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**Bounded commutative BCK-algebras satisfying d.c.c.** (English) Zbl 0638.03066  
Math. Jap. 32, 217-225 (1987).

We prove that a bounded commutative BCK-algebra satisfying d.c.c. and containing an atom splits as the direct sum of a prime BCK ideal and a finite chain which is the interval between 0 and a minimal complemented element which is also a join prime. The complement of this element is the generator of the prime BCK ideal which is also a principal lattice ideal and the annihilator ideal of the atom.

**MSC:**

[03G25](#) Other algebras related to logic

[06B10](#) Lattice ideals, congruence relations

Cited in 1 Document

**Keywords:**

descending chain condition; bounded commutative BCK-algebra; prime BCK ideal