

**TAK****PROPERTIES OF TAK MATERIALS (TAK 材質表)****Ni-Zn Ferrite Series (For High μ MATERIALS) 鎳-鋅氧化磁鐵粉系列(高頻使用)**

CHARACTERISTICS(特性)	UNIT(單位)	DL2	DL3	DL4	DL5	DL6
μ_{iac} (初透磁率)	----	300	350	600	400	300
APPLICABLE 適用 FREQUENCY 頻率	MHz(百萬赫茲)	0.1-2	0.1-2	0.1-2	0.1-2	0.1-2
Bm(飽和磁束密度)	Gauss(高斯)	2600	3500	3500	4000	4300
Br(殘留磁束密度)	Gauss(高斯)	1500	1600	2000	2400	2400
Hc(保持力)	Oersted(奧斯特)	0.9	0.7	0.5	0.3	0.3
Tc(居禮溫度)	°C(攝氏)	180	200	180	200	220
$\alpha \mu r$ (溫度係數)	$\times 10^{-6}/^{\circ}\text{C}$ (攝氏)	10	25	30	25	25
Tan δ / μ_{iac} (相對損失因子)	$\times 10^{-6}$	20(0.1) 100(2.0)	15(0.1) 80(2.0)	12(0.1) 80(2.0)	15(0.1) 80(2.0)	20(0.1) 90(2.0)
d(密度)	g/cm^3 (公克/立方公分)	4.8	4.8	4.9	4.9	4.8
ρ (表面阻抗)	$\Omega \text{ cm}$ (歐姆)	10^7	10^7	10^7	10^7	10^7

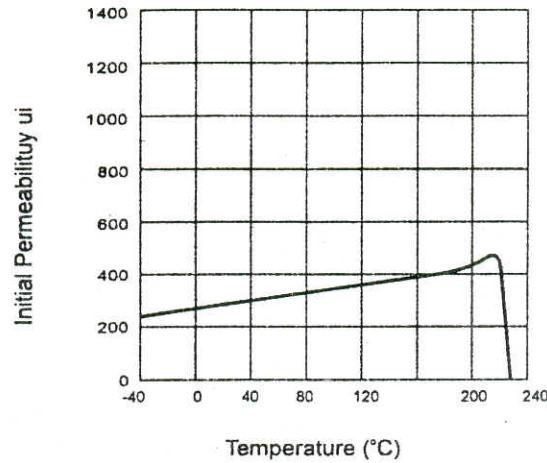

TAK Ferrite

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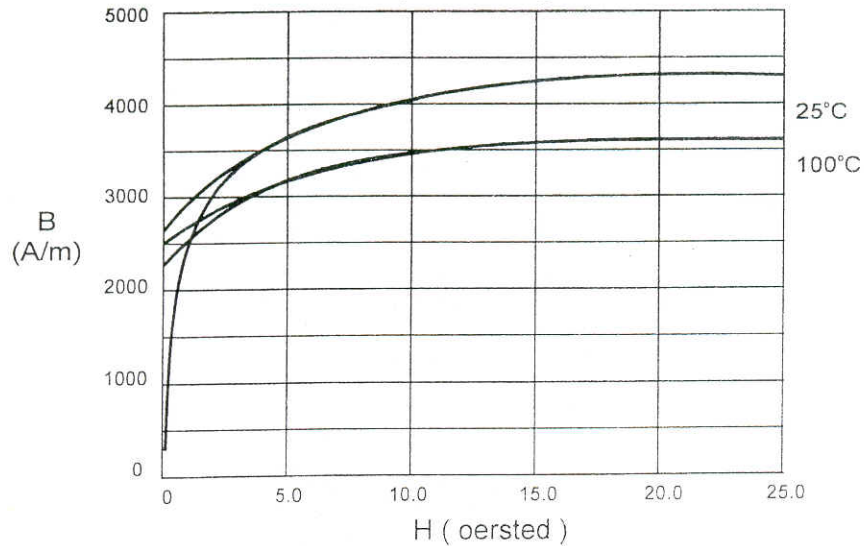


