

Fujifilm Prescale®

Pressure Indicating Films

Color Correlation Manual For Pressure Interpretation

<i>FILM TYPE</i>	<i>PRESSURE RANGE</i>
Ultra Low	28 - 85 PSI
Super Low	70 - 350 PSI
Low	350 - 1,400 PSI
Medium	1,400 - 7,100 PSI
High	7,100 - 18,500 PSI
Super High	18,500 - 43,200 PSI

TACTILE PRESSURE EXPERTS



SENSOR PRODUCTS INC.

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Instructions

How to use Fujifilm Prescale® Film

1. Select the appropriate film according to the PSI range you are working with. Consult the front cover of this manual to select the required range of Fujifilm Prescale® film.

2. Prepare the film for use. If using Ultra Low, Super Low, or Low films, you will need to place the two matte (rough) sides together before applying force. By placing these two films together, you will enable the color-forming material on the donor sheet to react with the color-developing material on the receiver sheet. *Only by doing this will you be able to conduct the experiment.*

This step is not necessary when using Medium and High range films. These films are contained on a single sheet, and do not require the manipulation of multiple sheets in order to conduct an experiment.

3. Cut the film to the precise dimensions that you will need to conduct the experiment. If using the Ultra Low, Super Low, or Low films, you will have both a donor sheet and a receiver sheet. Each sheet should be cut to the specific shape. Please cut the donor and receiver sheets separately to avoid accidental pressure readings. If using Medium or High films you will only have to cut a single sheet.

4. Place the film between two contacting or impacting surfaces. Apply force, then remove. Instantly and permanently, the film will turn a magenta color whose intensity is directly proportional to the amount of pressure being applied. In areas of high pressure, the film will turn a dark magenta; in areas of low pressure, the film's magenta tone will be lighter.

Be sure to record the approximate length of exposure time to pressure, as well as the temperature and humidity prevalent at the time of the experiment. You will need these variables in order to determine the pressure applied (in PSI) to the film.

How to Interpret Fujifilm Prescale® Films

In order to determine the approximate PSI applied across the surface area of the film, you will need to perform these four steps.

1. Match your exposed film to the color calibration swatches on page 4.

Below each color swatch is a density figure. You will need to take note of this figure for use later on in this interpretation process. If your exposed film's coloration is between color swatches, interpolate.

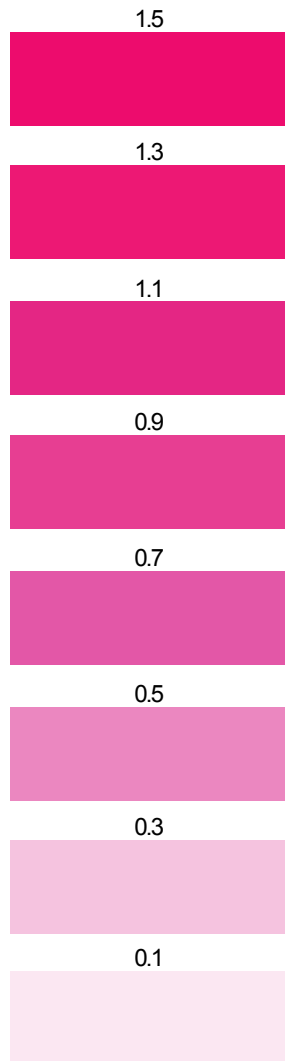
2. Proceed to the appropriate page listed below.

<i>If Using:</i>	<i>If Exposure > 10 seconds go to page:</i>	<i>If Exposure < 10 seconds go to page:</i>
Ultra Low	5	6
Super Low	7	8
Low	9	10
Medium	11	12
High	13	14
Super High	15	15

3. Referring to the page described in point #2 above, determine which temperature/humidity zone you are in. This is done by referring to the smaller box located in the top right hand corner of the page. For example, when making measurements for Super Low pressure film (page 7) at a temperature of 25°C and 60% humidity (RH%), the B zone and the B line in the Density/PSI chart will apply.

4. Once you have determined the temperature/humidity zone that you are in, proceed to the Density/PSI chart below it (this is the bigger chart on the same page). Go up the Y axis (Density) until you reach the density value that you obtained in step 1 above. Move to the right until you locate the point where the density value intersects the curve that you determined in step 3. From this point of intersection, follow the vertical line down to the X axis where you ultimately can obtain the actual PSI value. The accuracy of this technique is $\pm 15\%$.

