

NON-COATED STEEL FOR PACKAGING (BLACKPLATE)

1. SCOPE

This section deals with materials and objects in steel ¹⁾ which as finished products are intended to be in direct contact with foodstuffs, food products and beverage for humans and animals consumption.

The products mentioned in sheets "Steel excluding packaging" and "Stainless Steel" are not concerned .

The main applications examples are the following elements:

- Tins for food products (sugar, tea, cakes, chocolate, flour, pastries etc.)
- Oil cans, kegs, barrels etc.

2. RESTRICTIONS OF USE

The use of non-coated blackplate must be restricted to fatty or wet contacts.

For cans and tins sold to non-professional users or final consumers, the restrictions of use relating to packaged products must indicated by the retailer.

3. DEFINITIONS OF PERFORMANCE FOR FOOD CONTACT

3.1 Texts to be used

3.1.1 Regulatory texts

- Order of 15th November 1945 setting the list of materials likely to be used without adverse effect on public health in the manufacturing of measuring instruments.

3.1.2 Other texts

- Guidelines from the Council of Europe relating to metals and alloys intended to be in contact with food.
- NF A 36-701 Steel for packaging – Flat steel products intended for use in contact with foodstuffs, food products and beverage for human and animal consumption – Non-coated steel (blackplate).

¹⁾ Definition according to NF EN 10020 "Definition and classification of grades of steel"

3.2. Criteria to be used

3.2.1. Steel Composition

The steel supplier certifies conformity with the requirements relating to the chemical composition specified in the table below.

Table –Chemical composition ^{1) 2)}

Elements specified		Maximum contents in % mass
Al	Aluminium	1.0
As	Arsenic	0.030
B	Boron	0.05
C	Carbon	0.30
Cd + Pb + Hg ²⁾		0.0100
Cd	Cadmium ²⁾	0.0100
Pb	Lead ²⁾	0.0100
Hg	Mercury ²⁾	0.005
Cr	Chromium	0.50
Cu	Copper	0.40
Mn	Manganese	2.50
Mo	Molybdenum	0.10
N	Nitrogen	0.10
Nb	Niobium	0.10
Ni	Nickel	0.30
P	Phosphorus	0.10
S	Sulphur	0.050
Si	Silicon	1.0
Sn	Tin	0.10
Ti	Titanium	0.30
V	Vanadium	0.10
W	Tungsten	0.10
Zr	Zirconium	0.050
Others elements taken individually ¹⁾		0.050
¹⁾ The chemical elements included in the section "Others element taken individually" are those which may appear in very small quantities but which are not deliberately added during the manufacturing process of the steel.		
²⁾ The elements cadmium, lead and mercury are not deliberately added during the manufacturing process of the steel. The specification relating to the sum of these three elements refers to the order 98-638 of 20/07/1998 about the environmental requirements that have be taken into account during the design and manufacturing of packaging. Unless otherwise specified, individual regulations do not apply.		

3.2.2. Content of undesirable elements

Looking for the presence of lead, cadmium and arsenic.

4. ACCEPTIBILITY LIMITS

$$\text{Pb} + \text{Cd} \leq 0.010 \%$$

$$\text{As} \leq 0.030 \%$$