



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Mr. N. Anselmann
DG Entreprise SC 15 2/147
Rue de la Science 15
1040 BRUSSELS

Ref: HP/CORR/131/adc

2004-04-09

Subject: M/102 Amended mandate response

Dear Mr. Anselmann,

Please find herewith the amended answer of CEN/TC 254 "Membranes" to the mandate M/102 on "Membranes", under the Construction Products Directive, for your acceptance. The original response was sent to the Commission Services by our letter referenced EC Mandates/1876 dated 2000-07-20.

As agreed with the Commission Services, you will also find attached the comments of Dr. A. Pinney, Consultant, on the answer of CEN/TC 254.

Yours sincerely,

Hugues Plissart
Director
Standards Development

c.c. Mr. V. Leoz Arguëlles
Mrs. C. Vanden Schriek

Adam Pinney Phd BSc
CEN Consultant -
Construction

13 Holmwood Close
DUNSTABLE
BEDFORDSHIRE, LU5 4QX
UK

TEL/FAX : +44 (0) 1582 602995
e-mail : aapinney@tinyworld.co.uk

March 15, 2004

Dear Amilcar

Response from CEN TC254 to Mandate M/102 "Membranes"

I refer to the document "MANDATE ON "MEMBRANES" (M102) – REPLY FROM CEN TC254 Flexible sheets for waterproofing (December 2003)", document number CEN/TC254 N788, this being the final, revised answer from TC254 to this mandate. As far as I am aware, this is a complete answer to this mandate, because no other TCs are concerned.

I have examined the response carefully and it is fully in line with the requirements of the mandate and forms a fully satisfactory basis for the preparation of the harmonised standards proposed. The following comments are made for the understanding of this answer by the EC:

Page 2, 0.5): The addition of the WI on underlays for walls is justified. It requires no change to the mandate, because the characteristics are the same as those for the family of underlays.

Sections A.1 and A.2: The standards identified in these two sections will not be able to be referenced in the O.J. until the amended version of ENV 1187 (containing test method 4), and a suitable version of prEN 13501-5, become available.

Sections A.1.3 and A.2.3: The addition of the characteristic 'Joint strength' is justified. The replacement of the mandated requirement of 'Durability of watertightness ...' by more general durability assessment methods is also justified, because durability in the first four EC mandates (of which this is one) was different from that in later mandates and, therefore, not in line with the approach in the TC.

Mr Amilcar DaCosta,
CEN MC
36 Rue de Stassart
B-1050 BRUSSELS
BELGIUM

cc Mr P. Greenwood, BSI

Section A.3 and onwards, x.3.8: The proposed addition of the characteristics listed in these clauses is justified.

Section A.5.3 and onwards, x.3.9: The exclusion of 'Durability of reaction to fire against ageing/ degradation' is justified for the reason given.

Section 8.3.9: In addition to the comment above, the exclusion of 'Durability of water vapour permeability against ageing/degradation' is justified, for the reason given.

Sections 9.3.9 and 10.3.9: The exclusion of the characteristic 'resistance to compressive creep' is justified, because of the alternative stated here.

I repeat, however, that this answer is fully in line with the terms of the mandate. The changes proposed above bring the mandate into line with current regulatory and technical practice.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A.A.P.' followed by a stylized flourish.

Adam Pinney



Document CEN/TC 254

N 788

Ref: 7197: CEN254

Date: 17 December 2003

To the Members of CEN/TC 254

Secretariat of CEN/TC 254

Direct tel: +44 (0)208 996 7197

Direct fax: +44 (0)208 996 7187

E-mail: Peter.Greenwood@bsi-global.com

Web: www.bsi-global.com

Dear Member,

TC 254 reply to Mandate M/102

Please find attached the TC 254 response to Mandate M/102, as agreed at the meeting in October 2002, with the restriction to 'reaction to fire' classes removed and the dates of availability updated. .

Yours sincerely,

Peter Greenwood

Programme Manager

Secretary CEN/TC 254

Direct

Tel. +44 (0) 20 8996 7197

Fax +44 (0) 20 8996 7187

Email Peter.Greenwood@bsi-global.com

**MANDATE ON “MEMBRANES” (M102) - REPLY FROM CEN TC254
Flexible sheets for waterproofing (December 2003)**

0) General comments from TC254 related to the answer to the mandate

0.1) Requests for clarification on the scope of the mandate concerning the products and allocation of work:

None.

