plasticmetal

Metal repair system

Product description

DIAMANT plasticmetal is a quick-curing polymer-bound metal repair system for the reliable filling of blow holes as well as small and medium-size defects. Due to its particularly high content of genuine metal fillers, plasticmetal exhibits a very good metal finish and can be machined and manually worked like metal.

As a freely combinable repair system, plasticmetal from DIAMANT Metallplastic adapts itself perfectly to every specific requirement.

14 metal powders and 6 hardening liquids can be individually combined in the plasticmetal repair system and used for a specific application. The freely selectable mixing ratio allows variable viscosities from liquid to pasty. Particularly practical and economical: Also ideal when very small amounts are required, because mixed material can be stored without problems and is instantly available for subsequent work.

Characteristics

- excellent metal character
- very good adhesion to all metals and alloys
- resistant to chemically aggressive media
- permanent temperature resistance up to + 250°C (short term: up to + 350°C)
- short curing times
- free mixing ratio (consistency: liquid to pasty)
- workable after hardening like metal and paintable

Typical applications

Typical applications DIAMANT plasticmetal is used to repair and correct voids, porosities, cavities, voids, wear and tear on all cast iron, steel and metal alloys.

Package sizes

Standard: 500g, 1kg
Superior: 500g, 1,5kg
Hardener: 125ml, 300ml

Technical data

Technical data	Test methods	Value
Specific weight	DIN53454	2 - 2,5 g/cm³
Compressive strength	DIN53454	160 N/mm²
Hardness [Shore D]	DIN53505	87 - 89
Tensile strenght	DIN53455	86 N/mm²
Tensile shear strength	DIN53283	35 N/mm²
Flexural strength	DIN53452	95 N/mm²
Impact strength	DIN53453	4.8 N/mm²
E-Modulus	DIN53457	14500 N/mm²
Thermal conductivity	DIN53612	0,7 - 0,9 W/mK
Linear expansion coefficient		25 x 10 E-6
Temperature resistance (permanent)	HF HF WF(T)	- 40 up to +160°C up to +250°C
Temperature resistance (short-term)	HF HF WF(T)	max. +220°C max. +350°C

All material values are average values and vary due to the mixing ratio, the amount of material and the ambient conditions. The material values given here are based on standard conditions (STP) of + 20 ° C (68 ° F) and 1,013mbar.

Storage / shelf life

Store in the original, unopened container in a dry, cool and frost-free place (5°C - + 20°C). Shelf life 12 months. Protect from direct sunlight. Higher temperatures reduce the shelf life.

Important instructions

Please observe the instructions in the safety data sheet.

Product overview

DIAMANT plasticmetal is available in 14 base powder and 6 liquid hardener variants:

14 base powder

Types	Product name	No.	Metal content %	Application area	Characteristics	Can be combined with other hardeners
Ferro	A	#0061	92	Cast iron	For repairs to the raw cast iron which is painted	Yes
	Superior dark	#0067	96	Cast iron	For best metal character after the processing	Yes
	Superior light	#0223	96	Cast iron	For best metal character after the processing	Yes
Steel	A	#0196	92	Cast steel	For repairs to the raw cast iron which is painted	Yes
	Superior	#0199	96	Cast steel	For best metal character after the processing	Yes
Aluminium	A	#0005	92	Aluminium cast	For best metal character after the processing	Yes
	Superior	#0008	96	Aluminium cast	For best metal character after the processing	Yes
Bronze	A	#0014	92	Bronze casting	For best metal character after the processing	Yes
Brass	A	#0136	92	Cast brass	For best metal character after the processing	Yes
Copper	A	#0127	92	Copper brass	For best metal character after the processing	Yes
Red brass	A	#0190	92	Red brass	For best metal character after the processing	Yes
Iron oxide	A	#0054	96	Cast iron	Oxidized after processing as base material	Yes
Alloy	A	#0263	96	Stainless steel	For the finest metal structure - especially for ground surfaces	Yes
Model Ceram	0065	#0811	-	Applicable to all metals	For wear-resistant repairs	Yes

6 hardener liquids

Hardener liquids	No.	Pot life (min.) 30ml: 30ml *	Pot life (min.) 30ml: 15ml *	Curing (Min.) *	Characteristics
HF standard	0112	8-10	5-7	20	Standard hardener (Europe)
HF fast	0116	5-7	3-5	13	Especially for quick and emergency repairs
HF slow	0114	18-20	15-17	30	Especially for series productions
HF WF	0204	5-6	4-5	11	For high temperature loads + 250°C
HF SF	0013	7-9	6-8	13	For flameproof repairs / hard elastic after hardening
HF Thixo	0065	7-9	6-8	15	Thixotropic hardener, for leak-proof mixtures

Curing time based on a mixing ratio of 2: 1 and 100g material.
PM Ferro A # 0061 / Mixing ratios are in the ratio base powder: hardener liquid.

Preparation of the liability surface
Roughen liability surfaces and clean with DIAMANT cleaner. The surface must be dry and clean. The working temperature must be within the optimum temperature range between +5 / + 45°C.

Processing
Mix the powder and the hardener liquid in a volume ratio of at least 1: 1 (liquid, pourable consistency). By adding powder, the consistency can be adjusted from pourable to pasty-spatulatable. The maximum mixing ratio is 3: 1 (powder: liquid).

Application description
Apply a thin adhesive layer firmly to the liability surfaces with a spatula. Roughen the rest roof-shaped without trapping air.

Curing
The curing time depends on the amount of hardener used and varies from 5 to 60 minutes

Disposal
Unused residual material from the cans, if mixed in the correct mixing ratio and completely cured, can be disposed of normally (EAKV 170203). Unmixed material must be disposed of as chemical waste (EWC 080111).

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