

CYS National Annex to CYS EN 1991-1-3:2002

Eurocode 1: Actions on structures

Part 1-3: General actions – Snow loads

Prepared by
Eurocodes Committee, Scientific and Technical Chamber
of Cyprus under a Ministry of Interior's Programme



NATIONAL ANNEX
TO
CYS EN 1991-1-3:2003 Eurocode 1: Actions on Structures
Part 1-3: General Actions – Snow Loads

This National Annex has been approved by the Board of Governors of the Cyprus Organisation for Standardisation on 11/06/2010.

INTRODUCTION

This National Annex has been prepared by the Eurocodes Committee of the Technical Chamber of Cyprus which was commissioned by the Ministry of Interior of the Republic of Cyprus.

NA 1.1 SCOPE

This National Annex is to be used together with CYS EN 1991-1-3:2003.

This National Annex gives:

(a) National determined parameters for the following clauses of CYS EN 1991-1-3:2003 where national choices is allowed (see Section NA2)

- 1.1(2)
- 1.1(4)
- 2(3)
- 2(4)
- 3.3(1)
- 3.3(3)
- 4.1(1)
- 4.2(1)
- 4.3(1)
- 5.2(1)
- 5.2(2)
- 5.2(5)
- 5.2(6)
- 5.2(7)
- 5.3.3(4)
- 5.3.4(3)
- 5.3.5(1)
- 5.3.5(3)
- 5.3.6(1)
- 5.3.6(3)
- 6.2(2)
- 6.3(1)
- 6.3(2)
- A(1) (through Table A1)

(b) Guidance on use of the informative Annexes C, D and E (see Section NA 3)

(c) References to non-contradictory complementary information applicable to buildings and civil engineering works (see Section NA 4).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 1.1(2) General. Treatment of snow load for altitudes above 1500 m

For altitudes above 1500m a special study must be carried out regarding the snow load. Data regarding snow depth, snow drift and exceptional snow load must be obtained from responsible authority.

NA 2.2 Clause 1.1(4) General. Use of Annex B

Annex B should be used

NA 2.3 Clause 2(3) Classification of actions. Exceptional snow loads

Exceptional snow loads may be treated as accidental load for locations with altitude above 1000 m

NA 2.4 Clause 2(4) Classification of actions. Exceptional snowdrift

Exceptional snow drifts may be treated as accidental load for locations with altitude above 1000 m

NA 2.5 Clause 3.3(1) Exceptional condition of snow falls but not snow drifts

The design situations to be considered are persistent / transient.

NA 2.6 Clause 3.3(3) Define which design situation to apply for a particular local effect

The design situations to be considered are persistent / transient.

NA 2.7 Clause 4.1(1) Snow load on the ground. Characteristic value of snow load on the ground (s_k)

The characteristic value of snow load (s_k) must be obtained from the formula of Annex C Table C.1 for Mediterranean Region. The zone number all over the island must be taken equal $Z=1$

$$s_k = 0.289 * \approx 1 + (A/452)^2 \dots$$

Where

s_k is the characteristic snow load on the ground (KN/m²)

A is the site attitude above sea level (m)

NA 2.8 Clause 4.2(1) Snow load on the ground. Other representative values

Table 4.1 of CYS EN 1991-1-3 should be used

NA 2.9 Clause 4.3(1) Snow load on the ground. Treatment of exceptional snow load on the ground

The value of the coefficient for exceptional snow loads $C_{esl} = 2.0$

NA 2.10 Clause 5.2(1) Snow load on the roof. Load Arrangement

Both drifted and undrifted snow load shall be taken into account.

NA 2.11 Clause 5.2(2) Snow load on the roof. Load Arrangement

Annex B shall be used.

NA 2.12 Clause 5.2(5) Snow load on the roof. Load Arrangement

The snow loads must be arranged in such a way so the strength values to be ultimate.

NA 2.13 Clause 5.2(6) Snow load on the roof. Load Arrangement

No further guidance available.

NA 2.14 Clause 5.2(7) Snow load on the roof. Load Arrangement

The values of C_e should be taken from table 5.1 of CYS EN 1991-1-3.

NA 2.15 Clause 5.3.3(4) Roof shape coefficients. Drifted load arrangement

No further guidance available.

NA 2.16 Clause 5.3.4(3) Roof shape coefficients. Multi span roof

The National Annex B should be used to determine the load case due to drifting.

NA 2.17 Clause 5.3.5(1) Roof shape coefficients. Cylindrical roofs

The upper value for μ_3 is 2.

NA 2.18 Clause 5.3.5(3) Roof shape coefficients. Cylindrical roofs

No further guidance available.

NA 2.19 Clause 5.3.6(1) Roof shapes coefficients. Roof abutting and close to taller construction works

The range for μ_w should be $0.8 < \mu_w < 4$.

NA 2.20 Clause 5.3.6(3) Roof shape coefficients. The drifted load arrangement

National Annex B should be used to determine the load case due to drifting.

NA 2.21 Clause 6.2(2) Local effects. Drifting at protection and obstructions

National Annex B should be used to determine the load case due to drifting.

NA 2.22 Clause 6.3(1) Local effects. Snow overhanging the edge of the roof.

The load of snow overhanging the edge of the roof should be considered for sites above 800 meters above the sea level.

NA 2.23 Clause 6.3(2) Local effects. Snow overhanging the edge of the roof

The value of k is calculated as follows: $k=3/d$ but $k < d \cdot \gamma$. Where d is the depth of the snow layer on the roof, in meters, and γ is the weight density of snow and can be taken as 3 KN/m^2 (see Figure 6.2 of CYS EN 1991-1-3).

NA 2.24 Annex A Design situation and load arrangements to be used for different locations

Note 1. For exceptional conditions see NA2.3 and NA2.4

Note 2. For cases B1 and B3 it is not necessary the design situation apply for the particular local effects described in section 6.

NA 3 DECISION ON USE OF THE INFORMATIVE ANNEXES C, D AND E

NA 3.1 Annex C

Annex C may be used

NA 3.2 Annex D

Annex D may be used

NA 3.3 Annex E

Annex E may be used

**NA 4 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY
INFORMATION**

None

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