0.2) Requests for clarification on the intended use:

None.

0.3) Information on products under the scope of the mandate which are the subject of other CEN/TCs - Information on the organisation of the work between TCs:

Some kits including membranes are the subject of mandates to EOTA.

0.4) Information on issues concerning the scope and intended uses included in the mandate, for which no work has yet been started in the TC, or for which the TC cannot provide a standard:

None.

0.5) Specific requests for additions to the mandate of products, materials, intended uses, essential characteristics, etc.:

Underlays for walls - product specification is a confirmed work item (00254049) of TC254.. It is the current view of TC254 that plastic breather membranes should be an additional product standard in mandate M102 within the 'family' of underlays.

0.6) Liaison with other TCs for certain horizontal tests - Information on the organisation of the work between the TCs:

TC254 standards will use general test and classification standards from CEN TC127.

0.7) Other issues which the TC considers necessary for the comprehension of the answer to the mandate:

None.

A. FLEXIBLE SHEETS FOR WATERPROOFING

A.1 Plastic and rubber sheets for roof waterproofing

A.1.1 Harmonised product standard
00254031, prEN 13956

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Plastic and rubber sheets for roof waterproofing -
Definitions and characteristics

(ii) **Scope** : This European Standard specifies the characteristics of plastic and rubber sheets including sheets made out of their blends and alloys (thermoplastic rubber) for which the intended use is roof waterproofing. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : Waterproofing of flat or inclined roofs.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Tensile strength

Products used as root barriers in roof gardens

3. Root resistance

All products, for handling and installation

4. Tear resistance
5. Static perforation resistance
6. Impact resistance
7. Joint strength
8. Low temperature flexibility

Fire performance

9. External fire performance
10. Reaction to fire

(v) **Durability aspects**

11. Durability of watertightness against weathering
12. Durability of watertightness against ageing/degradation

(vi) **Other aspects** :

The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.1.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.1.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Tensile strength	EN 12311-2 Flexible sheets for waterproofing - Determination of tensile properties - Part 2: Plastic and rubber sheets for roof waterproofing
Root resistance	prEN 13948 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to root penetration
Tear resistance	EN 12310-2 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 2: Plastic and rubber sheets for roof waterproofing
Static perforation	EN 12730 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to static loading
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength	EN 12316-2 Flexible sheets for waterproofing - Determination of peel resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing, and EN 12317-2 Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing
Low temp. flexibility	EN 495-5 Flexible sheets for waterproofing - Determination of foldability at low temperature - Part 5: Plastic and rubber sheets for roof waterproofing
Ext. fire performance	ENV 1187 Test methods for external fire exposure to roofs, and prEN 13501-5 Fire classification of construction products and building elements - Part 5: Classification using test data from external fire exposure to roofs tests, or reference to classification in an Annex, and 'Deemed to satisfy'.
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (weathering and ageing)	prEN 1297 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water

A.1.3 Additional information, comments and remarks

1.3.1 Deviations from a performance approach in the product standard: None.

1.3.2 Requests for clarification on the scope of the mandate concerning the product in A.1 above: None.

1.3.3 Requests for clarification on the intended uses concerning the product in A.1 above: None.

1.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.1 above: None.

1.3.5 Information on essential characteristics required by the mandate concerning the product in A.1 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

1.3.6 Explanation of the state of the art concerning durability issues: See A.1.1 (v).

1.3.7 Information on other Directives under which the product in A.1 above falls, and compliance conditions: None.

1.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.1 above:

TC254 requests the addition of the characteristic 'Joint strength', which is subject to regulatory requirements in some Member States.

1.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

TC254 has developed methods of exposure for artificial weathering and ageing. It does not consider that evaluation by use of a watertightness test will be useful for characterisation of products.

A.2 Reinforced bitumen sheets for roof waterproofing

A.2.1 Harmonised product standard
00254041, prEN 13707

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Reinforced bitumen sheets for roof waterproofing -
Definitions and characteristics

(ii) **Scope** : This European Standard specifies definitions and characteristics for flexible reinforced bitumen sheets for which the intended use is roof waterproofing. This covers sheets used as top layers, intermediate layers and underlayers. It does not cover reinforced bitumen sheets for waterproofing used as underlays for discontinuous roofing.