Color Correlation Chart

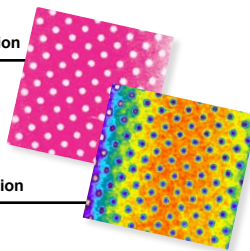


Extract precise statistical data and enhanced digital images from Fujifilm Prescale[®] sensor films with Topaq[™] advanced analysis.

Vital statistics like total force, average pressure, total square inches of contact and standard deviation can be determined with much greater accuracy ($\pm 4\%$) using Topaq's advanced analysis capabilities. Topaq[™] can also render histographic and population statistics on user-defined regions of interest.

1

Film Impression
BEFORE
ANALYSIS



2

Film Impression
AFTER
ANALYSIS

With no risk or obligation receive one **FREE analysis**.*



Mail one piece of pressure-exposed film to the attention of "Imaging Dept."
Be sure to include the following data with your impressions:

Name _____ Date _____

Company _____

Address _____

Phone _____ Fax _____

E-mail _____

1. Film type used (PSI or kg/cm²) _____

2. Approximate exposure time _____

3. Approximate temperature _____

4. Approximate relative humidity _____



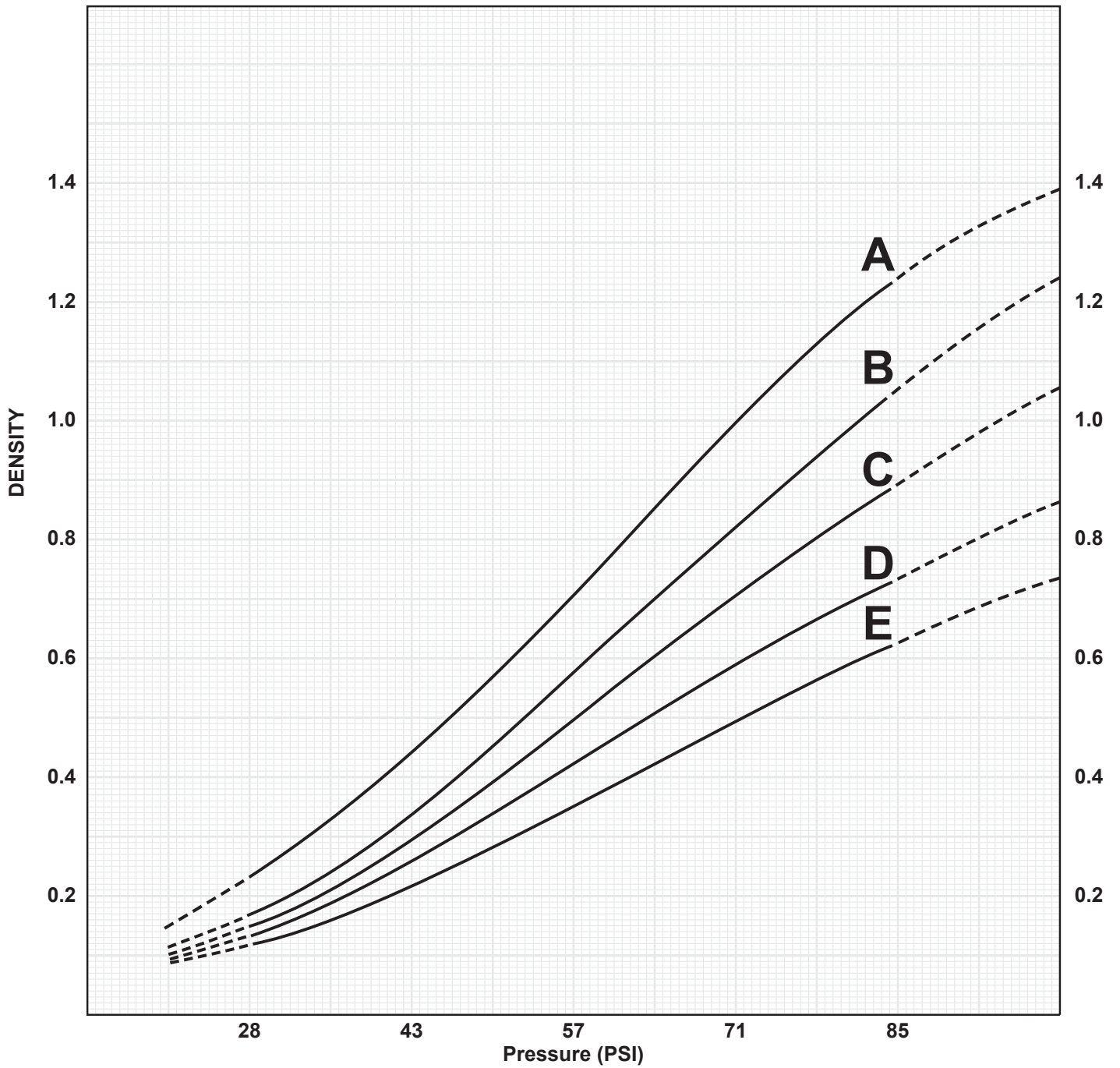
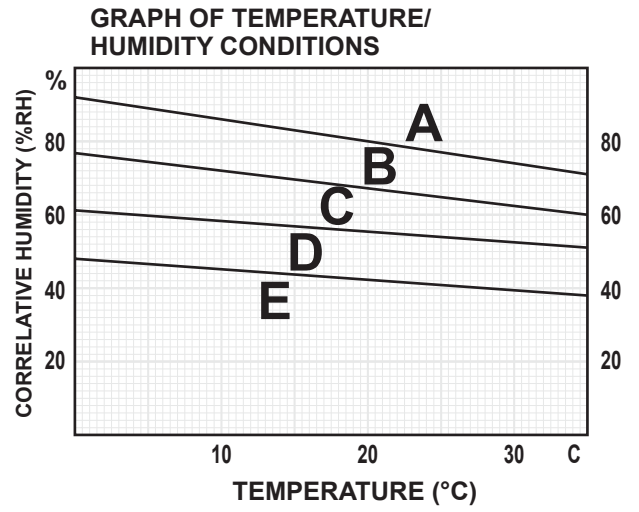
* Size of pressure-exposed film cannot exceed 11" x 17".



