFE:

TWO (2) YEAR(s) IN A TEMPERATURE CONTROLLED ENVIRONMENT (FROM THE DATE OF MANUFACTURE)

8. SERVICE LIFE:

THIS DEVICE IS SINGLE USE, AND IS NOT INTENDED TO BE REPROCESSED (CLEANED, DISINFECTED/STERILIZED) AND/OR USED ON ANOTHER PATIENT.

9 DEVICE FEEDBACK

TEN (10) AUDIBLE INDICATIONS AT TORQUE LIMIT, PER ONE (1) FULL ROTATION.

10. PACKAGING:

PACKAGED WITHIN SEE-THRU VACUUM-FORMED CONTAINER HOLDING SIXTY (60) INSTRUMENTS. AN IDENTIFICATION LABEL IS PLACED ON EACH CONTAINER WITH THE FOLLOWING INFORMATION, AT A MINIMUM: CUSTOMER OR ECA PART NUMBER, CUSTOMER ORDER NUMBER, AND MANUFACTURING LOT NUMBER.

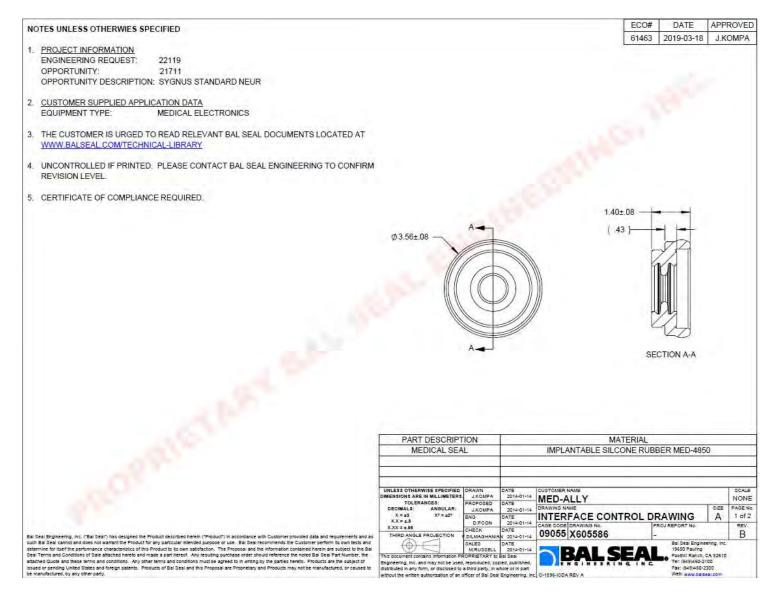
11. CHEMICAL RESIDUES / BIOCOMPATIBILITY:

THIS DEVICE HAS BEEN CLEANED TO REMOVE PROCESSING CHEMISTRIES AND GROSS SIZED PARTICLES; HOWEVER, IT IS RECOMMENDED THAT FURTHER BIOCOMPATIBILITY EVALUATION OF THIS DEVICE IN ACCORDANCE TO THE LATEST ISSUE OF ISO 10993-1 BIOLOGICAL EVALUATION OF MEDICAL DEVICES - PART 1: EVALUATION AND TESTING WITHIN A RISK MANAGEMENT PROCESS, CONTACT DURATION 'A' LIMITED (<24H), SURFACE DEVICE, INTACT SKIN AND MUCOSAL MEMBRANE ONLY BE COMPLETED.



MED - ALLY	Drawing No:	7002	Revision:	2.0
	Part No:	7002	Created By:	C. Mannarino
	Part Description 1:	BalSeal Seal		
	Part Description 2:	BalSeal Sygnus Neuro Seal		
Med-Ally,LLC	Supplier Part No:	X605586 Rev B		
2040 Bushy Park Road, North Bldg 6 Goose Creek, SC 29445	Supplier Name:	BalSeal Engineering		
Goose Cleek, SC 29445	Sp	ecification Cor	ntrol Drawi	ng

Rev	ECO Number	Description	Date
1.0	19-52	Initial release	12 Nov 19
2.0	19-14	Replace Newronika ICD with Med-Ally ICD.	23Mar2020