It does not cover waterproofing sheets which are intended to be used fully bonded under bituminous products (e.g. asphalt) directly applied at high temperature, specified by the European Standard on flexible reinforced bitumen sheets for concrete bridge decks and other concrete surfaces trafficable by vehicles.

(iii) **Intended uses** : Waterproofing of flat or inclined roofs.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Tensile strength

Products used as root barriers in roof gardens

3. Root resistance

All products, for handling and installation

4. Tear resistance
5. Static perforation resistance
6. Impact resistance
7. Joint strength
8. Low temperature flexibility

Fire performance

9. External fire performance
10. Reaction to fire

(v) **Durability aspects**

11. Durability of watertightness against weathering
12. Durability of watertightness against ageing/degradation

(vi) **Other aspects** : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.2.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.2.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Tensile strength	EN 12311-1 Flexible sheets for waterproofing - Determination of tensile properties - Part 1: Bitumen sheets for roof waterproofing
Root resistance	prEN 13948 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to root penetration
Tear resistance	EN 12310-1 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 1: Bitumen sheets for roof waterproofing
Static perforation	EN 12730 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to static loading
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength	EN 12316-1 Flexible sheets for waterproofing - Determination of peel resistance of joints - Part 1: Bitumen sheets for roof waterproofing, and EN 12317-1 Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 1: Bitumen sheets for roof waterproofing
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Ext. fire performance	ENV 1187 Test methods for external fire exposure to roofs, and prEN 13501-5 Fire classification of construction products and building elements - Part 5: Classification using test data from external fire exposure to roofs tests, or reference to classification in an Annex, and 'Deemed to satisfy'.
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (weathering and ageing)	prEN 1297 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water, and EN 1850-1 Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Part 1: Determination of visual defects, or PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets
	for roof waterproofing - Method for artificial ageing by long term exposure to elevated temperature

A.2.3 Additional information, comments and remarks

2.3.1 Deviations from a performance approach in the product standard: None.

2.3.2 Requests for clarification on the scope of the mandate concerning the product in A.2 above: None.

2.3.3 Requests for clarification on the intended uses concerning the product in A.2 above: None.

2.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.2 above: None.

2.3.5 Information on essential characteristics required by the mandate concerning the product in A.2 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

2.3.6 Explanation of the state of the art concerning durability issues: See A.2.1 (v).

2.3.7 Information on other Directives under which the product in A.2 above falls, and compliance conditions: None.

2.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.2 above:

TC254 requests the addition of the characteristic 'Joint strength', which is subject to regulatory requirements in some Member States.

2.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

TC254 has developed methods of exposure for artificial weathering and ageing. It does not consider that evaluation by use of a watertightness test will be useful for characterisation of products.

A.3 Plastic and rubber damp proof membranes

A.3.1 Harmonised product standard
00254053, prEN 13967

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet - Definitions and characteristics

(ii) **Scope** : This European Standard specifies definitions and characteristics of flexible plastic and rubber sheets for which the intended use is as damp proofing for buildings, including basement tanking. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : On or under floors or ground slabs to prevent water passing from the ground into the internal environment.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Tensile strength
3. Tear resistance
4. Static perforation resistance
5. Impact resistance
6. Joint strength

Fire performance

8. Reaction to fire

(v) Durability aspects

9. Durability of watertightness against chemicals
10. Durability of watertightness against ageing/degradation

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.3.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.3.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Tensile strength	EN 12311-2 Flexible sheets for waterproofing - Determination of tensile properties - Part 2: Plastic and rubber sheets for roof waterproofing
Tear resistance	EN 12310-2 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 2: Plastic and rubber sheets for roof waterproofing, or prEN 13859-1 Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1: Underlays for discontinuous roofing
Static perforation	EN 12730 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to static loading
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength resistance	EN 12317-2 Flexible sheets for waterproofing - Determination of shear of joints - Part 2: Plastic and rubber sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (chemicals)	EN 1847 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Methods of exposure to liquid chemicals, including water
Durability (ageing)	PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.3.3 Additional information, comments and remarks

3.3.1 Deviations from a performance approach in the product standard: None.

3.3.2 Requests for clarification on the scope of the mandate concerning the product in A.3 above: None.

3.3.3 Requests for clarification on the intended uses concerning the product in A.3 above: None.

3.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.3 above: None.

