

SEQUENTIALLY COHEN-MACAULAY MONOMIAL IDEALS OF EMBEDDING DIMENSION FOUR

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ABSTRACT. Let I be a monomial ideal of the polynomial ring $S = K[x_1, \dots, x_4]$ over a field K . Then S/I is sequentially Cohen-Macaulay if and only if S/I is pretty clean. In particular, if S/I is sequentially Cohen-Macaulay then I is a Stanley ideal.

Key words : Monomial Ideals, Prime Filtrations, Pretty Clean Filtrations, Stanley Ideals.

2000 Mathematics Subject Classification: Primary 13H10, Secondary 13P10, 13C14, 13F20.