

## Tech Note 3: AusPress Press-Fit Media Suitability Guide

**TN.03**

Not sure? Ask technical@auspress.com.au			316 SS	CuNiFe	Copper	EPDM	hNBR	FKM	PTFE
Media	Notes	Diameter	Max Work Pressure	Max Work Pressure	Max Work Pressure	-20 to +100C	-20 to +70C	-20 to +180C	-20 to +180C
Acetylene <sup>TN, 5</sup>	AS 4289 (15 - 35mm)	< 22	1.5	N/S	N/S	A	A	A	A
		28	1.3						
		35	1.0						
Ad Blue / Urea		15 - 54	25		N/S	A	B	B	A
		76 - 168	16						
Ammonia <sup>TN</sup>	(dry) Max purity: N3.8	15 - 108	16	16	N/S	A	B	N/S	A
Argon <sup>5</sup>	Max purity: N4.0	15 - 108	16	16	16	A	A	A	A
Avgas		15 - 54	25	N/S	N/S	N/S	N/S	A	A
		76 - 168	16						
Bio-Diesel (dry) (B100) <sup>TN</sup>	No water or wetting agents.	15 - 54	25		N/S	N/S	N/S	A	A
		76 - 168	16						
Bio-Ethanol	E85 (85% Ethanol)	15 - 54	25		N/S	N/S	A	A	
		76 - 168	16						
Bio-Gas	Methane, CO <sup>2</sup> , nitrogen & hydrogen sulphide.	15 - 168	16			N/S	A		
Butane <sup>5</sup>		15 - 108	5	5	5	N/S	A	A	A
Carbon dioxide <sup>5</sup>	(dry) Max purity: N2.5	15 - 108	16	16	16	B	A	A	
Carbon monoxide <sup>5</sup>	(dry) Max purity: N3.7	15 - 108	16		16	N/S	A	A	A
Compressed Air <sup>5</sup>	Dry: < 1.0mg/m <sup>3</sup> Wet: (Oil) lubricated air	15 - 54	25	16	16	If dry system	If wet system	If wet system	If wet system
		76 - 108	16						
Demineralised (& Part) Water	Conductivity > 0.1µS/cm (EC), pH 4 - 14	15 - 108	25		N/S (too pure)	A			
		168	16						
Diesel <sup>TN</sup>	Flashpoint 50-80°C	15 - 54	25		N/S (ages fuel)	N/S	A	A	
		76 - 168	16						
Ethane <sup>5</sup>		15 - 168	5		5	N/S	A	A	A
Ethanol <sup>TN</sup>	Temp < +25°C	15 - 54	25		16	A	N/S	N/S	A
		76 - 168	16						
Fire Services	Sprinkler & hydrant.	15 - 168	25 (ActivFire)		16 (refer AS 2419.1)	A			
Glycol (< 90% by vol)	EPDM for Ethylene & Propylene bases.	15 - 108	25		16	A	A	A	A
		168	16						
Helium <sup>5</sup>	Max purity: N4.0	15 - 108	16	16	16	A	A	A	A
Hydrogen <sup>TN, 5</sup>	Max purity: N4.0 (may leak <0.001cm <sup>3</sup> /min)	15 - 108	16	16	5	A	A	A	A
Kerosene <sup>TN</sup>		15 - 54	25		16	N/S	A	A	A
		76 - 168	16						
LPG (Propane) <sup>2, 5</sup>	AS 3688 approved <sup>6</sup> .	15 - 168	2 (5)		2	N/S	A	N/S <sup>3</sup>	N/S <sup>3</sup>
Lubricants <sup>1</sup>					10	N/S		A	
Methane <sup>5</sup>		15 - 108	5		5	N/S	A	A	A
Methanol		15 - 168	16		N/S	A	B	N/S	A
Motor (Mineral) Oil, SAE <sup>1 TN</sup>		15 - 54	25	Ask Us	10	N/S	A	A	A
		76 - 168	16						
Natural Gas <sup>2, 5</sup>	AS 3688 approved <sup>6</sup> .	22 - 168	2 (5)	Ask Us	2	N/S	A	N/S <sup>3</sup>	N/S <sup>3</sup>

