

C. & L. E. Attenborough Ltd.

Dental Technicians & Dental Brush Manufacturers

Viscosa House, George Street, Nottingham NG1 3BN

Telephone: 0602 473562 Fax: 0602 509086



TM No. 415469

SAFETY AND DATA SHEET

1. PRODUCT Attenborough's Cobalt Chromium Alloy No. 4
2. PHYSICAL DATA OF MATERIAL A cobalt chromium base alloy in cut rod form
3. STABILITY Can be stored indefinitely
4. HANDLING & STORAGE No recorded health effect from handling the material in its solid state. However, the constituent metals of the alloys are governed by Exposure Limits which must be observed in any circumstances of use which involves or creates finely divided powder, dust or fume. It is the responsibility of the user/employer to ensure that Exposure Limits are not exceeded. The material should be stored in a clean and dry area and properly identified.
5. HEALTH HAZARD INFORMATION (A) Due regard must be given to machining and grinding of the material. The application of excessive mechanical force may result in fracture.
(B) Grinding of the alloy should only be carried out using properly designed and operated local exhaust extraction.
(C) NOT TO BE USED FOR NICKEL SENSITIVE INDIVIDUALS
Skin contact should be avoided when handling powders.
(D) Welding and melting - Fumes and gases can be produced which should be extracted.
6. FIRE FIGHTING No special precautions
7. DISPOSAL In accordance with Local Authority Regulations
8. OTHER COMMENTS When using an oxy-acetylene torch, care must be taken to avoid carbon pick-up from the flame which will increase the alloy hardness and reduce its ductibility. Use a reducing flame with the acetylene feather approximately 20% longer than the oxygen cone. Do not use too large a flame which may cause overheating.

Every effort has been made to ensure that the information is correct and gives adequate safety within current knowledge. Whilst responsibility for errors and omissions are not accepted, the Company will endeavour to supply information on any of its products on request.

REF. SD7 VERSION 2 19/12/91

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DATA SHEET

(FOR INFORMATION ONLY)

<u>PRODUCT:-</u>	Attenborough's Cobalt Chromium Alloy No.4 to BS3366 Pt 1 1988	
<u>FORM:</u>	Cobalt Chromium base alloy with high wear resistance which allows slight bending of the retentive elements.	
<u>TECHNICAL DATA:</u>	Hardness	HV 330
	Elongation	5 - 8%
	Modus of Elasticity	220,000 n/mm ²
	Ultimate Tensile Strength	775 N/mm ²
	0.2% Proof Stress	540 N/mm ²
	Density	8.4 g/cm ³ (0.3031b/in ³)
	Thermal Expansion Coefficient	$16 \times 10^{-6} / ^\circ\text{c}$ ($8.9 \times 10^{-6} / ^\circ\text{f}$)
	Liquidem Temperature	1385 c
	Solidem Temperature	1170 c

The data listed represent average values based on laboratory tests conducted by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed values. Our products, and any recommended practices, should be tested by the user under actual service conditions to determine their suitability for any particular purpose.

REF. SD7/1 VERSION 1 12/7/91