

## PRE-STRONGLY SOLID VARIETIES OF COMMUTATIVE SEMIGROUPS

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### Abstract

Generalized hypersubstitutions are mappings from the set of all fundamental operations into the set of all terms of the same language do not necessarily preserve the arities. Strong hyperidentities are identities which are closed under the generalized hypersubstitutions and a strongly solid variety is a variety which every its identity is a strong hyperidentity. In this paper we give an example of pre-strongly solid varieties of commutative semigroups and determine the least and the greatest pre-strongly solid variety of commutative semigroups.

**Keywords and phrases:** generalized hypersubstitution, pre-strongly solid variety, commutative semigroup.

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