Evaporation Coating Materials

PRODUCTION INFORMATION

Substance AH40

地址：上海闵行区吴泾塘湾三新街 1 号，Sanxin street No.1 Tangwan town WujingMinhang Zone，Shanghai
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AH40 PRODUCTION INFORMATION

BIREF INTRODUCTION

The products information sheet is based on our own study and on literature data. The different deposition process have influence on the properties of the coating materials in thin films . For this reason, coating properties quoted are to be understood as being typical values and cannot be guaranteed. As far as possible, the conditions under which the coating properties were achieved are indicated.

QUALITY CONTROL

We try my best to do many times experiment .During quality control of the products analyses were performed for measure the properties of the products which are of major importance for the applicability of the products and the properties of the coatings. We also did much Chemical analysis is to determine the element proportion in ordre to get perfect optical data. Furthermore application testing is performed to analyse the character of the product during melting and evaporation. Also thin coatings are made to analyse transmittance and refractive index.

SAFETY NOTE

Working safety requires that products which are formed during evaporation to be kept in the closed system. If you clean the chamber ,it need well ventilation. If fine dust develops during cleaning of evaporation equipment suitable respiratory protection must be provided .

GENERAL INFORMATION

Coating material AH40 was developed to provide an evaporation material for deposition of higher index thin films especially on inorganic glass ,crystal, plastic substrates and so on .The coating temperature is from room temperature to 300 degree.

Transmittance range of Coating material AH40 is about 360 nm to 7 μm. Refractive index of films is about 2.1 at 500 nm depending on deposition conditions. Coating material AH40 is supplied in form of granules. Coating material AH40 Can substitute for substance refractive index 2.1 effectively。

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Properties of AH40

Melting point: about 1800℃

Evaporation temperature: about 2250℃

Refractive index: about 2.1 (λ =500nm)

Transmittance range: 360nm—7000nm

Appearance : dark grey granules

Granule size: 1—4mm

Recommended Coating Conditions

Deposition rate: 0.3-0.8nm/sec

Oxygen partial pressure: 8.0E-3Pa--1.4E-2Pa.

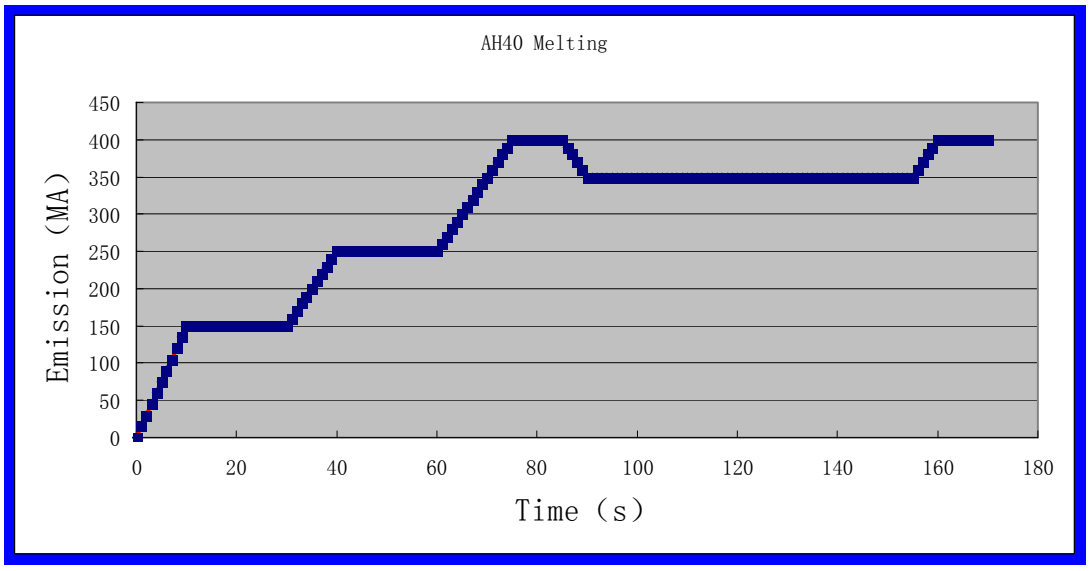
Substrate temperature: Room Temperature--300℃

Density setting: 5.82g/cc

Z－Ratio: 1.0

Crucible: water cooled Copper or molybdenum

Recommended premelting process used for AH40



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STEP	EMISSION	R TIME	H TIME	SCANING	ROTATION
1	0-150	10		80x80	
2	150		20	80x80	
3	150-250	10		60x60	
4	250		20	60x60	
5	250-400	15		30x30	
6	400		10	30x30	
7	400-350	5		10x10	
8	350		5	10x10	
9	350		60	10x10	12 POINT
10	350-400	5		70x70	
11	400		10	70x70	

Properties of THIN FILM(Typical Example)

JEOL EB: Model:JEBG－102U

Water cooled Copper Crucible: 12 Points Hearth

Exhaust System: RP+MBP+DP

INFICON XTC/2 : Six point crystal

The physical thickness on crystal: About 360nm

Spectrometer: Jasco－570

Coating material **AH40** single layer film , shows transmittance (T%) spectrum.