	Drawing No:	7008	Revision:	1.0
MED - ALLY	Part No:	7008	Created By:	C. Mannarino
	Part Description 1:	Epoxy, EPO-Tek 301		
	Part Description 2:	Epoxy Technology EPO-Tek 301		
Med-Ally,LLC	Supplier Part No:	EPO-Tek 301		
2040 Bushy Park Road, North Bldg 6 Goose Creek, SC 29445	Supplier Name:	Epoxy Technology		
G0056 C166K, SC 29443	Sp	ecification Cor	ntrol Drawi	ng

Rev	ECO Number	Description	Date
1.0	19-52	Initial release	12 Nov 19



#### EPO-TEK® 301 **Technical Data Sheet** For Reference Only Spectrally Transparent Epoxy

Date: September 2017 Rev: Two 20:5 No. of Components: Mix Ratio by Weight:

Specific Gravity: Part A: 1.15 Part B: 0.87 Pot Life: 1-2 Hours Shelf Life- Bulk: One year at room temperature

Recommended Cure: 65°C / 2 Hours

Minimum Alternative Cure(s): May not achieve performance properties listed below 85°C / 1 Hour 23°C / 24 Hours

NOTES:

Container(s) should be kept closed when not in use.

 Container(s) should be kept closed when not in use.
 Filled systems should be stirred thoroughly before mixing and prior to use.
 Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.

Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

TOTAL MASS SHOULD NOT EXCEED 25 GRAMS

Product Description: EPO-TEK® 301 is a two component, room temperature curing epoxy featuring very low viscosity, and excellent optical-mechanical properties.

<u>Typical Properties:</u> Cure condition: Varies as required Different batches, conditions & applications yield differing results.

Data below is not guaranteed. To be used as a guide only, not as a specification. If denotes test on lot acceptance basis

PHYSICAL PROPERTIES:		
* Color (before cure):	Part A: Clear/C	olorless Part B: Clear/Colorless
* Consistency:	Pourable liquid	
* Viscosity (23°C) @ 100 rpm:	100 - 200	cPs
Thixotropic Index:	N/A	
* Glass Transition Temp:	≥ 85	*C (Dynamic Cure: 20-200*C/ISO 25 Min; Ramp -10-200*C @20*C/Min)
Coefficient of Thermal Expansion (CTE):		A STATE OF THE PARTY OF THE PAR
Below Tg:	39	x 10 <sup>-6</sup> in/in°C
Above Tg:	98	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	85	
Lap Shear @ 23°C:	> 2,000	psi
Die Shear @ 23°C:	≥ 10	Kg 3,556 psi
Degradation Temp:	430	*C
Weight Loss:		
@ 200°C:	0.12	%
@ 250°C;	0.13	%
@ 300°C:	0.39	%
Suggested Operating Temperature:	< 300	°C (Intermittent)
Storage Modulus:	436,249	psi
* Particle Size:	N/A	

Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 1 x 10 <sup>13</sup>	Ohm-cm	
Dielectric Constant (1KHz):	4.00		
Dissipation Factor (1KHz):	0.016		

