



COMMERCIAL CLAY LTD

PROCESSORS OF CLAY FOR CRAFT EDUCATION AND INDUSTRY

SANDBACH ROAD, COBRIDGE, STOKE-ON-TRENT ST6 5DF

SAFETY DATA SHEET

POTTERY CLAY AND SLIPS

PRODUCT CHARACTERISTICS	
CHEMICAL NATURE:	MIXTURE OF CLAY MINERALS, GROUND CERAMIC FLUXES, CRYSTALLINE SILICA (QUARTZ AND/OR CRISTOBALITE) FIRECLAY GROGS AND WATER.
APPEARANCE AND ODOUR:	ODOURLESS PLASTIC MASS OR LIQUID SUSPENSION (CASTING SLIP).
MELTING POINT:	GREATER THAN 1000 DEG C (SOLID COMPONENT).
SOLIDS CONTENT:	APPROXIMATELY 80% PLASTIC CLAY 70% CASTING SLIP

HEALTH HAZARD DATA

SUPPLIED IN PUGGED CLAY, PRESS-CAKE OR CASTING SLIP FORM, THE PRODUCT DOES NOT GIVE RISE TO SIGNIFICANT HEALTH HAZARD. HOWEVER, DUE TO THE CRYSTALLINE SILICA CONTENT, UP TO 50% ON DRY WEIGHT BASIS, THE MATERIAL MAY GIVE RISE TO HEALTH HAZARD THROUGH INHALATION IF IT IS TRANSFORMED INTO DUST. PROLONGED AND REPEATED INHALATION OF QUARTZ DUST (USUALLY OVER A PERIOD OF YEARS) CAN GIVE RISE TO LUNG DAMAGE AND IMPAIRED BREATHING.

CLAY WHICH DRIES OUT ON THE SKIN MAY GIVE RISE TO IRRITATION. INGESTION IS NOT KNOWN TO CAUSE SERIOUS ILL-EFFECTS.

SPILLAGES OF CLAY AND/OR SLIP WET ON FLOOR MAY GIVE RISE TO SLIPPERY CONDITIONS.

DURING THE FIRING OF CLAY, POTENTIALLY HARMFUL VAPOURS AND GASES MAY BE EVOLVED. THEREFORE KILNS SHOULD BE HOUSED IN A WELL-VENTILATED ROOM WHERE ALL GASES ARE EXHAUSTED TO THE ATMOSPHERE.

RECOMMENDED PROTECTIVE MEASURES

PROTECTIVE APRON OR OVERALLS, MADE FROM FABRIC HAVING A LOW DUST RETENTION VALUE, SHOULD BE WORN. CLAY ITEMS SHOULD BE FETTLER WHILE THEY STILL RETAIN MOISTURE TO AVOID THE GENERATION OF DUST. IF DUSTY CONDITIONS EXIST, A SUITABLE RESPIRATORY PROTECTIVE DEVICE SHOULD BE WORN, (E.G. 3M 8800 DUST MASK) OR DUST EXTRACTION PROVIDED.

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EMERGENCY AND FIRST AID PROCEDURES

ALL CONTAMINATION OF THE SKIN AND MOUTH SHOULD BE WASHED AWAY WITH WATER. IF INGESTED GIVE PLENTY OF WATER TO DRINK AND CONSULT MEDICAL OPINION. IF CLAY GETS INTO EYES WASH THE AFFECTED PART WITH WATER FOR 15 MINUTES. CONSULT MEDICAL OPINION AFTER EYE CONTACT OR IF ILL-EFFECT CONTINUED.

SPILLAGE AND WASTE DISPOSAL

COLLECT ALL SPILLAGES IMMEDIATELY AND DISPOSE OF AS NON-TOXIC WASTE IN ACCORDANCE WITH LOCAL REGULATIONS. IF DRY CLAY OR SLIP FORMS DUST ON FLOORS OR SHELVES COLLECT BY USE OF VACUUM CLEANER FITTED WITH AN EFFICIENT FILTER OR WASH TO DRAINS WITH PLENTY OF WATER. NOTE EFFLUENT CONTROL LIMITS MUST BE ADHERED TO.

