



NOV SARA ENGINEERING SPECIFICATION	
Section: SES 26 – 320	
Issue: "A"	Rev. No.: "1"
Effective Date: 20.10.2011	Page: 1 of 1

## MATERIAL SPECIFICATION FOR HOMOGENOUS NBR (NITRILE) ELASTOMER

### **1.0 PURPOSE**

**1.1** It is the purpose of material specification to list in a concise form of the material requirements for NBR Homogenous Elastomers to be used in General Service at temperature from – 20° F to +250 °F.

**1.2** This material specification is intended to aid the purchasing department in procuring and the vendor in supplying a product which meets the needs of its intended use, and the quality control department in the inspection and release of incoming material.

### **2.0 SCOPE**

**2.1** This material specification covers general services, medium- high CAN, sulfur cure compounds recommended for service with petroleum oils and fuels, water, glycols and silicones. They are not recommended for service with ketones, esters, Amines or halohydrocarbone.

**3.0 Chemical composition:** The standard formulas for Nitrile Rubber compounds are in ASTM D-2934 Table-1, they may be modified to meet the various requirements of ASTM-2000, Table -6 BG materials.

**4.0 Physical Properties:** The ASTM standard specifications to determine the physicals are given below.

PROPERTIES	RANGE
HARDNESS (D-2240) Shore "A" Durometer	70/80/90 $\pm$ 5 Pts.
TENSILE STRENGTH (D-412) Min.	2,000 PSI ( MPa)
ELONGATION (D-412) Min.	220%
100% Modules (D-412) Min.	920 PSI
TEAR (D-624) DIE C Min.	220 PPI
COMPRESSION SET (D-395) Max.	
70 HRS @ 212° F	24%
70 HRS @ 257° F	46%

**5.0 IDENTIFICATION:** The Elastomers shall be dyed black throughout.

### **6.0 DOCUMENTATION REQUIRED**

**7.1** Each shipment shall be accompanied by material certifications for each lot of material, the certifications must be positively relatable to the lot of material represented.