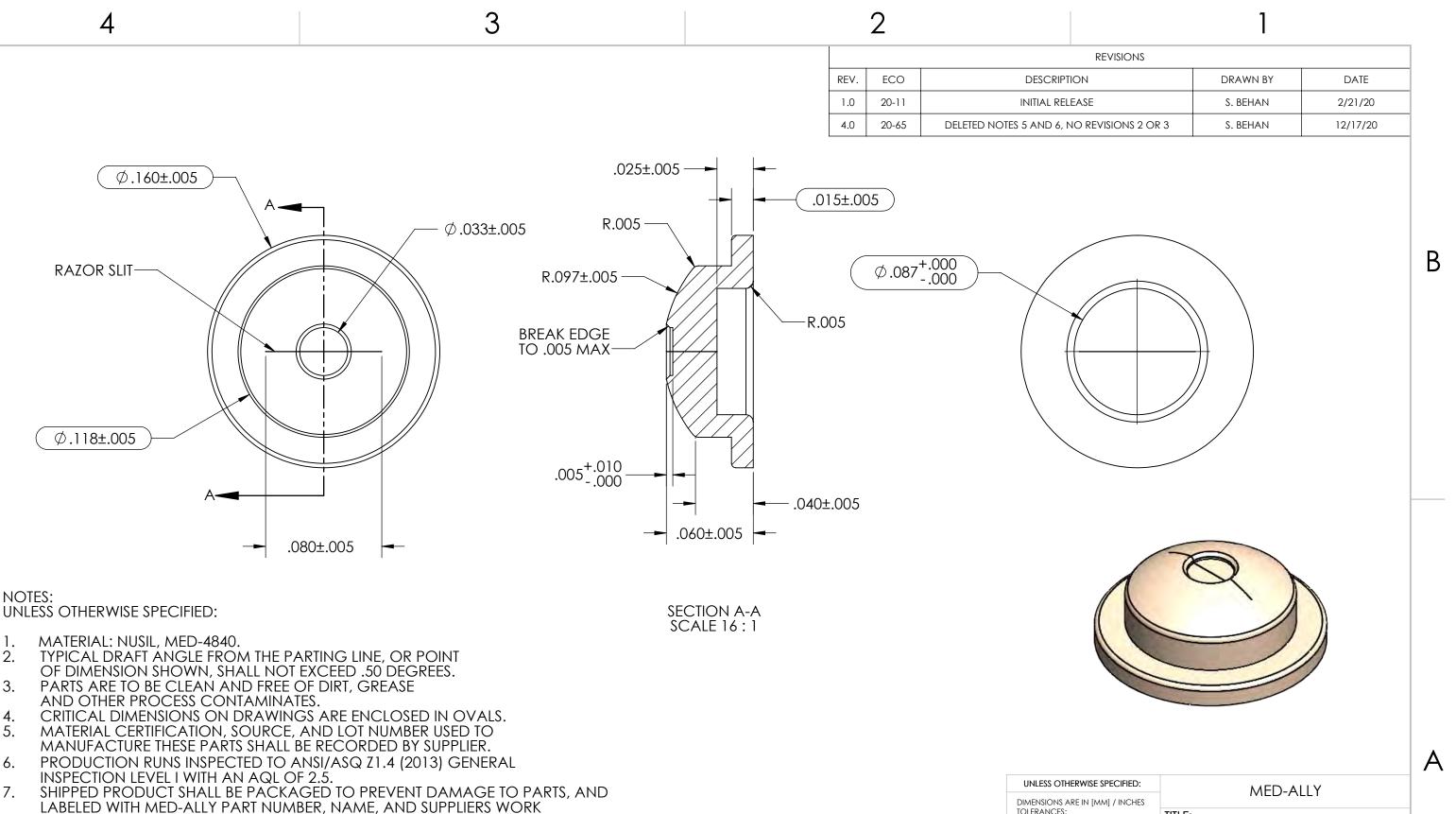
OPTICAL PROPERTIES @ 23°C: ≥ 99% @ 382-980 nm Spectral Transmission: ≥ 97% @ 980-1,640 ≥ 95% @ 1,640-2,040 nm Refractive Index 1.519 @ 589

Epoxies and Adhesives for Demanding Applications™

This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.

EPOXY TECHNOLOGY, INC.

14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782



CERTIFICATE OF CONFORMANCE.

8. THE CERTIFICATE OF CONFORMANCE SHALL STATE THAT SHIPPED PRODUCTS MEET ALL CRITERIA ON MED-ALLY DRAWING, AND INSPECTION AND MATERIAL RECORDS ARE KEPT BY SUPPLIER FOR AT LEAST 10 YEARS. DATA MUST BE MADE AVAILABLE TO MED-ALLY IF REQUESTED.