3.3.5 Information on essential characteristics required by the mandate concerning the product in A.3 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

3.3.6 Explanation of the state of the art concerning durability issues: See A.3.1 (v).

3.3.7 Information on other Directives under which the product in A.3 above falls, and compliance conditions: None.

3.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.3 above:

TC254 requests the addition of the characteristics 'Tear resistance', 'Resistance to impact' and 'Joint strength', which are subject to regulatory requirements in some Member States.

A.4 Bitumen damp proof membranes

A.4.1 Harmonised product standard
00254058, prEN 13969

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Bitumen damp proof sheets including bitumen basement tanking sheets - Definitions and characteristics

(ii) **Scope** : This European Standard specifies definitions and characteristics for flexible reinforced bitumen sheets for which the intended use is as damp proofing for buildings, including basement tanking. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : On or under floors or ground slabs to prevent water passing from the ground into the internal environment.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Tensile strength
3. Tear resistance
4. Static perforation resistance
5. Impact resistance
6. Joint strength
7. Low temperature flexibility

Fire performance

8. Reaction to fire

(v) Durability aspects

9. Durability of watertightness against chemicals
10. Durability of watertightness against ageing/degradation

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.4.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.4.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Tensile strength	EN 12311-1 Flexible sheets for waterproofing - Determination of tensile properties - Part 1: Bitumen sheets for roof waterproofing
Tear resistance	EN 12310-1 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 1: Bitumen sheets for roof waterproofing
Static perforation	EN 12730 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to static loading
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength	EN 12317-1 Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 1: Bitumen sheets for roof waterproofing
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (chemicals)	EN 1847 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Methods of exposure to liquid chemicals, including water
Durability (ageing)	PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.4.3 Additional information, comments and remarks

4.3.1 Deviations from a performance approach in the product standard: None.

4.3.2 Requests for clarification on the scope of the mandate concerning the product in A.4 above: None.

4.3.3 Requests for clarification on the intended uses concerning the product in A.4 above: None.

4.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.4 above: None.

4.3.5 Information on essential characteristics required by the mandate concerning the product in A.4 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

4.3.6 Explanation of the state of the art concerning durability issues: See A.4.1 (v).

4.3.7 Information on other Directives under which the product in A.4 above falls, and compliance conditions: None.

4.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.4 above:

TC254 requests the addition of the characteristics 'Impact resistance', Joint strength' and 'Low temperature flexibility', which are subject to regulatory requirements in some Member States.

A.5 Plastic and rubber water vapour control layers

A.5.1 Harmonised product standard
00254055, prEN 13984

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title :** Flexible sheets for waterproofing - Plastic and rubber vapour control layers - Definitions and characteristics

(ii) **Scope :** This European Standard specifies the characteristics of flexible sheets of plastic or rubber intended for use as water vapour control layers for buildings and applies to both reinforced and unreinforced products. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses :** To control the movement of water and/or water vapour through walls, or water vapour below the thermal insulation in roofs.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Water vapour permeability
3. Tensile strength
4. Tear resistance
5. Impact resistance
6. Joint strength

Fire performance

7. Reaction to fire

(v) Durability aspects

8. Durability of reaction to fire against ageing/degradation (not relevant)
9. Durability of water vapour permeability against ageing/degradation
10. Durability against alkali

(vi) Other aspects :

The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.5.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.5.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Water vapour permeability	prEN ISO 12572 Hygrothermal performance of building materials and products — Determination of water vapour transmission properties
Tensile strength	EN 12311-2 Flexible sheets for waterproofing - Determination of tensile properties - Part 2: Plastic and rubber sheets for roof waterproofing
Tear resistance	EN 12310-2 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 2: Plastic and rubber sheets for roof waterproofing, or prEN 13859-1 Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1: Underlays for discontinuous roofing
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength	EN 12317-2 Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (alkali)	Annex C of prEN 13984
Durability (ageing)	prEN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.5.3 Additional information, comments and remarks

5.3.1 Deviations from a performance approach in the product standard: None.

5.3.2 Requests for clarification on the scope of the mandate concerning the product in A.5 above: None.

5.3.3 Requests for clarification on the intended uses concerning the product in A.5 above: None.

5.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.5 above: None.

