

**UNIFORM BUILDING CODE STANDARD 21-13  
HYDRATED LIME FOR MASONRY PURPOSES**

Based on Standard Specification C 207-91 (Reapproved 1992) of the ASTM International.  
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See Section 2102.2, Item 3, *Uniform Building Code*  
*Note: See Referenced Standard UBC 21-4*

**Section 21.1301 — Scope**

This standard covers four types of hydrated lime. Types N and S are suitable for use in mortar, in the scratch and brown coats of cement plaster, for stucco, and for addition to portland-cement concrete. Types NA and SA are air-entrained hydrated limes that are suitable for use in any of the above uses where the inherent properties of lime and air entrainment are desired. The four types of lime sold under this specification shall be designated as follows:

**Type N**—Normal hydrated lime for masonry purposes.

**Type S**—Special hydrated lime for masonry purposes.

**Type NA**—Normal air-entraining hydrated lime for masonry purposes.

**Type SA**—Special air-entraining hydrated lime for masonry purposes.

**Note:** Type S, special hydrated lime, and Type SA, special air-entraining hydrated lime, are differentiated from Type N, normal hydrated lime, and Type NA, normal air-entraining hydrated lime, principally by their ability to develop high, early plasticity and higher water retentivity and by a limitation on their unhydrated oxide content.

**Section 21.1302 — Definition**

**HYDRATED LIME.** The hydrated lime covered by Type N or S in this standard shall contain no additives for the purpose of entraining air. The air content of cement-lime mortars made with Type N or S shall not exceed 7 percent. Types NA and SA shall contain an air-entraining additive as specified by Section 21.1305. The air content of cement-lime mortars made with Type NA or SA shall have a minimum of 7 percent and a maximum of 14 percent.

**Section 21.1303 — Additions**

Types NA and SA hydrated lime covered by this standard shall contain additives for the purpose of entraining air.

**Section 21.1304 — Manufacturer's Statement**

Where required, the nature, amount and identity of the air-entraining agent used and of any processing addition that may have been used shall be provided, as well as test data showing compliance of such air-entraining addition.

**Section 21.1305 — Chemical Requirements  
Composition**

Hydrated lime for masonry purposes shall conform to the requirements as to chemical composition set forth in Table 21-13-A.

**Section 21.1306 — Residue, Popping and Pitting**

The four types of hydrated lime for masonry purposes shall conform to one of the following requirements:

1. The residue retained on a No. 30 (600  $\mu$ m) sieve shall not be more than 0.5 percent, or
2. If the residue retained on a No. 30 (600  $\mu$ m) sieve is over 0.5 percent, the lime shall show no pops and pits when tested.

**Section 21.1307 — Plasticity**

The putty made from Type S, special hydrate, or Type SA, special air-entraining hydrate, shall have a plasticity figure of not less than 200 within 30 minutes after mixing with water, when tested.

**Section 21.1308 — Water Retention**

Hydrated lime mortar made with Type N, normal hydrated lime, or Type NA, normal air-entraining hydrated lime, after suction for 60 seconds, shall have a water-retention value of not less than 75 percent when tested in a standard mortar made from the dry hydrate or from putty made from the hydrate which has been soaked for a period of 16 to 24 hours.

Hydrated lime mortar made with Type S, special hydrated lime, or Type SA, special air-entraining hydrated lime, after suction for 60 seconds, shall have a water-retention value of not less than 85 percent when tested in a standard mortar made from the dry hydrate.

**Section 21.1309 — Special Marking**

When Type NA or SA air-entraining hydrated lime is delivered in packages, the type under this standard and the words "air-entraining" shall be plainly indicated thereon or, in case of bulk shipments, so indicated on shipping notices.