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(54) **COLD SEAL COMPOSITIONS COMPRISING HOMOGENEOUS ETHYLENE POLYMERS**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(58) **Field of Search** ..... **524/502, 504, 524/478, 474; 525/240, 88; 526/943, 348; 428/355 AC, 355 EN, 355 BL, 34.2, 515, 35.2, 523; 229/80**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,397,843	3/1995	Lakshmanan et al. ....	525/240
5,530,054	6/1996	Tse et al. ....	524/474
5,548,014	8/1996	Tse et al. ....	524/477

**FOREIGN PATENT DOCUMENTS**

0 531 618	3/1993	(EP) .
WO 97/33921	9/1997	(WO) .
WO 98/03603 *	1/1998	(WO) .

**OTHER PUBLICATIONS**

"A New Family of Linear Ethylene Polymers Provides Enhanced Sealing Performance" *Tapi Journal* pp 100-102, Feb. 1992.\*

\* cited by examiner

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(57) **ABSTRACT**

The present invention is a cold seal composition having certain rheological properties. The composition comprises from about 10 wt-% to 100 wt-% of at least one homogeneous ethylene/ $\alpha$ -olefin interpolymers. The novel adhesive compositions of the present invention may be coated onto a variety of substrates, resist blocking upon being supplied as a roll-good, and exhibit a wide range of bond strengths, amenable to a variety of cold seal bonding applications.

**19 Claims, 1 Drawing Sheet**

**COLD SEAL RHEOLOGICAL PARAMETERS**