MATERIAL DL6 CHARACTERISTIC

Initial permeability vs. temperature



Flux density vs. Magnetic field

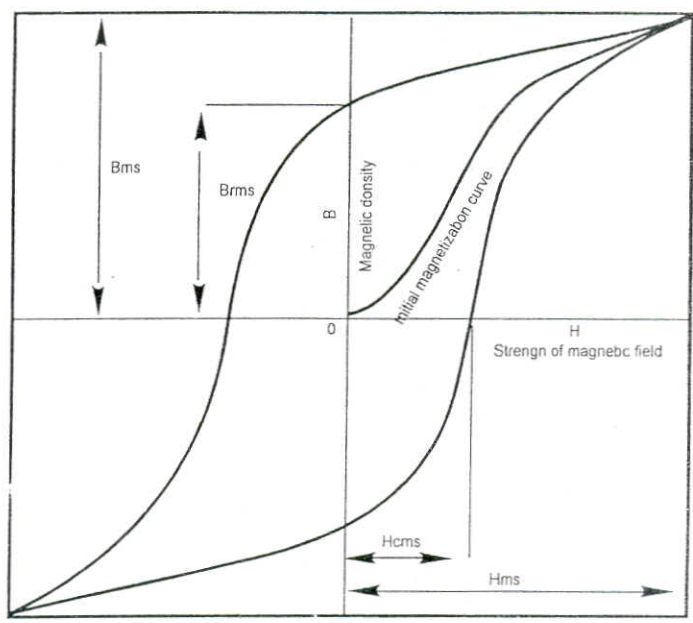


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PROPERTIES OF TAK MATERIALS

CHARACTERISTICS	UNIT	DL4	DL5	DL6
μ_{iac}	-----	600	400	300
APPLICABLE FREQUENCY	MHz	0.1~2	0.1~2	0.1~2
B_m	Gauss	3500	4000	4300
B_r	Gauss	2000	2400	2400
H_c	Oersted	0.5	0.3	0.3
T_c	°C	180	200	220
$\alpha\mu\gamma$	$\times 10^{-6}/^{\circ}C$	30	25	25
$\tan \delta / \mu_{iac}$	$\times 10^6$	12(0.1MHz) 80(2MHz)	15(0.1MHz) 80(2MHz)	20(0.1MHz) 90(2MHz)
d	g/cm^3	5.0	5.0	5.0
ρ	Ωcm	10^7	10^7	10^7



B - H CURVE



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Test Report

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Date: 09 May 2008

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TAK TECHNOLOGY CO.,LTD
NO.3RD INDUSTRIAL AREA JUZHOU SHIJIE TOWN DONGGUAN CITY GUANGDONG PROVINCE
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as :
DL6 MATERIAL FERRITE CORE

SGS Job No. : 10997069 - SZ
 SGS Internal Reference No. : 3.3
 Date of Sample Received : 05 May 2008
 Testing Period : 05 May 2008 - 08 May 2008
 Test Requested : Selected test(s) as requested by client.
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).

Signed for and on behalf of
SGS-CSTC Ltd.

Huang Fang, Sunny
Sr. Engineer

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Test Results:

ID for specimen 1 : CAN08-021494.003
 Description for specimen 1 : Dk-grey core

Heavy metal(s)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Cadmium (Cd)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2
Lead (Pb)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	54	2
Mercury (Hg)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321/2nd CDV (111/95/CDV), UV-Vis	N.D.	2

