

On the a -invariant of the Rees Algebra of the ideal of k -products

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We determine the equations of the polyhedral cone generated by the exponent vectors of the monomials defining the Rees algebra of the ideal generated by the square-free monomials of degree k in n variables, the canonical module of the Rees algebra can be expressed in terms of the relative interior of the cone, this would allow us to compute the a -invariant of this algebra.