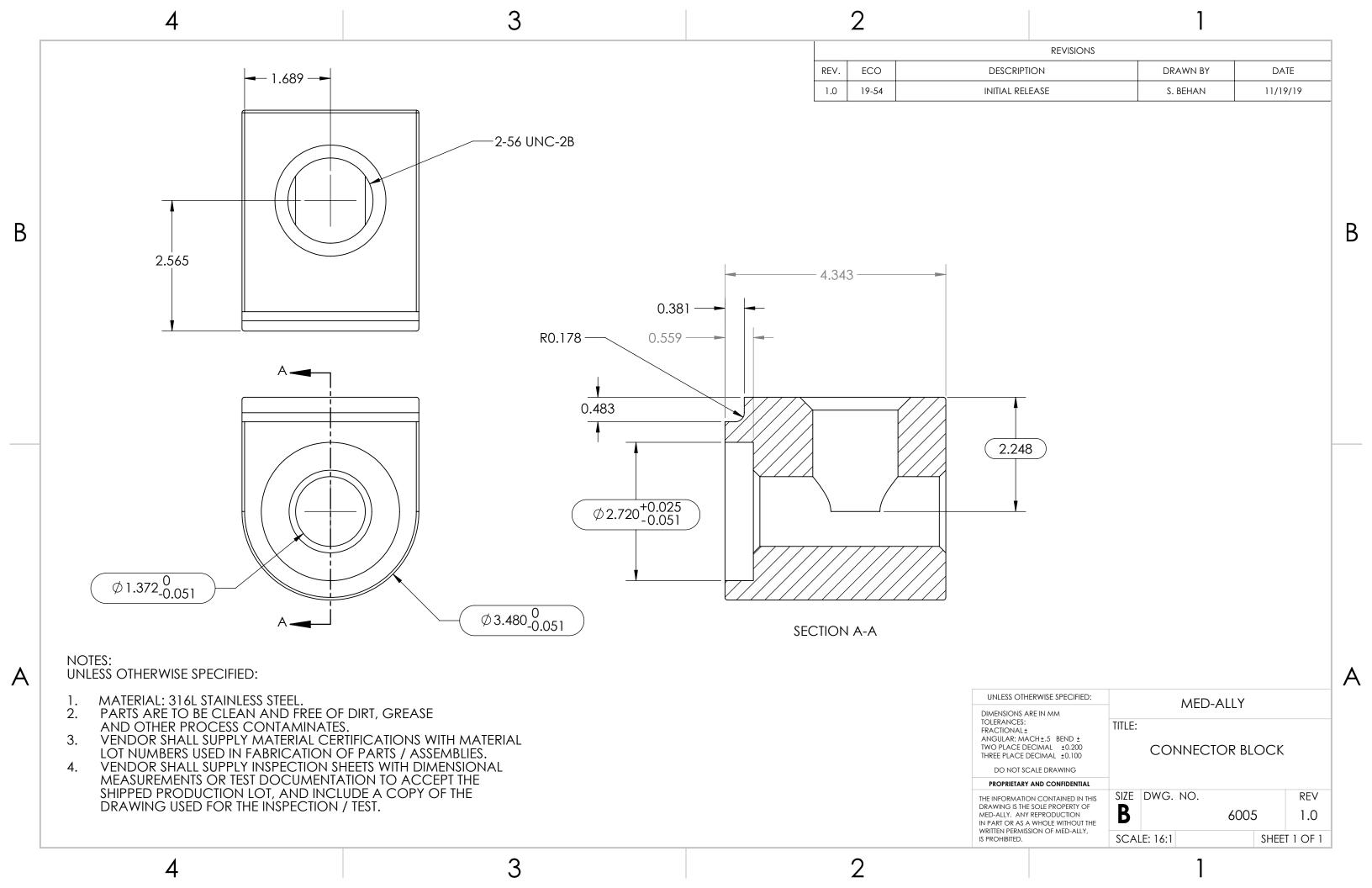
ORDER NUMBER(s) OR PRODUCTION LOT NUMBER(s), AND CONTAIN A

В

TOLERANCES: TITLE: FRACTIONAL±
ANGULAR: MACH±.5
TWO PLACE DECIMAL ±[0.20] / .008
THREE PLACE DECIMAL ±[0.100] / .004 **SEAL PLUG** DO NOT SCALE DRAWING PROPRIETARY AND CONFIDENTIAL SIZE DWG. NO. **REV** THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MED-ALLY. ANY REPRODUCTION 6018 4.0 IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MED-ALLY IS PROHIBITED. SCALE: 24:1 SHEET 1 OF 1