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Media	Notes	Diameter	Max Work Pressure	Max Work Pressure	Max Work Pressure	-20 to +100C	-20 to +70C	-20 to +180C	-20 to +180C
Nitrogen (gas) <sup>5</sup>	Max purity: N4.8	15 - 108	16		16	A	A	A	A
Osmosis Water	High speed OK; TOC < 500ppb; < 10 CFU/mL	15 - 108 168	25 16		N/S	A			
Oxygen (Gas) < 25°C <sup>TN, 5</sup>	Not medical, max purity: N2.8. Installer to clean to ensure oil & grease free.	15 - 168	16	16	10	N/S <sup>4</sup>	N/S	A	A
Ozone (gas) <sup>5</sup>	Dry, not dissolved (wet).	15 - 108	16			A	N/S	A <sup>7</sup>	A
Propane (LPG) <sup>2, 5</sup>	AS 3688 approved <sup>6</sup> .	15 - 108	2 (5)		2	N/S	A	N/S <sup>3</sup>	N/S <sup>3</sup>
Petrol <sup>TN</sup> ROZ 95 & 98	Class A-III suitable	15 - 54 76 - 108	25 16	Ask Us	16	N/S	A	A	A
Potable Water	WaterMark (316+EPDM & Copper+EPDM)	15 - 108 168	25 16	Not for Drinking	16	A		A	
Refrigerants <sup>1, 5</sup>	Non-Flammable; R134a, R404, R407, R410A	15 - 168	16		N/S	A <sup>1</sup>	A <sup>1</sup>	N/S	
Salt Water		N/S	16	N/S	A		A		
Sewer (Gravity)	Press-fit is not suitable!	N/S	N/S	N/S	-	-	-	-	
Spring Water		15 - 108 168	25 16	Ask Us	Ask Us	A			
Stormwater & Siphonic Drainage	Press-fit is not suitable!	-	N/S	N/S	N/S	-	-	-	-
Synthetic Air <sup>5</sup>	Max purity: N4.8	15- 108	16			A	A	A	A
Steam (Wet) <sup>TN</sup>	Loose nut fittings not suitable, Refer Tech Note!	15 - 108	5.5 (160°C)	Ask Us	< 1.0 (100°C)	N/S	N/S	N/S	N/S
Vacuum (not Siphonic)	From atmosphere 1,013mbar, 813mbar to 200mbar achievable.	15 - 168	0.2 absolute	200mbar absolute	200mbar absolute	A	A	A	A
Vegetable Oils	Avocado, canola (rapeseed), coconut, corn, cottonseed, linseed, peanut, rice bran, safflower, sesame, soybean & sunflower.	15 - 168	16			N/S	A		
	Including: olive & palm.	15 - 168	16			A	A		

**Notes & Abbreviations:**

No data does not suggest suitability. Please contact AusPress for confirmation. Max Working Pressure shown in 'bar' units unless otherwise noted. **A**= Suitable, **B**= Fair, **N/S**= Not Suitable, **Ask Us**= Contact us for assessment; **TN**= Refer to our Tech Note documents for more information. **Note 1:** Contact us with the brand and product name for confirmation first. **Note 2:** Pressure subject to regulations (eg LPG up to 200kPa for AS 5601). Min tube wall thickness 1.2mm conflict AS 5601 & AS 5200. Using 'HP' Press Collars is not suitable. **Note 3:** AS 5601 requires yellow hNBR seals despite these materials being chemically suitable. **Note 4:** EPDM is suitable up to 15°C but not recommended for safety. **Note 5:** Using the 'HP' collars 76.1-108 with ACO402 & ACO403 tools is not suitable for this media. **Note 6:** See AS 5601.1, Table 4.1 (316: 70°C & 2 bar max). **Note 7:** FKM may absorb O<sup>3</sup> not affecting the rubber but will any data readings.

**About Pressures:** Working Pressure= 'normal' or 'design' operating pressure. The working pressure of a 'system' is dependent on the press tool used. Test Pressure= 'working pressure' x1.5 (wet) or x1.1 (gasses), during site test conditions only. Safety Pressure= Maximum pressure not to be exceeded in all circumstances. Burst Pressure= The pressure recorded in a laboratory test environment during destructive testing – for information only. For example: 25 bar maximum working pressure is ok for potable water when using M-Profile stainless 108mm and the ACO403 press tools to install. The 1.5x testing pressure is 37.5 bar in this instance as a wet media.

**Degree Purity of Gas:** The first digit of the grade classification indicates the 'number of nines' purity, e.g. N3.0 = 99.9% purity. The second digit is the number following the last nine, e.g. N4.6 helium has a guaranteed minimum purity level of 99.996%.

**Elastomer Types:** EPDM - ethylene propylene diene monomer. hNBR - hydrogenated nitrile butadiene rubber. FKM - fluoro-elastomer (green). PTFE - Polytetrafluoroethylene (Teflon) coated with FKM core.