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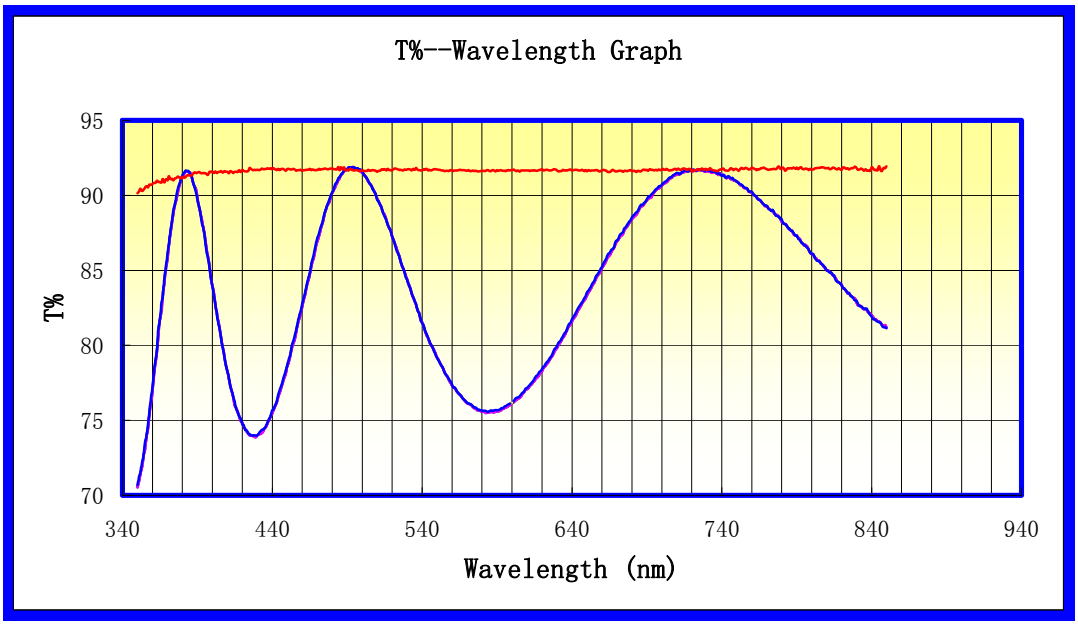
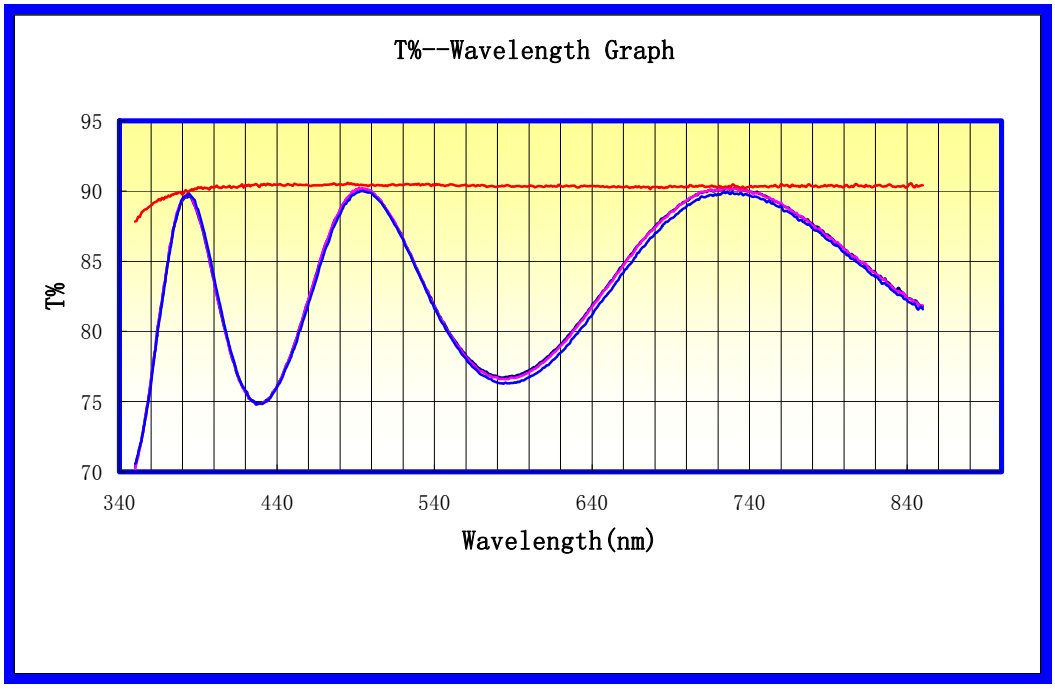
substrate material: BK7(N=1.52)



substrate material: ZK3(N=1.56)



The properties of the materials in thin film are affected by the choice of deposition conditions. For example ,substrate temperature, Deposition rate, Oxygen partial pressure and so on. For this reason, coating properties quoted are to be understood as being typical values and cannot be guaranteed. The following figures show the dispersion of refractive index for different substrate .