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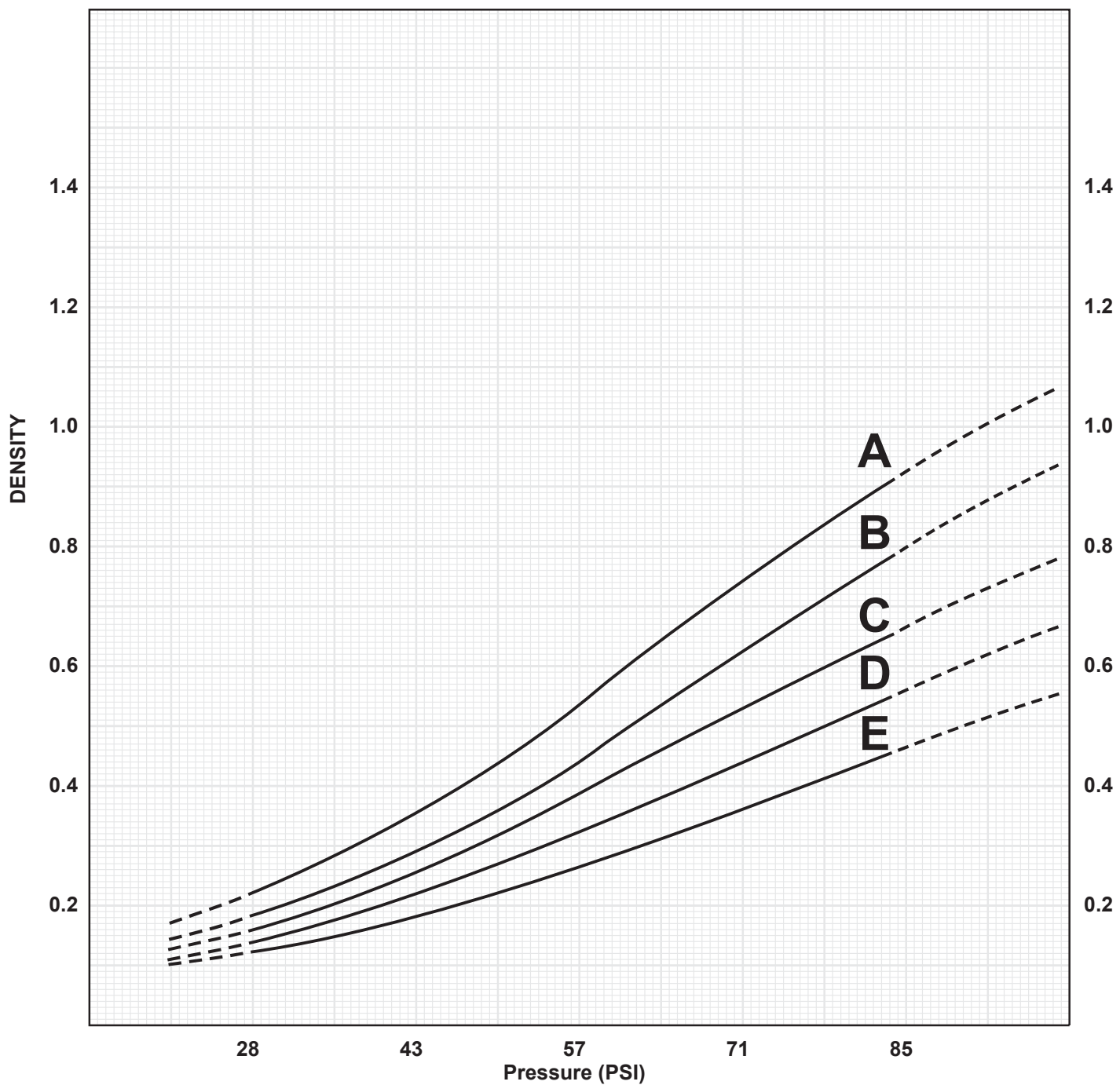
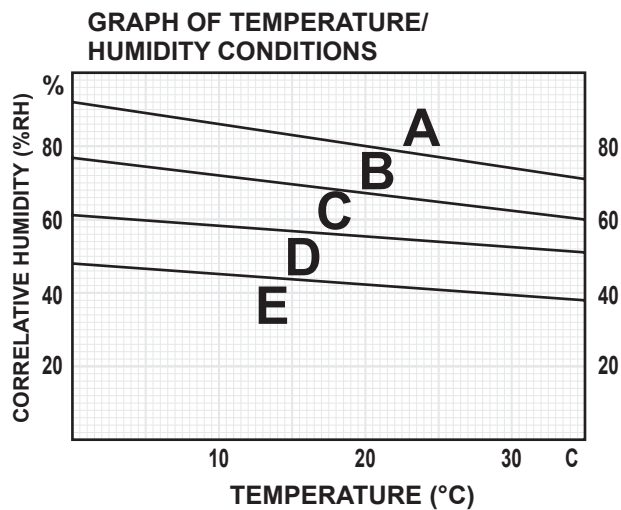


