RUBBER CALENDERED SHEET

DESCRIPTION

DUNLOP 1413 Uncured Natural Rubber – (NR) – Calendered Sheet

APPLICATION

Open Steam or Autoclave Cure – Soft Heat Resistant Natural Rubber sheet for moderate chemical and impinging abrasion resistance applications.

STANDARD PRODUCTS

13.1m x 1200mm roll packed into standard box for transport and storage. Thickness range is 1mm to 15mm.

TYPICAL PROPERTIES (Based on 3mm sheet press cured 10 mins @ 160^{0}C)

Tensile Strength	(ASTM D412 method A)	MPa	21.0
Elongation @ Break	(ASTM D412 method A)	%	600
Hardness	(ASTM D2240 Scale "A")	(A/1)	46 +/-5
S.G.			1.06
Shelf Life	@ or below 7^{0}C	Months	3

TYPICAL CHEMICAL RESISTANCE – 1413 sheet (cured) – up to 100^{0}C anaerobic (submerged) Working Conditions

Alkalis	**G**	**Hydrocarbons Oils** – Paraffinic (aniline pt>95^{0}C)	**U**
Acids – Non-oxidising (eg HCL, HCN)	**G**	Mineral Oils – Naphthenic (aniline pt60-95^{0}C	**U**
Acids – Oxidising- Sulphuric to 35% **G to 70°C**	**P**	Synthetics – Aromatic (aniline pt<60^{0}C	**U**
- Nitric	**U**	**Hydrocarbon Solvents** >30% aromatics	**U**
- Others	**V**	5 to 30% aromatics	**U**
Inorganic salts - neutral or alkaline	**G**	0 to 5% aromatics	**U**
- acidic, refer to parent acid	**V**	**Chlorinated Solvents**	**U**
Chlorine water	**U**	**Alcohols**	**G**
Oxidants	**V**	**Ketones**	**V**

Grading: E=Excellent G=Good P=Poor U=Unsuitable
V=Variable. Depends on material and concentration and so check with Fenner Dunlop

SUGGESTED BONDING SYSTEM Regardless of whether this, or some other system is used, it is the responsibility of the customer to ensure that the chosen calendered sheet and chosen bonding system and procedures is capable of meeting the expected service requirements before committing to production.	Throughout this process surfaces, materials and environment must be maintained at 15 to 30° degrees C and less than 75% Relative Humidity. **Avoid dew point throughout all preparation.** **Metal Preparation.** 1.1 Grit blast to AS1627.4 Class 2.5, following full de-grease and removal of flake or other contaminants. 1.2 One coat Chemlock 205 (or Chemlock 289) immediately to dry clean surface. 1.3 One coat Chemlock 220 (or Chemlock 290) 1.4 One coats 1612 solution. **Rubber Preparation.** 2.1 Wash rubber with toluene. 2.2 One or more coat(s) 1612 Solution to absolutely clean, moisture free surface. **Solvent:** Toluene

CURING METHOD (Allow additional time for substrate).	**Autoclave Cure (as per 1410 procedure).** 1. 30 min. rise to 150°C then a) 6mm – 40min @ 150°C b) 12mm – 60min @ 150°C. Slow blow down (Minimum 30 mins) NOTE: Excessive temperature or time will reduce physical properties. **Open Steam Cure (Steam both inside and outside vessel).** 1. 2 Hour rise to 90-100°C then: 2. Hold at maximum temperature until cured. Cure time will be dependent on individual circumstances. NOTE: Firmly maintain enclosure. Ensure complete circulation of steam. Avoid dead spots. Drain ALL condensate.

PRECAUTIONS (refer also to solution safety data sheets)	1. Avoid cementing in high humidity conditions to prevent moisture condensation. 2. All solutions are flammable – maintain safety precautions. – 3. Ensure adequate ventilation in confined areas.

COMMENTS	1. All work should be carried out to BS6374 Part 5:1985 For specific chemical resistance contact Fenner Dunlop.