



# PRODUCT INFORMATION

**HIGH TECHNOLOGY MATERIALS**

## METREGRIP 355

### **LONG WORKING LIFE, EPOXY STRUCTURAL ADHESIVE**

**METREGRIP 355** is a **NEW**, low viscosity, high bond strength epoxy adhesive developed for general purpose applications. It is easy to use: Mix one part activator with 2 parts adhesive base - spread on only one surface - put parts together with simple contact - squeeze out excess - and that's it!

**METREGRIP 355** will set overnight, and yet the working life of 1/4 lb. batch is 4 hours. (Approx. 2 hours for a 1 lb. batch). For more rapid setting, 30 minutes at about 150°F will do it.

**METREGRIP 355** will bond to almost any surface and produces a resilient and tenacious, water-proof, chemically resistant joint.

**METREGRIP 355** bonds by "chemical welding", and can be used to cement all common materials as aluminum, iron, steel, copper, lead, zinc, glass, ceramics, pottery, leather, wood, paperboard, etc.

**METREGRIP 355** is supplied as a free flowing liquid, but is also available as a paste, **METREGRIP 355-TP**.

### DIRECTIONS FOR USE

#### Surface Preparation

For maximum adhesion, surfaces should be clean and dry. Refer to Technical Service Bulletin No. 3-626, "Preparation of Surfaces for Bonding". For release or masking, use **META-PART 7582**.

### GENERAL PURPOSE WORK

Mix thoroughly one part activator with two parts adhesive base until the haziness clears. In 1/4 lb. batches, the mixture has a working life of at least 4 hours. To flexibilize **METREGRIP 355**, add more activator to the adhesive base. Mixing ratio is non-critical, and therefore, **METREGRIP 355** is not sensitive to operational errors.

Apply **METREGRIP 355** by any common method, such as brush, roller coater, doctor blade, or drop from dispenser. Glue line thickness is not critical, although higher strengths are obtained with thick glue lines. Place parts together; clamping is not necessary unless the parts will shift and keep overnight until bond sets. (A heat lamp will set bond in 15 minutes.)

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FORM 1105 REV. 0

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**TYPICAL BOND STRENGTHS**

Tensile shear strengths, psi. (obtained after curing 5 days at room temperature)

Steel to Steel	2700
Aluminum to Aluminum	2600
Brass to Brass	1900
Copper to Copper	1200
Wood to Steel*	1600

\*(failure in wood)

**TYPICAL PROPERTIES OF METREGRIP 355**

A. Unmixed Components

<u>Appearance</u>	<u>Part A, Activator</u>	<u>Part B, Base</u>
Appearance	Amber	Clear
Physical Form	Liquid	Syrup
Viscosity (125°C, Brookfield cps)	300	7000

**CURED METREGRIP 355**

<u>Property</u>	<u>Test Method</u>	<u>Value</u>
Appearance	Visual	Transparent Straw Solid
Specific Gravity, 25°C	ASTM-D792	1.2
Flexural Strength, ultimate	ASTM-D796	50,000
Tensile Elongation (%)	D638	6.4
Safe Operating Temperature, °C	MERECO	-60 to 145
Dielectric Strength (V/mil)	ASTM-D149	425
Volume Resistivity (ohm/cm)	ASTM-D257	3.1 x 10 <sup>15</sup>
Dielectric Constant, 10 <sup>3</sup> cycles	ASTM- D150	3.57
Power Factor, 10 <sup>3</sup> cycles	ASTM-D150	0.01
Water Absorption (%)	-----	0.21
Heat Distortion Temperature (°F)	ASTM-D648	153
Impact Resistance, Izod (ft.-lbs./in/notch)	ASTM-D256	0.55
Uniaxial Tensile Tests @ 2.0 ipm and 72 °F	ASTM-D638	
Modulus (ksi)		416
Poisson's Ratio		0.35
Strength (psi)		5,180
Elongation %		1.5
Tg °F		
DSC		145
DMA		164
CTE (in/in/°F)		45 X 10 <sup>-6</sup>
Wt. Loss (24 hrs. at 300°F)	-----	0.64

## **CLEAN-UP**

**METATERGE 1405** is recommended to replace hazardous solvents for general clean-up.

**METATERGE 1405**, a unique water soluble resin detergent, dissolves uncured resin systems and renders them water compatible. Soiled equipment, tools or bench areas can then be simply cleaned with a wet sponge or shop rag. Refer to Data Bulletin for details.

**METASTRIP 701** is an effective non-corrosive stripping solvent for removing cured epoxy resins to salvage valuable electronic components. Refer to Data Bulletin for details.

**METASTRIP 705**, a highly active epoxy remover formulated for vigorous stripping of more chemically resistant cured encapsulating compounds, is more active and requires careful handling. Refer to Data Bulletin for details.