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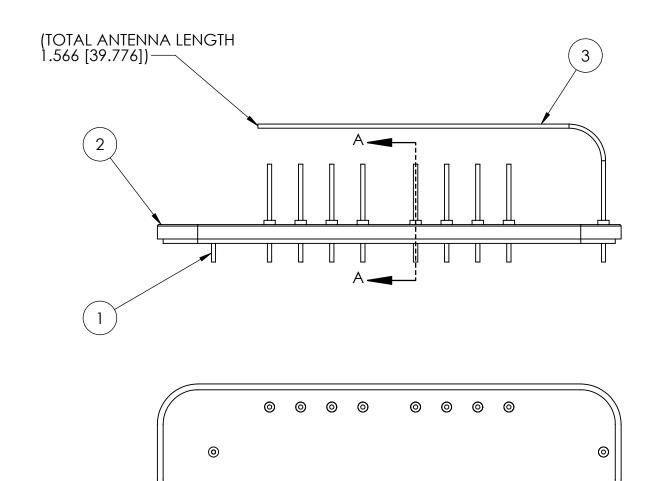
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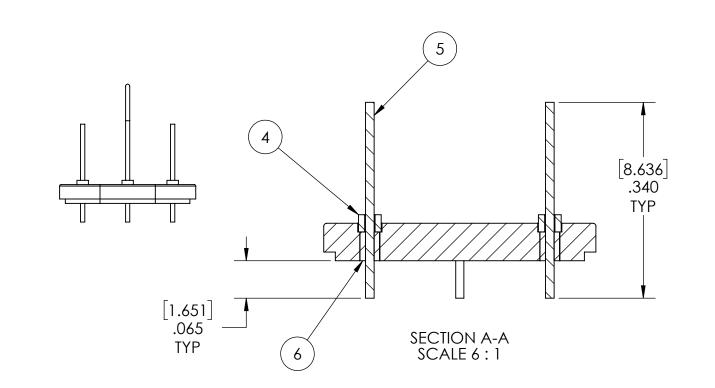




REVISIONS

REV. ECO DESCRIPTION DRAWN BY DATE





### NOTES: UNLESS OTHERWISE SPECIFIED:

1. FEEDTHROUGH SHALL UNDERGO THERMAL CYCLING TO MIL-STD-883, METHOD 1010.9, TEST CONDITION B (MINUS 55C TO PLUS 125 C, OR 10 CYCLES AT 15 MINUTE DWELLS). THIS INCLUDES TEMPERATURE TRANSITIONS FEEDTHROUGH SHALL HAVE A LEAK RATE LESS THN 5X10^-9 ATM CC/SEC FOR THERMAL SHOCK SPECIFIED IN MIL-STD-883, METHOD 1011.9, SECTION 3.1, TIMING.

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 FEEDTHROUGH SHALL MEET VISUAL CRITERIA OF HERMETIC SOLUTIONS GROUP WORKMANSHIP QUALITY STANDARD WQS-102. FOR THE MINIMUM ACCEPTABLE QUALITY LEVEL FOR KRYOFLEX CERAMIC SEALS.

3. FEEDTHROUGH PIN TO PIN TO FLANGE INSULATION RESISTANCE SHALL BE 50 MEGA OHM MINIMUM WHEN TESTED IN ACCORDANCE WITH MIL-STD-202, METHOD 302, TEST CONDITION A (100 VDC).

4. MATERIAL CERTIFICATION FILES WITH TRACEABILITY FOR ALL MATERIALS USED IN PRODUCT AND PROCESS (E.G., TO BE KEPT IN VENDOR FILES FOR A MINIMUM OF 15 YEARS, OR ACCORDING TO VENDOR REQUIREMENTS.

5. FINAL INSPECTION AND TEST RESULTS FOR EACH PART SHALL BE KEPT IN VENDOR FILES FOR A MINIMUM OF 15 YEARS, OR ACCORDING TO VENDOR REQUIREMENTS.

