

Product Description

DIAMANT **plasticmetal** is the perfect material for small and medium surface repairs on any kind of metal. Because of its high amount of fillers, **plasticmetal** has a very good metal finish and is machinable like metal. With its fast curing time and flexible mixing ratio it is a very useful product especially for foundries and any kind of metal.

DIAMANT **plasticmetal** consists of two components - the hardener liquid and the base powder. The base powders (cp. table page 2) can be combined with any of the 8 hardener liquids (cp. table page 1) to obtain special properties. It is possible to mix different powders together with one hardener liquid for colour matching.

Typical Applications

DIAMANT **plasticmetal** is used to repair and correct blowholes, porosities, voids, pin holes, abrasion, surface defects and on any kind of casting, steel and alloy

Properties

- matching of mechanical and visual properties
- high adhesion to metal and metal alloys
- high chemical resistance
- temperature resistance up to 250 C continuously (short term: up to + 500 C)
- short cure time down to 5 minutes
- free mixing ratio enables putty to liquid viscosities
- machinable like metal
- cured material can be varnished

Application

Preparation

Roughen the adhesion surface (enlargement of adhesion area, good anchoring points) and clean chemically (optimum: DIAMANT cleaner). The surface has to be clean and dry and within the optimum working temperature range between +5°C / +45°C

Mixing

Mix powder and hardener liquid at least at a ratio of 1:1 by volume (liquid, castable viscosity). Through addition of powder you can adjust the viscosity from liquid to putty which can be applied by spatula. The maximum mixing ratio is 3:1 (powder : liquid).

Applying

First apply a thin adhesion layer, then add the remainder up to the desired layer thickness.

Curing

The cure time depends on the used hardener liquid and varies from 5 to 60 minutes.

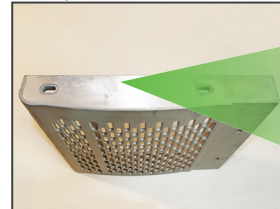
mix



apply



ready



Hardener Liquids for DIAMANT **plasticmetal**

Hardener Liquid	No.	Pot Life (Min.) 30ml:30ml*	Pot Life (Min.) 30ml:15ml*	Cure Time (Min.)*	Properties
HF Standard	0112	8-10	5-7	20	Standard hardener
HF rapid	0116	5-7	3-5	13	Special for quick- and emergency repairs
HF slow	0114	18-20	15-17	30	Specially for serial production / long pot life and curing
HF WF	0204	5-6	4-5	11	High temperature loads +250 °C
HF SF	0013	7-9	6-8	13	Blast proof hardener, hard elastic after curing
HF Thixo	0065	7-9	6-8	15	Drip proof hardener for overhead work

Cure times based on a mixing ratio of 2:1 (powder:hardener) and 100g material.



Base Powders for DIAMANT **plasticmetal**

Range	Product Name	No.	Metal Content in %	Application	Properties	Can be combined with other hardeners
Cast Iron	A	#0061	92	cast iron	for unfinished castings which will be painted for best metal finish	yes
	Superior dunkel	#0067	96	cast iron		yes
	Superior hell	#0223	96	cast iron		yes
Steel	A	#0196	92	steel castings	for unfinished castings which will be painted for best metal finish	yes
	Superior	#0199	96	steel castings		yes
Aluminium	A	#0005	92	alu castings	for unfinished castings which will be painted for best metal finish	yes
	Superior	#0008	96	alu castings		yes
Bronze	A	#0014	92	bronze	for best metal finish	yes
Brass	A	#0136	92	brass	for best metal finish	yes
Copper	A	#0127	92	copper	for best metal finish	yes
Red Brass	A	#0190	92	red brass	for best metal finish	yes
Iron Oxide	A	#0054	96	cast iron	oxidised after machining like the basic material	yes
Alloy	A	#0263	96	stainless steel	for finest metal structures, especially for stainless steels	yes
Ceram	0065	#0811	-	applicable on all metals	wear resistant repairs	yes

Shelf Life

min. 12 month

Package Sizes (cpl.)

standard: 500g, 1.000g
superior: 500g, 1.500g
hardener: 125ml, 300ml

Technical Data

Specific Weight	DIN53454	2 - 2,5 g/cm ³
Compressive Strength	DIN53454	160 N/mm ²
Hardness [Shore D]	DIN53505	87 - 89
Tensile Strength	DIN53455	86 N/mm ²
Tensile Shear Strength	DIN53283	35 N/mm ²
Bending Strength	DIN53452	95 N/mm ²
Impact Strength	DIN53453	4.8 N/mm ²
E-Modulus	DIN53457	14500 N/mm ²
Thermal Conductivity	DIN53612	0,7 - 0,9 W/mK
Linear Expansion Coefficient		25 x 10 E-6
Temperature Resistance (permanent)	HF	- 40 up to +160°C
	HF WF(T)	up to +250°C
Temperature Resistance (temporary)	HF	max. +220°C
	HF WF(T)	max. +500°C

All material values are average values and vary due to mixing ratio, material quantity and environmental conditions. The mentioned material values are based on normal conditions (STP) of 20° 9F) and 1013mbar (1013hPa). C (273K / 31,73

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