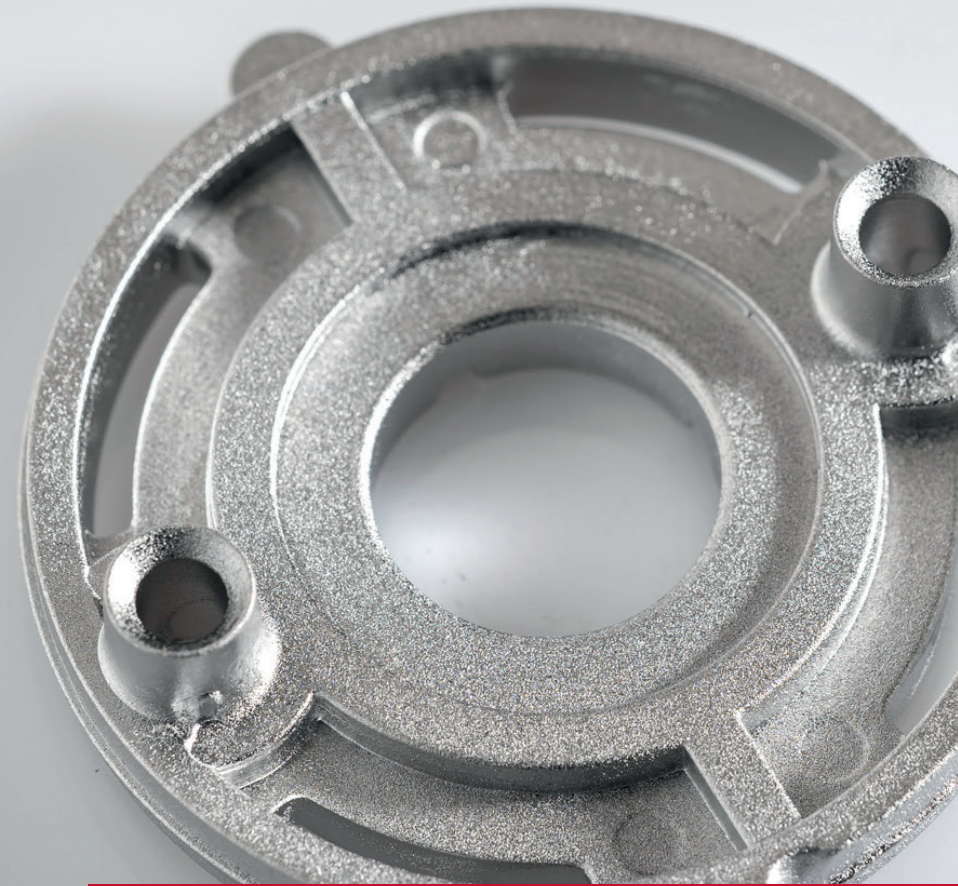



CARBONYL IRON POWDER

for Metal Injection Molding




BASF

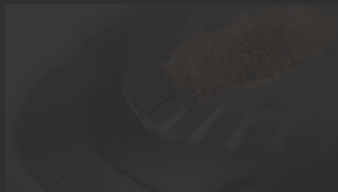
We create chemistry




Inductive
Electronic
Components



Metal Injection
Molding and
Powder Metallurgy



Diamond
Tools



Microwave
and Radar
Absorption

ADVANTAGES OF CIP BY BASF

Carbonyl Iron Powder (CIP) is a key raw material for Metal Injection Molding (MIM). The unique fineness of CIP makes it easily compoundable with high load. It provides high density, excellent strength and surface texture quality in the sintered part. CIP's uniform spherical particle shape generates a high flowability and facilitates high accuracy to size in the final part. Using CIP helps to precisely control the carbon-oxygen ratio of the feedstock.

CIP GRADES BY BASF

BASF's **CIP OS** and **OM** grades are the CIP grades mostly used for MIM applications. These mechanically hard grades offer excellent sintering properties and outstanding batch-to-batch consistency. **CIP OS** is additionally silicated to improve the flowability of the feedstock.

CIP CC is a hydrogen-reduced mechanically "soft" grade with very low carbon and nitrogen content. It is widely applied in combination with **OS** or **OM** in order to adjust the carbon-oxygen ratio of the feedstock. Our new **CIP CD** grade provides a non-silicated alternative to **CIP CC**.

Our specialty, **CIP HQ**, is employed when highest demands need to be met. The extraordinary fineness of **CIP HQ** provides high density and surface texture quality in micro MIM parts.

TYPICAL PROPERTIES

Grade	Characteristic	Fe (%)	C (%)	N (%)	O (%)	D10 (mic.)	D50 (mic.)	D90 (mic.)
CIP CC	Soft, silicated	min. 99.5	max. 0.05	max. 0.01	0.18 – 0.35	1.7 – 2.7	3.8 – 5.3	6.5 – 10.0
CIP CD	Soft	min. 99.5	max. 0.05		max. 0.25	2.0 – 3.3	4.2 – 6.3	7.5 – 12.0
CIP CM	Soft	min. 99.5	max. 0.03	max. 0.01	0.10 – 0.25	3.4 – 4.2	7.0 – 9.5	17.0 – 33.0
CIP CS	Soft	min. 99.5	max. 0.03	max. 0.01	0.12 – 0.30	2.8 – 3.5	6.0 – 7.0	11.0 – 24.0
CIP HQ	Hard	min. 97.8	0.6 – 0.9	0.6 – 0.9	0.3 – 0.5	max. 1.0	max 2.0	max 3.0
CIP OM	Hard	min. 97.8	0.75 – 0.90	0.65 – 0.90	0.15 – 0.40	1.7 – 2.7	3.9 – 5.2	7.2 – 9.2
CIP OM-C	Hard, silicated	min. 97.0	0.8 – 0.9	0.6 – 0.9	0.25 – 0.45		3.8 – 5.1	
CIP OS	Hard, silicated	min. 97.5	0.7 – 0.9	0.5 – 0.9	0.6 – 0.9	1.4 – 2.4	3.4 – 4.4	6.4 – 8.4

Our CIP grades for high quality MIM parts

With precisely controlled properties, our well-known high-quality CIP grades contribute to superior MIM parts. BASF's excellent batch-to-batch consistency helps our customers to efficiently run their production processes.



Please contact us to discuss the requirements of your CIP application.

EUROPE

BASF SE
Metal Systems, Carbonyl Iron Powder
G-EDM/MM
67056 Ludwigshafen am Rhein
Germany
Phone: +49 621 600

CHINA

BASF (China) Company Ltd.
Pudong, Shanghai
China
Phone: +86 21 2039 1328

TAIWAN

BASF Taiwan Ltd.
Taoyuan 32853
Taiwan
Phone: +886 3483 7701

KOREA

BASF(Korea) Company Ltd.
Ansan 15423
Korea
Phone: +82 31 599 7513

NORTH AMERICA

BASF Corporation
Florham Park, NJ,
USA
Phone: +1 973 245 6000

JAPAN

BASF Japan Ltd.
Nihonbashi, Tokyo 103-0022
Japan
Phone: +81 03 5290 3000

INDIA

BASF India Ltd.
400 705, Navi Mumbai
India
Phone: +91 8291281183



Visit our website at:

www.carbonylironpowder.com

NOTE

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