6. A CERTIFICATE OF CONFORMANCE SHALL ACCOMPANY ALL DELIVERIES
VERIFYING PARTS MET ALL DRAWING REQUIREMENTS AND REQUIRED RECORDS
ARE ON FILE. RECORDS SHALL BE PROVIDED TO MED-ALLY UPON REQUEST

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	8164	GROUND PIN	1
2	6164	12 MM LIDTHROUGH PLATE	1
3	XXXX	Straight antenna wire	1
4	XXXX	CAP BEAD	17
5	XXXX	FEEDTHROUGH WIRE	16
6	XXXX	FEEDTHROUGH BRAZE	17

7000				· · ·	D.1.7 (LL		. ,
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	DIMENSIONS A						
	TWO PLACE D THREE PLACE		TITLE:	12	mm lidthrc Assembly		ł
	PROPRIETAR	Y AND CONFIDENTIAL					
		ON CONTAINED IN THIS	SIZE	DWG.	NO.		REV
NIEVT ACCELADI V	MED-ALLY LLC.	IE SOLE PROPERTY OF ANY REPRODUCTION	В		503	34	0.2
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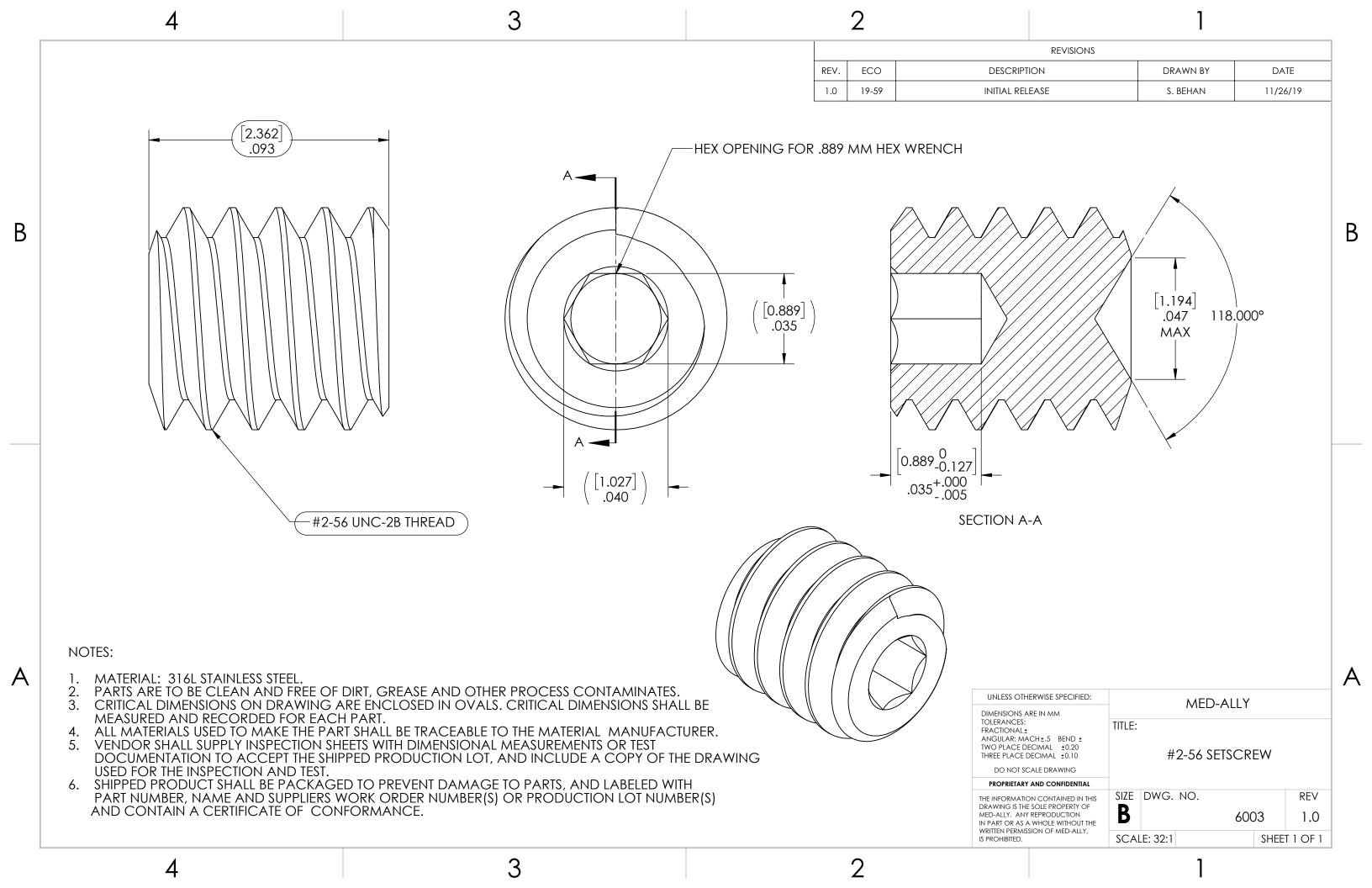
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44	Drawing No:	7073	Revision:	1.0	
MED - ALLY	Part No:	7073	Created By:	G. Early	
	Part Description 1:	Silicone Adhesive, MED-2000			
	Part Description 2:	NuSil MED-2000			
Med-Ally,LLC	Supplier Part No:	MED-2000 (Self-Leveling)			
2040 Bushy Park Road, North Bldg 6 Goose Creek, SC 29445	Supplier Name:	NuSil			
Goose Cleek, SC 29443	Specification Control Drawing				