extended exposure





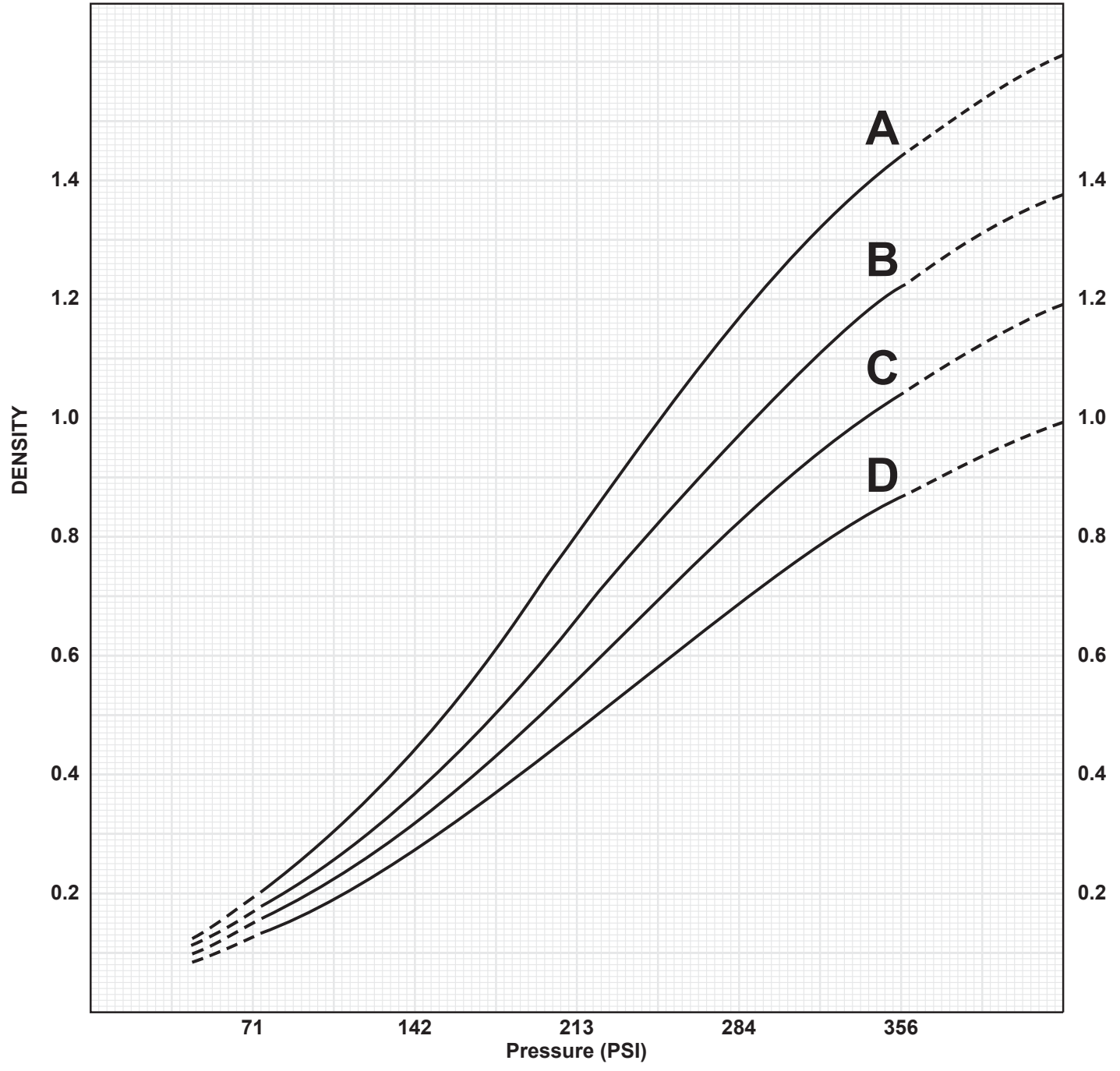
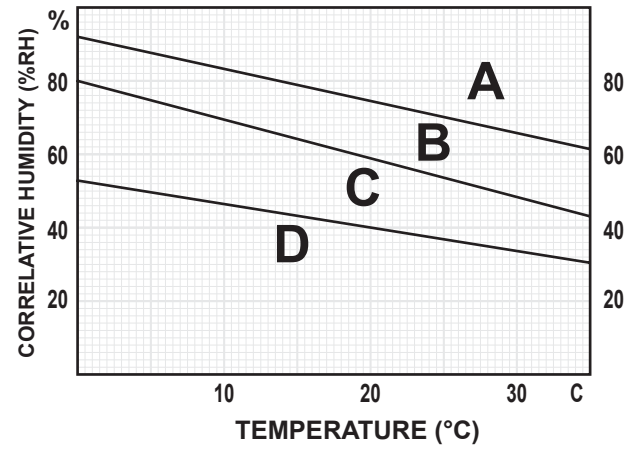
momentary exposure