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

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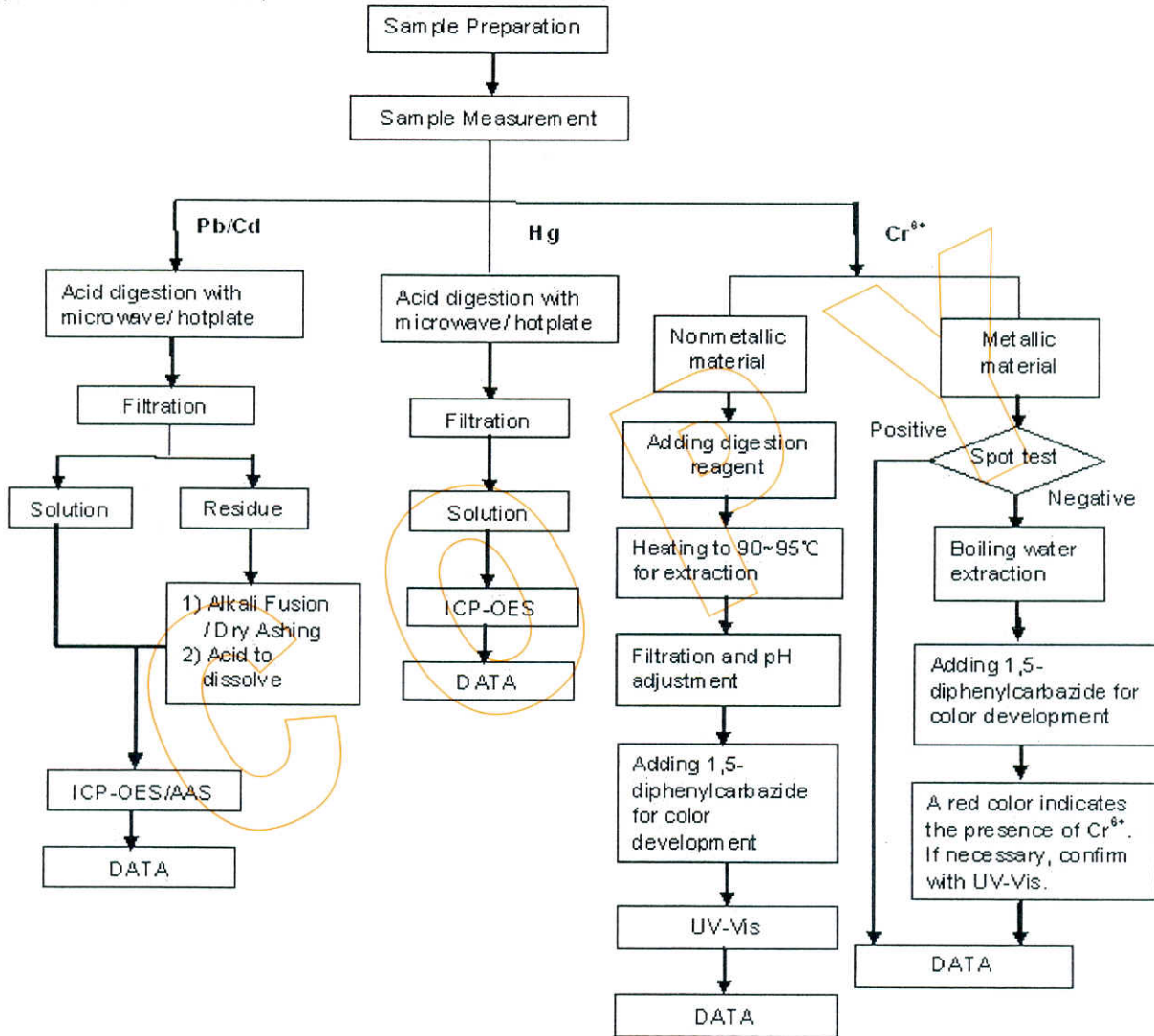


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ATTACHMENTS

Testing Flow Chart

- 1) Name of the person who made measurement: Bowen Chen
- 2) Name of the person in charge of measurement: Adams Yu
- 3) These samples were dissolved totally by pre-conditioning method according to below flowchart.
(Cr⁶⁺ test method excluded)



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Sample photo:



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