

HG

CHEMICAL INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

HG/T 20606-2009

**Non-metallic flat gaskets for use with steel pipe flanges (PN
designated)**

钢制管法兰用非金属平垫片(PN系列)

(English Translation)

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1 Scope

This national standard specifies the pattern, dimension, technical requirements and marking of non-metallic flat gaskets (with or without insertion) for use with steel pipe flanges (PN designed).

This Standard is applicable to non-metallic flat gaskets for use with steel pipe flange in nominal pressure of PN2.5~PN63 specified in HG/T 20592.

Note: the use of the asbestos-contained material shall comply with requirements of relevant laws and regulations. When the production and use are containing asbestos material gasket, protective measures shall be adopted, so as to ensure not endanger the person health.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For dated reference, subsequent amendments (excluding content of corrigenda) to, or revisions of, any of these publications do not apply.

However, Parties to agreements biased on this Code are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies.

"Rubber, Vulcanized or Thermoplastic-Determination of Tensile Stress-Strain Properties" GB/T 528 "Oil-resisting Compressed Asbestos Fibre Jointing" GB/T 539 "Cold Rolled Stainless Steel Plate Sheet and Strip" GB/T 3280 "Compressed Asbestos Fibre Jointing" GB/T 3985 "Steel Pipe Flanges (PN designated)" HG/T 20592 "Specification for selection of Steel Pipe Flanges, Gaskets and Bolting (PN designated)" HG/T 20614 "The Classification, Code and Sign of Flexible Graphite Sheets/Strip" JB/T 6613 "Reinforced Flexible Graphite (Sheets) Gaskets" JB/T 6628 "Specifications of Flexible Graphite Sheets" JB/T 7758.2 "PTFE Sheets" QB/T 3625

3.1 Material category

Materials of non-metallic flat gaskets for use with steel pipe flanges usually include.
confirmed by the service operating condition.

3.2.7 The expanded PTFE strip is generally used for maintenance and service of pipe flange, particularly, in emergency occasions; it may also be used for special pipe flanges. When it is being used, the authorized manufacturer's brand shall be indicated.

3.2.8 When adopting non-asbestos fiber sheet gasket, authorized manufacturer's brand shall

be indicated. The applicable pressure, applicable temperature and maximum (p_{xT}) value of the gasket shall be confirmed by the service operating condition.

3.3 Service conditions

Service conditions of non-metallic flat gaskets shall be in accordance with those specified in Table 3.3.

range and maximum (P_{xT}) value of the products.

c The expanded PTFE strip is generally used for maintenance and service of pipe flange, particularly, in emergency occasions; it may also be used for special pipe flanges.

d When it is used higher than this temperature range or the saturated vapor pressure is greater than 1.0MPa (gage pressure), applicable conditions of specific products shall be confirmed.

3.4 Applicable nominal pressure scope of the gaskets

Nominal pressure scope of gaskets for flanges on different seal contact face see the requirement of Table 3.4.

Table 3.4 Nominal Pressure Scope of Gasket for Flanges on Different Seal Contact Face

Sealing surface type (code) Nominal pressure PN Flat face (FF) 2.5~16 Raised face (RF)

2.5~63 Male/female Face (MF/M) 10~63 Tongue/groove Face (T/G) 10~63

3.5 Adoption of gasket material and thickness

When adopting the material and thickness of the gasket, operating media, service operating condition, flange sealing surface pattern, roughness of surface and bolt load impacts shall be considered. The supplier should be advisory and confirmed for gaskets used for critical occasions.

3.6 The fitting between the gaskets and flanges or bolting the fitting between the gaskets and flanges or bolting complies with the requirements of HG/T 20614.

4.0.1 According to sealing surface type, the gaskets are consisted of FF type, RF type, MFM

type and TG types, which are applicable to flat face, raised face, male/female face and tongue/groove face flanges respectively, see Figure 4.0.1. The reinforced flexible graphite sheets gaskets and high-temperature mica composite sheet gaskets are only applicable to flanges with raised face, male/female face and tongue/groove face.

Table 4.0.2-1 (Continued) (mm)

Nominal
dimension
Inside
diameter
of the
gasket
1D a
PN10 PN16 Gasket
thickness
Outside
diameter
of the
gasket
Quantity
of the

bolt

hole n

Diameter

of bolt

hole l

Diameter

of the

bolt hole

center

circle

Outside

diameter

of the

gasket

Quantity

of the

bolt

hole n

Diameter

of bolt

hole

Diameter

of the

bolt hole

center

circle K

10 18 90 4 14 60 90 4 14 60 1.5d 15 22 95 4 14 65 95 4 14 65 20 27 105 4 14 75 105 4 14
75 25 34 115 4 14 85 115 4 14 85 32 43 140 4 18 100 140 4 18 100 40 49 150 4 18 110
150 4 18 110 50 61 165 4 18 125 165 4 18 125 65 77 185 8b 18 145 185 8b 18 145 80 89