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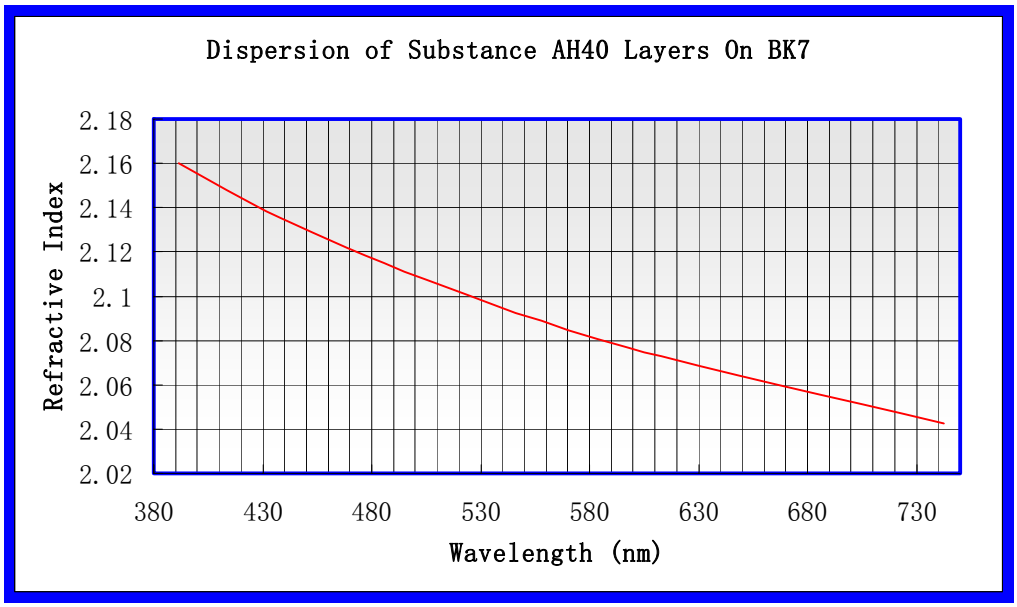

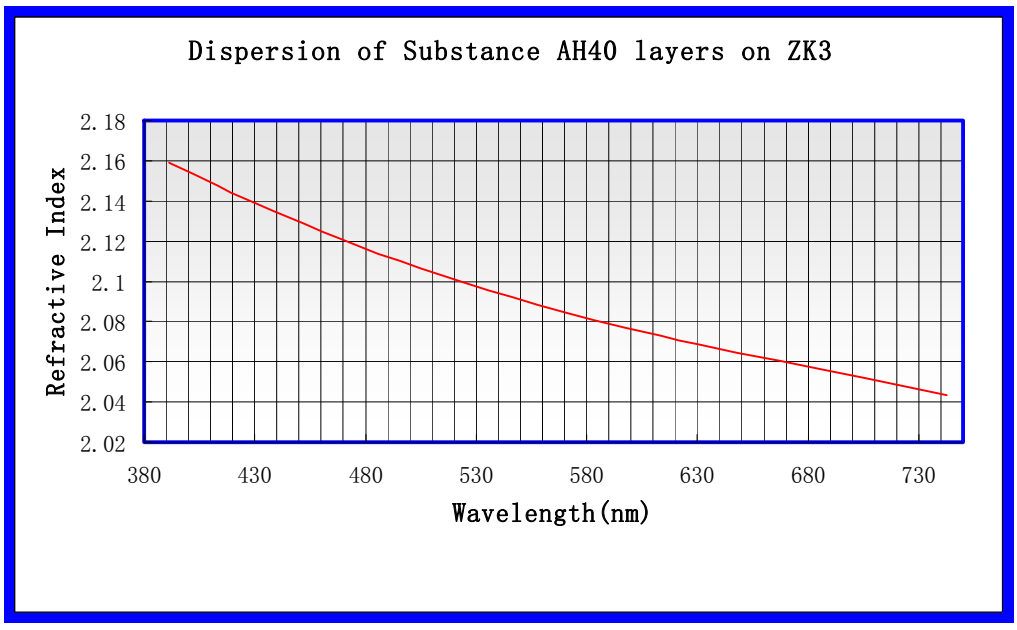

Above data is only for your reference. If you have any question, do not hesitate to contact with us. We are glad to discuss any question with you。 Thank you for your support and cooperation。

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