5.3.5 Information on essential characteristics required by the mandate concerning the product in A.5 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

5.3.6 Explanation of the state of the art concerning durability issues: See A.5.1 (v).

5.3.7 Information on other Directives under which the product in A.5 above falls, and compliance conditions: None.

5.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.5 above:

TC254 requests the addition of the characteristics 'Resistance to impact', 'Joint strength' and 'Durability against alkali', which are subject to regulatory requirements in some Member States.

5.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

The characteristic 'Durability of reaction to fire against ageing/degradation' is considered not relevant, because the reaction to fire of these products does not change with age.

A.6 Bitumen water vapour control layers

A.6.1 Harmonised product standard
00254059, prEN 13970

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Bitumen water vapour control layers - Definitions and characteristics

(ii) **Scope** : This European Standard specifies definitions and characteristics for flexible reinforced bitumen sheets for which the intended use is as water vapour control layers for buildings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : To control the movement of water and/or water vapour through walls, or water vapour below the thermal insulation in roofs.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Water vapour permeability
3. Tensile strength
4. Tear resistance
5. Impact resistance
6. Joint strength
7. Low temperature flexibility

Fire performance

8. Reaction to fire

(v) Durability aspects

9. Durability of reaction to fire against ageing/degradation (not relevant)
10. Durability of water vapour permeability against chemicals
11. Durability of water vapour permeability against ageing/degradation

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.6.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.6.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Tensile strength	EN 12311-1 Flexible sheets for waterproofing - Determination of tensile properties - Part 1: Bitumen sheets for roof waterproofing
Tear resistance	EN 12310-1 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 1: Bitumen sheets for roof waterproofing
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Joint strength	EN 12317-1 Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 1: Bitumen sheets for roof waterproofing
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (chemicals)	EN 1847 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Methods of exposure to liquid chemicals, including water
Durability (ageing)	PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.6.3 Additional information, comments and remarks

6.3.1 Deviations from a performance approach in the product standard: None.

6.3.2 Requests for clarification on the scope of the mandate concerning the product in A.6.5 above: None.

6.3.3 Requests for clarification on the intended uses concerning the product in A.6 above: None.

6.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.6 above: None.

6.3.5 Information on essential characteristics required by the mandate concerning the product in A.6 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

6.3.6 Explanation of the state of the art concerning durability issues: See A.6.1 (v).

6.3.7 Information on other Directives under which the product in A.6 above falls, and compliance conditions: None.

6.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.6 above:

TC254 requests the addition of the characteristics 'Impact resistance', 'Joint strength', 'Low temperature flexibility' and 'Durability of water vapour permeability against chemicals', which are subject to regulatory requirements in some Member States.

6.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

The characteristic 'Durability of reaction to fire against ageing/degradation' is considered not relevant, because the reaction to fire of these products does not change with age.

A.7 Underlays for roofing

A.7.1 Harmonised product standard
00254050, prEN 13859-1

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title :** Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1:
Underlays for discontinuous roofing

(ii) **Scope :** This European Standard specifies the characteristics of flexible sheets for underlays which are to be used under the roof covering of discontinuous roof coverings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses :** Underlays for use under discontinuous roof coverings.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Tensile strength
3. Tear resistance
4. Low temperature flexibility (bitumen products)

Fire performance

5. Reaction to fire

(v) Durability aspects

6. Durability of watertightness and tensile strength against ageing/degradation
7. Durability of reaction to fire against ageing/degradation (not relevant)

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.7.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.7.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness and EN 13111 Flexible sheets for waterproofing - Underlays for discontinuous roofing and walls - Determination of resistance to water penetration
Tensile strength	EN 12311-1 Flexible sheets for waterproofing - Determination of tensile properties - Part 1: Bitumen sheets for roof waterproofing
Tear resistance	EN 12310-1 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 1: Bitumen sheets for roof waterproofing
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (ageing/ degradation)	prEN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature, and prEN 1297 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water

A.7.3 Additional information, comments and remarks

7.3.1 Deviations from a performance approach in the product standard: None.

7.3.2 Requests for clarification on the scope of the mandate concerning the product in A.7 above: None.

7.3.3 Requests for clarification on the intended uses concerning the product in A.7 above: None.

7.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.7 above: None.