Rev	<b>ECO Number</b>	Description	Date
1.0	22-31	Initial Release	22Nov2022

#### Description

- One-part, solvent-free silicone
- Cures at room temperature upon exposure to atmospheric moisture

#### **Applications**

- Well suited for use as an adhesive for bonding and sealing silicone materials
- For applications requiring the bonding of silicone to metals, urethanes and various other substrates

NuSil Technology's MED-2000 may be considered for use in human implantation for a period of greater than 29 days.







## MED-2000

### Silicone adhesive

#### DESCRIPTION

- One part, solvent-free silicone
- Cures at room temperature upon exposure to atmospheric moisture

#### **APPLICATION**

- Well suited for use as an adhesive for bonding and sealing silicone materials
- For applications requiring the bonding of silicone to metals, urethanes and various other substrates

NuSil™ MED-2000 may be considered for use in human implantation for a period of greater than 29 days.

#### **PROPERTIES**

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	Translucent	ASTM D2090	002
Extrusion Rate**	2.5 g/minute	ASTM C603	033
Tack-Free Time	12 minutes	ASTM C679	005
Cured: 72 hours minimum at ambient temp	erature and humidity		
Specific Gravity	1.08	ASTM D792	003
Durometer, Type A	25	ASTM D2240	006
Tensile Strength	1,375 psi (9.5 MPa)	ASTM D412	007
Elongation	800%	ASTM D412	007
Tear Strength	80 ppi (14.1 kN/m)	ASTM D624	009
Stress at 200% Strain	110 psi (0.76 MPa)	ASTM D412	007
Tissue Culture (Cytotoxicity Testing)	Pass	USP <87> ISO 10993-5	061

The above properties are tested on a lot-to-lot basis. Do not use as a basis for preparing specifications. Please <u>contact</u> NuSil Technology for assistance and recommendations in establishing particular specifications.

<sup>\*\*</sup> Performed using a Semco model 250-A pneumatic gun with a 14 gauge nozzle orifice and 90 +/- 5 psi air pressure.





#### INSTRUCTIONS FOR USE

Apply MED-2000, supplied in cartridges, with the use of appropriate dispensing equipment. Do not store alcohol near the worksite as traces of alcohol inhibit the catalytic system of the adhesive.

#### Surface Preparation

Thoroughly clean surfaces being bonded or built-up with silicone adhesive using a non-oily cleaner or mild soap to remove any surface contaminants. Do not use synthetic detergents or oil-based soaps, as they may be absorbed and subsequently leach out. Rinse first with hot water, followed by a thorough rinse using distilled water. Use compatible degreasers to clean metal surfaces.

#### **Bonding Applications**

Spread a layer of silicone adhesive on one of the surfaces. Squeeze both surfaces together to bond. Apply sufficient pressure to ensure full contact without forcing the silicone adhesive from between the pieces.

Note: Some bonding applications may require the use of a primer. NuSil Technology's MED-160 is recommended. For more information on primer selection, visit <a href="https://www.nusil.com">www.nusil.com</a> and review Chaosing a Silicone Primer/Adhesive System.

