

Non-Asbestos Gasket Sheets — Technical Data Sheet / Datasheet / TDS

1) Compressed Aramid Fiber (Aramid + NBR / SBR / EPDM binders) — aka “Compressed Non-Asbestos Fiber (CNAF) / Aramid jointing”

A. Typical properties (representative)

Property	Typical value / notes
Composition	Aramid (Kevlar®/aramid) fibres + mineral fillers + elastomeric binder (NBR, SBR or EPDM)
Color / appearance	Blue/grey/black depending on binder; calendered/pressed sheet
Temperature range	typically -40° C to +150° C (grade & binder dependent; some high-temperature variants up to ~200° C).
Pressure capability	Suitable for low-to-medium pressure flange classes (Class 150 / 300 common for soft-cut gaskets).
Chemical resistance	Good to water, steam, diluted acids/alkalis and many oils (check binder compatibility for fuels/aromatics).
Mechanical	Good compressibility and recovery; good tensile/tear for fiber sheet family.
Typical uses	General piping gaskets, pumps, valves, heat exchangers, oil/gas piping where asbestos must be avoided.

2) [Generic Compressed Non-Asbestos Jointing](#)

A. Typical properties

Property	Typical notes
Composition	Calendered fibre mixes (aramid/cellulose/mineral) with nitrile or other rubber binder
Temperature	-40° C to ~200° C depending on binder & thickness
Performance	Versatile, economical general service sheet for liquids & gases; many grades available (oil-resistant, steam, chemical)
Uses	General plant piping, utilities, HVAC, light chemical services

3) [Flexible Graphite](#) (graphite foil / laminated graphite sheets; unreinforced & reinforced)

A. Typical properties

Property	Typical value / notes
Composition	Flexible (expanded) graphite sheets — available plain or laminated with metal (SS) or polymer films
Temperature range	-200° C to +450° C (graphite itself); oxidizing atmospheres reduce max temp unless protected/coated
Pressure capability	Excellent sealing under high bolt loads; reinforced laminates give higher mechanical strength
Chemical resistance	Excellent to many chemicals; resists thermal shock; avoid oxidising atmospheres at high T without protection
Electrical / thermal	Good electrical and thermal conductivity (useful in some applications)
Typical uses	High-temperature gaskets, heat exchangers, steam lines, refinery process equipment

4) [Expanded PTFE](#) (ePTFE) & PTFE sheets (virgin / filled / reinforced PTFE)

A. Typical properties

Property	Typical notes
Composition	ePTFE (expanded) — microporous PTFE; solid PTFE sheets also used (virgin or filled)
Temperature range	-200° C to +260° C (typical continuous for PTFE)
Chemical resistance	Exceptional — resistant to virtually all chemicals except molten alkali metals & elemental fluorine at high T
Friction / sealing	Very low friction; excellent for chemical applications & food contact (many grades FDA compliant)
Typical uses	Chemical process gaskets, food/pharma seals, corrosive fluid services, where chemical inertness is essential

5) Metal-reinforced non-asbestos laminates

A. Typical properties

Property	Typical notes
Composition	Graphite or mica/fibre layers laminated to a thin metal foil or tanged metal insert (SS304/316)
Advantages	Combines corrosion/chemical resistance of soft sheet with mechanical strength and controlled blowout resistance of metal layer
Uses	High-pressure / cyclic service, steam, petrochemical process flanges, exhaust flanges where extra strength is needed

6) Mica-based gasket sheets (flexible mica / mica laminates — asbestos-free)

A. Typical properties

Property	Typical notes
Composition	Exfoliated mica paper / mica + high-temp binder; often stainless steel-tanged for reinforcement
Temperature range	continuous up to $\sim 900 - 1000^\circ \text{C}$ depending on type
Applications	Gas burners, furnaces, turbine seals, high-temperature insulation gaskets, electrical insulation at high T
Chemical resistance	Good to many chemicals; notable for thermal insulation and electrical insulation properties

7) Ceramic / Ceramic-fiber gasket sheets & papers

A. Typical properties

Property	Typical notes
Composition	Alumino-silicate ceramic fibers (paper/pulp style) with binders; also rigid ceramic boards
Temperature	up to $\sim 1200^\circ \text{C} - 2300^\circ \text{F}$ depending on fibre type and binder
Use cases	Furnace seals, kiln gaskets, refractory gasketing, casting insulation, molten metal handling seals
Safety notes	Some ceramic fibers are classified as respirable fibrous materials — handle per supplier SDS and safety guidance