7.3.5 Information on essential characteristics required by the mandate concerning the product in A.7 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

7.3.6 Explanation of the state of the art concerning durability issues: See A.7.1 (v).

7.3.7 Information on other Directives under which the product in A.7 above falls, and compliance conditions: None.

7.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.7 above:

TC254 requests the addition of the characteristic 'Durability of tensile strength against ageing/degradation', which is subject to regulatory requirements in some Member States.

7.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

The characteristic 'Durability of reaction to fire against ageing/degradation' is considered not relevant, because the reaction to fire of these products does not change with age.

A.8 Underlays for walls

A.8.1 Harmonised product standard
00254049, prEN 13859-2

Dates of availability
Stage 32: Achieved,
Stage 40: Achieved
Stage 49: December 2003

(i) **Title** : Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 2:
Underlays for walls

(ii) **Scope** : This European Standard specifies the characteristics of flexible sheets for underlays for walls which are to be used in walls behind outside wall coverings in order to avoid penetration of wind and water from outside. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : Underlays to prevent the penetration of wind and water through walls.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Water vapour permeability
3. Tensile strength
4. Tear resistance
5. Low temperature flexibility

Fire performance

6. Reaction to fire

(v) Durability aspects

7. Durability of watertightness and tensile strength against ageing/degradation
8. Durability of water vapour permeability against ageing/degradation (not relevant)
8. Durability of reaction to fire against ageing/degradation (not relevant)

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.8.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.8.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness and EN 13111 Flexible sheets for waterproofing - Underlays for discontinuous roofing and walls - Determination of resistance to water penetration
Water vapour	EN ISO 12572 Hygrothermal performance of building materials and products permeability — Determination of water vapour transmission properties and EN 1931 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of water vapour transmission properties
Tensile strength	EN 12311-1 Flexible sheets for waterproofing - Determination of tensile properties - Part 1: Bitumen sheets for roof waterproofing
Tear resistance	EN 12310-1 Flexible sheets for waterproofing - Determination of resistance to tearing - Part 1: Bitumen sheets for roof waterproofing
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (ageing/ degradation)	prEN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature, and prEN 1297 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water

A.8.3 Additional information, comments and remarks

8.3.1 Deviations from a performance approach in the product standard: None.

8.3.2 Requests for clarification on the scope of the mandate concerning the product in A.8 above: None.

8.3.3 Requests for clarification on the intended uses concerning the product in A.8 above: None.

8.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.8 above: None.

8.3.5 Information on essential characteristics required by the mandate concerning the product in A.8 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

8.3.6 Explanation of the state of the art concerning durability issues: See A.8.1 (v).

8.3.7 Information on other Directives under which the product in A.8 above falls, and compliance conditions: None.

8.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.8 above:

TC254 requests the addition of the characteristics 'Low temperature flexibility' and 'Durability of water resistance and tensile strength against ageing/degradation', which are subject to regulatory requirements in some Member States.

8.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate:

The characteristics 'Durability of reaction to fire against ageing/degradation' and 'Durability of water vapour permeability against ageing/degradation' are considered not relevant, because these properties of the products do not change significantly with age.

A.9 Bitumen damp proof course

A.9.1 Harmonised product standard
00254052

Dates of availability
Stage 32: Achieved,
Stage 40: December 2003
Stage 49: June 2005

(i) **Title** : Flexible sheets for waterproofing - Bitumen damp proof courses - Definitions and characteristics

(ii) **Scope** : This European Standard specifies the characteristics for bitumen damp proof courses for buildings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : To prevent the movement of water from one part of a wall to another.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Impact resistance
3. Compressive creep (not relevant)
4. Low temperature flexibility

Fire performance

5. Reaction to fire

(v) Durability aspects

6. Durability of watertightness against ageing/degradation

(vi) Other aspects : The harmonised product standard will also contain:
- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.9.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.9.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Low temp. flexibility	EN 1109 Flexible sheets for waterproofing - Determination of flexibility at low temperature - Bitumen sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (ageing)	PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.9.3 Additional information, comments and remarks

9.3.1 Deviations from a performance approach in the product standard: None.

9.3.2 Requests for clarification on the scope of the mandate concerning the product in A.9 above: None.

9.3.3 Requests for clarification on the intended uses concerning the product in A.9 above: None.

9.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.9 above: None.