#### Curing Time

Curing or vulcanization time depends upon the thickness of the silicone adhesive layer, relative humidity, and accessibility of atmospheric moisture to the curing adhesive. For sections of typical thickness, a relative humidity level between 20-60% is recommended to cure the adhesive at room temperature.

Generally the adhesive forms a thick, tack-free outer skin for thick section films within a few minutes after application. The vulcanization rate slows when exposing very thin films to excessive humidity (80% relative air humidity). For films below 80 microns, the relative air humidity should be within 30% - 50%.

Because MED-2000 cures upon exposure to atmospheric moisture, keep tubes tightly closed when not in use. A plug of cured material may form in the tip of the tube. Remove or dispense the plug from the tube before using.

#### Non-Sterile Packaged Units

The acidic nature of MED-2000 provides a natural bactericidal effect. While containers may be relatively free of microorganisms, they can not be considered sterile unless subjected to a validated sterilization process. When the adhesive is fully cured it can withstand sterilization with ethylene oxide, dry heat, or steam autoclaving. The size and shape of fabricated articles must be considered when

#### Packaging

Warranty

8 Gram Tube

T 1 /50

2 Ounce Tube (59 mL)

5 Ounce Tube (148 mL)

6 Ounce Semco® Tube

12 Ounce Semco® Tube

12 Months

establishing the conditions of sterilization. Larger quantities and larger parts may require longer periods of heating and may retain ethylene oxide longer than small parts. It is the user's responsibility to determine the out-gassing time required for a particular application if ethylene oxide sterilization methods are used.

#### Caution

Do not use MED-2000 in its uncured state to repair or encapsulate living tissue in the body. During curing, approximately 4-5% acetic acid (vinegar-like odor) is generated in vapor form. Avoid contact with eyes and skin, as uncured adhesive irritates. Take appropriate precautions if wearing contact lenses. In case of contact, flush eyes with water, use a dry towel to remove from skin and contact a physician. Keep out of REACh of children.

#### FDA MASTER FILE

A Master File for MED-2000 has been filed with the U.S. Food and Drug Administration. Customers interested in authorization to reference the Master File must contact NuSil Technology.

#### REACH COMPLIANCE

Please <u>contact</u>. NuSil Technology's Regulatory Compliance department with any questions or for further assistance.

#### **SPECIFICATIONS**

Do not use the properties shown in this technical profile as a basis for preparing specifications. Please <u>contact</u> NuSil Technology for assistance and recommendations in establishing particular specifications.

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#### WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology's sole warranty is that the product will meet NuSil Technology's then current specification. NuSil Technology specifically disclaims all other expressed or implied warranties, including, but not limited to, warranties of merchantability and fitness for use. The exclusive remedy and NuSil Technology's sole liability for breach of warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. NuSil Technology expressly disclaims any liability for incidental or consequential damages.

#### WARNINGS ABOUT PRODUCT SAFETY

NuSil Technology believes, to the best of its knowledge, that the information and data contained herein are accurate and reliable. The user is responsible to determine the material's suitability and safety of use. NuSil Technology cannot know each application's specific requirements and hereby notifies the user that it has not tested or determined this material's suitability or safety for use in any application. The user is responsible to adequately test and determine the safety and suitability for their application and NuSil Technology makes no warranty concerning fitness for any use or purpose. NuSil

Technology has completed no testing to establish safety of use in any medical application.

NuSil Technology has tested this material only to determine if the product meets the applicable specifications. (Please <u>contact</u> NuSil Technology for assistance and recommendations when establishing specifications.) When considering the use of NuSil Technology products in a particular application, review the latest Material Safety Data Sheet and <u>contact</u> NuSil Technology with any questions about product safety information.

Do not use any chemical in a food, drug, cosmetic, or medical application or process until having determined the safety and legality of the use. The user is responsible to meet the requirements of the U.S. Food and Drug Administration (FDA) and any other regulatory agencies. Before handling any other materials mentioned in the text, the user is advised to obtain available product safety information and take the necessary steps to ensure safety of use.

#### PATENT / INTELLECTUAL PROPERTY WARNING

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