LABELLING

UNDER E.E.C REGULATIONS THE PRODUCT IS NOT CLASSIFIED AS DANGEROUS FOR SUPPLY OR CONVEYANCE. STATUTORY INSTRUMENT 1984, No.1244 IN THE U.K.

OTHER INFORMATION

THE PRODUCT IS NON-FLAMMABLE. STORE AT 5 - 25°C IN PACKAGING SUPPLIED.

IF CLAY DUST IS GENERATED, SUITABLE PRECAUTIONS I.E. PROVISION OF DUST EXTRACTION, SHOULD BE TAKEN. OCCUPATION EXPOSURE LIMITS (REF. GUIDE NOTE EH40/89 HEALTH AND SAFETY EXECUTIVE 8 HOUR TWA).

OBSERVE THE LATEST PUBLISHED LIMITS.

QUARRY	0.3 M.M. ⁻³ TOTAL INCAPABLE DUST
	0.1 M.M. ⁻³ RESPIRABLE DUST
CRISTOBALITE	0.15 M.M. ⁻³ TOTAL INCAPABLE DUST
	0.05 M.M. ⁻³ RESPIRABLE DUST

THIS SUPPLY DATA SHEET COVERS ALL CLAY BODIES AND CASTING SLIPS PRODUCED BY COMMERCIAL CLAY LIMITED.

MAGMA CLAYS

TECHNICAL SPECIFICATION

PHYSICAL DATA	FIRING RANGE	T/EXPN @ 500C	TOTAL SHRINKAGE	FIRE COLOUR	TEXTURE 1-SMOOTH 10-COARSE
WHITE	1200-1280c	0.265	10.2	OFF WHITE	6
FINE WHITE & EXTRA FINE WHITE	1200-1280c	0.275	13.2	OFF WHITE	3 1
SCULPTURE	1200-1300c	0.240	7.8	OFF WHITE	9
FINE SCULPTURE	1200-1300c	0.240	10.0	OFF WHITE	6
CRANK	1220-1280c	0.255	11.4	PALE GREY	8
RAKU FINE RAKU	960-1060c 1220-1280c	0.265	10.0	WARM BUFF	8 6
FAIENCE	1100-1160c	0.365	8.5	WHITE/IVORY	1
RED	1040-1140c 1240c	0.300 0.285	9.5 13.0	LIGHT/DARK RED DARK BROWN	8 8
PORCELAIN	1220-1280c	0.295	12.5	WHITE	1

CHEMICAL ANALYSIS

	SiO2	Al2O3	Fe2O3	TiO2	CaO	MgO	K2O	Na2O
WHITE	67.40	26.80	0.83	0.94	0.15	0.36	2.70	0.69
FINE WHITE	69.90	23.80	0.80	1.11	0.17	0.39	2.71	0.82
EXTRA FINE WHITE	72.38	21.64	0.71	1.02	0.21	0.32	2.81	0.92
SCULPTURE	59.40	34.90	1.20	1.63	0.26	0.24	1.86	0.27
CRANK	63.10	27.50	1.61	0.97	0.39	1.44	3.14	1.66
RAKU FINE RAKU	55.70	34.20	2.82	1.15	0.16	3.89	2.20	0.32
FAIENCE	65.30	16.15	0.55	0.48	5.51	0.21	1.15	0.25
RED	56.90	24.60	6.59	1.10	0.58	1.59	1.58	0.15
PORCELAIN	66.90	26.20	0.29	0.06	0.30	0.27	2.89	1.65

MAGMA WHITE MC2

A SUPERB WHITE FIRING, MEDIUM TEXTURED CLAY. THE INCLUSION OF A RANGE OF CAREFULLY CONTROLLED GRADES OF MOLOCHITE MAKES THIS CLAY IDEALLY SUITED TO A WIDE RANGE OF APPLICATIONS - THROWING, COILING, HAND BUILDING, MODELLING AND FINE SCULPTURE.