9.3.5 Information on essential characteristics required by the mandate concerning the product in A.9 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

9.3.6 Explanation of the state of the art concerning durability issues: See A.9.1 (v).

9.3.7 Information on other Directives under which the product in A.9 above falls, and compliance conditions: None.

9.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.9 above: None.

9.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate: The characteristic 'resistance to compressive creep' is considered to be not relevant because it is covered by a prescriptive limitation on the use of the product in that Member State requiring this characteristic.

A.10 Plastic and rubber damp proof course

A.10.1 Harmonised product standard
00254054

Dates of availability
Stage 32: Achieved,
Stage 40: December 2003
Stage 49: June 2005

(i) **Title** : Flexible sheets for waterproofing – Plastic and rubber damp proof courses - Definitions and characteristics

(ii) **Scope** : This European Standard specifies the characteristics for plastic and rubber damp proof courses for buildings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard.

(iii) **Intended uses** : To prevent the movement of water from one part of a wall to another, in domestic and commercial buildings.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Impact resistance
3. Compressive creep (not relevant)

A.10 Plastic and rubber damp proof course

A.10.1 Harmonised product standard
00254054

Dates of availability
Stage 32: Achieved,
Stage 40: January 2003
Stage 49: July 2004

(i) **Title** : Flexible sheets for waterproofing – Plastic and rubber damp proof courses - Definitions and characteristics

(ii) **Scope** : This European Standard specifies the characteristics for plastic and rubber damp proof courses for buildings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this standard. It is limited to products where conformity for the characteristic 'reaction to fire' is claimed for class E and F according to EN 13501 –1.

(iii) **Intended uses** : To prevent the movement of water from one part of a wall to another.

(iv) **Essential characteristics**

All products

1. Watertightness
2. Impact resistance
3. Compressive creep
4. Low temperature flexibility

Fire performance

5. Reaction to fire

(v) Durability aspects

6. Durability of watertightness against ageing/degradation

(vi) Other

aspects :

The harmonised product standard will also contain:

- a reference to the Commission's Decision on attestation of conformity,
- clauses on the evaluation of conformity (including Factory Production Control),
- guidance on the characteristics to be stated in the labelling accompanying the CE marking and on the way of expressing the determined values of these characteristics.

A.10.2 Supporting evaluation methods

The following ENs and prENs are proposed as evaluation methods to cover the characteristics required by the mandate and indicated in clause A.10.1 (iv) above:

Watertightness	EN 1928 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness
Impact resistance	EN 12691 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact
Low temp. flexibility	EN 495-5 Flexible sheets for waterproofing - Determination of foldability at low temperature - Part 5: Plastic and rubber sheets for roof waterproofing
Reaction to fire	EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
Durability (ageing)	PREN 1296 Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to elevated temperature

A.10.3 Additional information, comments and remarks

10.3.1 Deviations from a performance approach in the product standard: None.

10.3.2 Requests for clarification on the scope of the mandate concerning the product in A.10 above: None.

10.3.3 Requests for clarification on the intended uses concerning the product in A.10 above: None.

10.3.4 Requests for clarification on the essential characteristics for the intended uses included in the mandate concerning the product under A.10 above: None.

10.3.5 Information on essential characteristics required by the mandate concerning the product in A.10 above, for which no work has yet been started in the TC, or for which the TC cannot provide a standard: None.

10.3.6 Explanation of the state of the art concerning durability issues: See A.10.1 (v).

10.3.7 Information on other Directives under which the product in A.10 above falls, and compliance conditions: None.

10.3.8 Specific requests for additions to the mandate of materials, intended uses or essential characteristics concerning the product in A.10 above: None.

10.3.9 Other issues which the TC considers necessary for comprehension of the answer to the mandate: The characteristic 'resistance to compressive creep' is considered to be not relevant because it is covered by a prescriptive limitation on the use of the product in that Member State requiring this characteristic.