

CIRCOR					Rev
Elastomer Quality Plan Requirements					0
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<b>Quality Plan No. / Revision</b>	<b>QP12 / Rev 0</b>	
<b>Purchase Order No.</b>	<b>Standard Plan- See Purchase Order</b>	
<b>Material Specification No. / Revision</b>	ACT0001 4199	Acetal homopolymer-, API 6D & API 6A
	ACT0003 4199	Acetal copolymer -, API 6D & API 6A
	AFL0007 4342	Aflas (Flouraz), 90 Duro., API 6D & API 6A
	AFL0031 8153	Aflas (Flouraz), 80 Duro., API 6D & API 6A
	EPD0035 6490	EPDM, 90 Duro., API 6D
	EPD0037 4151	EPDM, 70 Duro. food grade material, API 6D
	KAL0003 52177	Kalrez 7090 perfluoroelastomer, API 6D & API 6A
	KAL0031 4342	Kalrez 4079 perfluoroelastomer, API 6D
	NBR0001 7977	Buna-N, 70 Duro., API 6D & API 6A
	NBR0010 5199	Buna-N, 90 Duro., API 6D & API 6A (back up rings)
	NBR0015 7977	JW E-O-L 985 (HNBR-HSN) 85 Duro., AED, Low & high temp H2S/CO2 service
	NBR0018 7977	JW E-O-L 101, 90 Duro. (HNBR-HSN) API 6D & 6A, AED, Low & high temp H2S/CO2 service
	NBR0031 7977	Buna-N, 70 Duro., API 6D & API 6A
	NBR0035 7977	Buna-N, 90 Duro., API 6D & API 6A
	NBR0036 7977	Buna-N Peroxide cured, 90 Duro., API 6D & API 6A
	NBR0037 7977	Low temp. Buna-N, 70 Duro., API 6D & API 6A
	NBR0042 7977	HNBR (HSN), 80 Duro., API 6D & API 6A, Low & high temp H2S/CO2 service
	NBR0045 111202	HNBR, 85 Duro., API 6D & 6A, Low & high temp H2S/CO2 service
	VTN0032 8153	Viton, 75 Duro., API 6D & API 6A
	VTN0035 8153	Viton, 90 Duro., API 6D & API 6A
	VTN0037 5977	Viton, 90 Duro., James Walker FR58/90, API 6D
	VTN0040 090149	Viton GLT, API 6D
	VTN0041 090149	Viton GFLT,75 Duro., API 6D
VTN0042 15439	Low temp. FKM (viton) GLT, 90 Duro., API 6D & 6A, AED, Low & high temp H2S/CO2 service	
VTN0043 110896	Low temp. FKM (viton) GLT, 98 Duro., API 6D & 6A, AED, Low & high temp H2S/CO2 service	
MSWI 8.3-2 R1	Requirement for Elastomers	

## 1.0 TITLE

1.1 Elastomer procurement, inspection, testing, storage and control in compliance with API Spec. 6A, API Spec. 6D and API Spec. Q1.

## 2.0 SCOPE

2.1 All parts which are used for sealing such as seals, seats and O-rings in the products manufactured to API Spec. 6A, API Spec. 6D and API Spec. Q1.

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### 3.0 REFERENCE STANDARDS

API Spec. 6A  
API Spec. 6D  
MIL-STD-105D  
ASTM Standards D2240 or D1415  
API Spec. Q1  
ISO 2859-1

#### Identify Applicability

Mark the applicable box(es)

<input type="checkbox"/>	Required procedures are submitted for review by the applicable <b>CIRCOR</b> API Manufacturing Location Engineering and/or Quality Departments or by a Subject Matter Expert (SME)
<input type="checkbox"/>	Required procedures are reviewed Onsite by competent CIRCOR Supply Chain location personnel
<input type="checkbox"/>	Technical audit
<input checked="" type="checkbox"/>	API Specification 6A is applicable
<input checked="" type="checkbox"/>	API Specification 6D is applicable

### 4.0 ORDERING REQUIREMENTS

Purchasing agreements shall include the following provisions identified by this Quality Plan.

Only vendors that are in good standing in the Approved Vendors List shall be used. Refer to **MSPM 1.8, Purchasing Control**, for other purchasing order requirements that may be required.

4.1 The vendor is required to submit to **CIRCOR** for review:

- a. A copy of the procurement and incoming inspection procedure, including the vendor's criteria for the qualification and approval of the process(es). This also includes provisions for process re-validation.
- b. Visual inspection requirements and acceptance criteria.
- c. Copies of the manufacturer qualification record.
- d. Copies of the calibration records for inspection, test and measurement equipment.
- e. The vendor shall submit any proposed changes in procurement and incoming inspection procedure for **CIRCOR** review prior to using it on CIRCOR orders when changes are proposed.

4.2 The vendor shall provide a Certificate of Conformance to their procurement and incoming inspection procedure number and revision level.

4.3 OEM material test reports are required.

4.4 The vendor shall not change supplier/manufacturer without **CIRCOR** approval.

4.5 All seals, seats and O-rings shall be ordered by KF part numbers, drawings and material specifications. They shall be attached to the purchase order.

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Quality Plan Required Documentation - ELASTOMERS			
Quality Plan Reference Requirement	What is required?	Circor Review Required	
		Yes	No
4.1a	Procurement and Incoming Inspection Procedure		X
4.1b	Visual Inspection Requirements and Acceptance Criteria	X	
4.1c	Manufacturer Qualification Record		X
4.1d	Calibration records, including record content, for inspection equipment		X
4.2	Certificate of Conformance	X	
Attachment I	Including records specified by MSF 2.3.1-1, Supplier Documentation Requirements for this Quality Plan		X

CIRCOR Supply Chain Location Approval *Mike Evans* 2/28/17  
 Signature Date

CIRCOR API Manufacturing Site Approval *Carlos Castillo* 2/28/2018  
 Signature Date

CIRCOR API Manufacturing Site Approval *J. M. [Signature]* 2/28/18  
 Signature Date