MAGMA FINE WHITE MC4

THE USE OF A WHITE FIRING, HIGH PLASTIC BALL CLAY TOGETHER WITH CHINA CLAY AND MOLOCHITE RESULTS IN A PRODUCT WITH HIGH WARP RESISTANCE, EXCELLENT THERMAL SHOCK AND SUPERB THROWING CAPABILITY FOR LARGE AND WIDE PIECES. IT IS ALSO AVAILABLE IN AN EXTRA FINE VERSION, MC6.

MAGMA SCULPTURE MC8

SCULPTURAL WORK NECESSITATES THE USE OF THICK SECTIONS OF CLAY AND CAN RESULT IN CRACKING AND WARPING DURING DRYING AND FIRING. MAGMA SCULPTURE IS A HIGHLY GROGGED CLAY OF LOW SHRINKAGE, YET RETAINS EXCELLENT WORKABILITY AND HIGH RESISTANCE TO THERMAL SHOCK. FIRES TO AN OFF-WHITE/IVORY COLOUR.

MAGMA FINE SCULPTURE MC10

HAND-BUILDING TECHNIQUES BECOME A JOY WITH THIS MEDIUM TEXTURED CLAY, AS WELL AS BEING A COARSE THROWING BODY. RESPONDS WELL TO RAKU FIRING AND TO BOTH OXIDISING AND REDUCTION STONEWARE TEMPERATURES. THE USE OF TALC AND OTHER MINERALISERS RESULTS IN THE FORMATION OF CORDIERITE, A MATERIAL OF VERY LOW THERMAL EXPANSION GIVING EXCELLENT THERMAL STABILITY.

MAGMA CRANK MC12

THIS INTIMATE BLEND OF MINERALS, THRUST UP FROM THE EARTH'S CORE AND NOW MODIFIED BY MAN, GIVES A CLAY OF UNIQUE COMPOSITION. HIGHLY GROGGED YET STILL RETAINING EXCELLENT PLASTICITY FOR ALL TYPES OF SCULPTURAL AND HAND-BUILDING CERAMICS.

MAGMA RAKU MC14

A HIGHLY GROGGED CLAY GIVING EXCELLENT RESULTS IN RAKU FIRING, BUT EQUALLY AT HOME WITH BOTH OXIDISING AND REDUCTION STONEWARE TEMPERATURES. THIS OPEN TEXTURED CLAY WITH LOW SHRINKAGE AND WARPAGE FIRES TO AN INTERESTING WARM COLOUR WITH SLIGHT SPECKLING AND TOASTING AND IS SUITABLE FOR A HAND-BUILDING TECHNIQUE. A FINER GROGGED ALTERNATIVE IS AVAILABLE WHICH IS SUITABLE FOR THROWING AND FOR FINER SURFACE AND CLOSE TEXTURED HAND-BUILT CERAMICS, I.E. MAGMA FINE RAKU MC16.

MAGMA FAIENCE MC18

A RECENTLY DEVELOPED EARTHENWARE CLAY BASED ON HISTORICAL RECIPES GIVES A WHITE/IVORY FIRED COLOUR WITH SUPERB THROWING CHARACTERISTICS AND EXCELLENT COLOUR RESPONSE. ALREADY RECEIVING EXCELLENT COMMENTS FROM EXISTING CUSTOMERS AND IS POSSIBLY ONE OF THE BEST THROWING WHITE EARTHENWARES AVAILABLE TODAY.

MAGMA RED MC20

A SUPERB TERRACOTTA USING REFRACTORY GROGS, YET RETAINING GOOD PLASTICITY, IS SUITABLE FOR SCULPTURAL AND GARDEN WARE. LIGHT RED IN COLOUR BECOMING PROGRESSIVELY DARKER WITH INCREASING TEMPERATURE. IT IS ALSO USED BY A NUMBER OF POTTERS FIRING TO STONEWARE TEMPERATURES, GIVING A WARM BROWN COLOUR.

MAGMA PORCELAIN MC22

BY CAREFUL SELECTION OF HIGHLY REFINED MINERALS, HIGHLY PLASTIC CHINA CLAYS AND THE ADDITION OF NATURAL PLASTICISERS GIVES AN EXCELLENT WHITE, TRANSLUCENT BODY SUITABLE FOR THROWING AND FINE MODELLING.