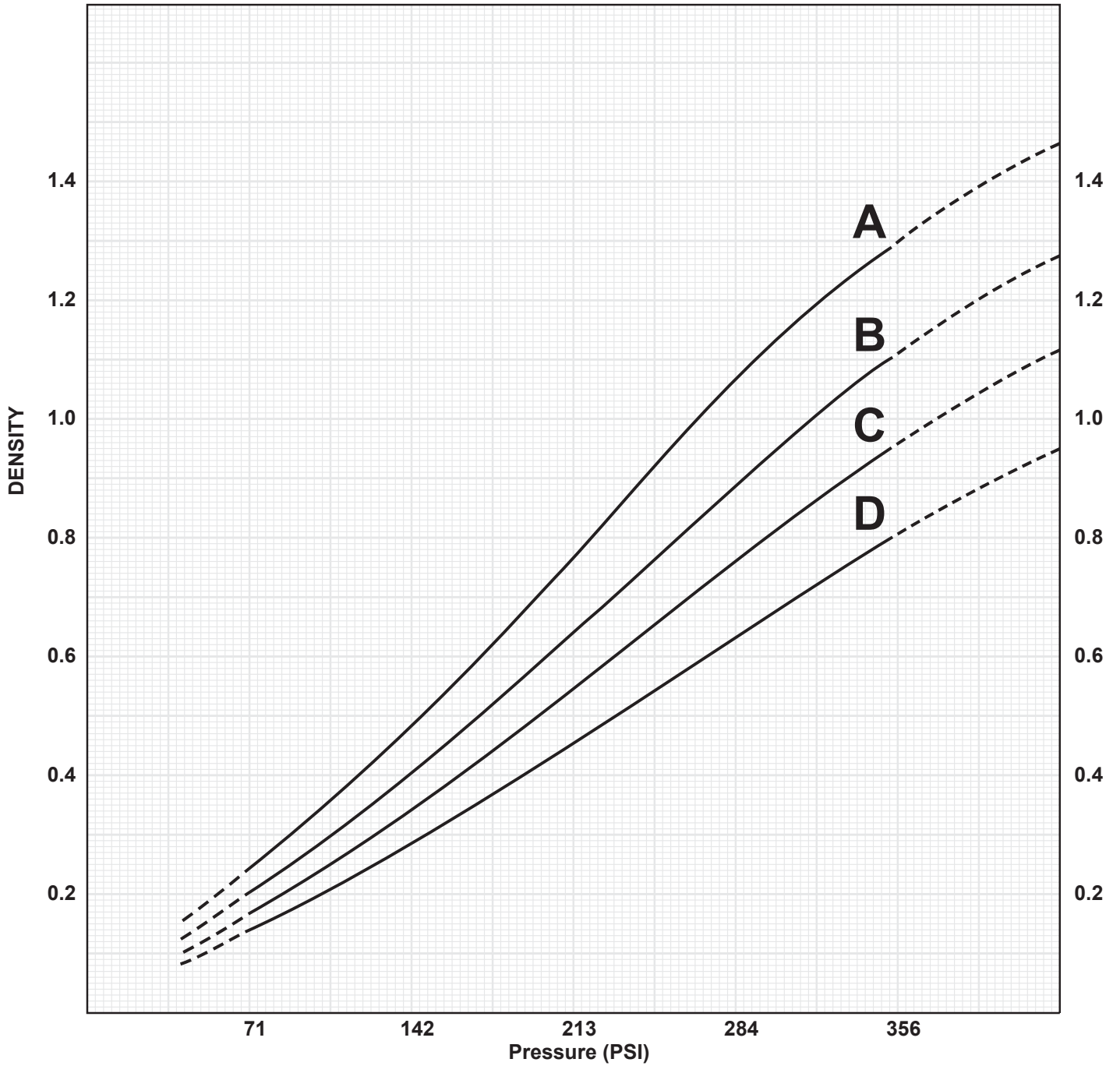
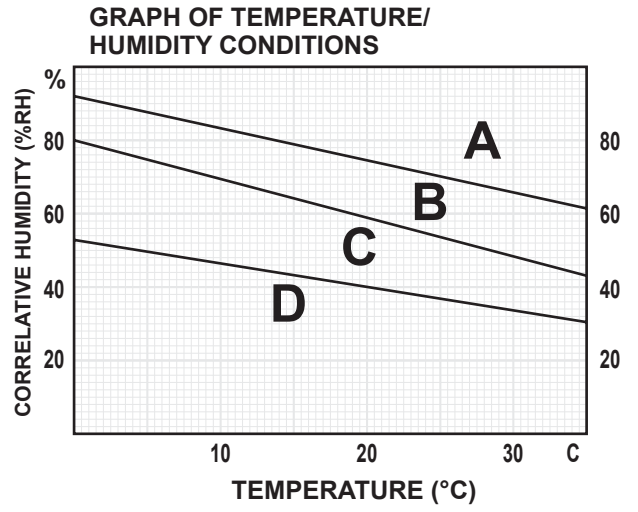
extended exposure

GRAPH OF TEMPERATURE/
HUMIDITY CONDITIONS



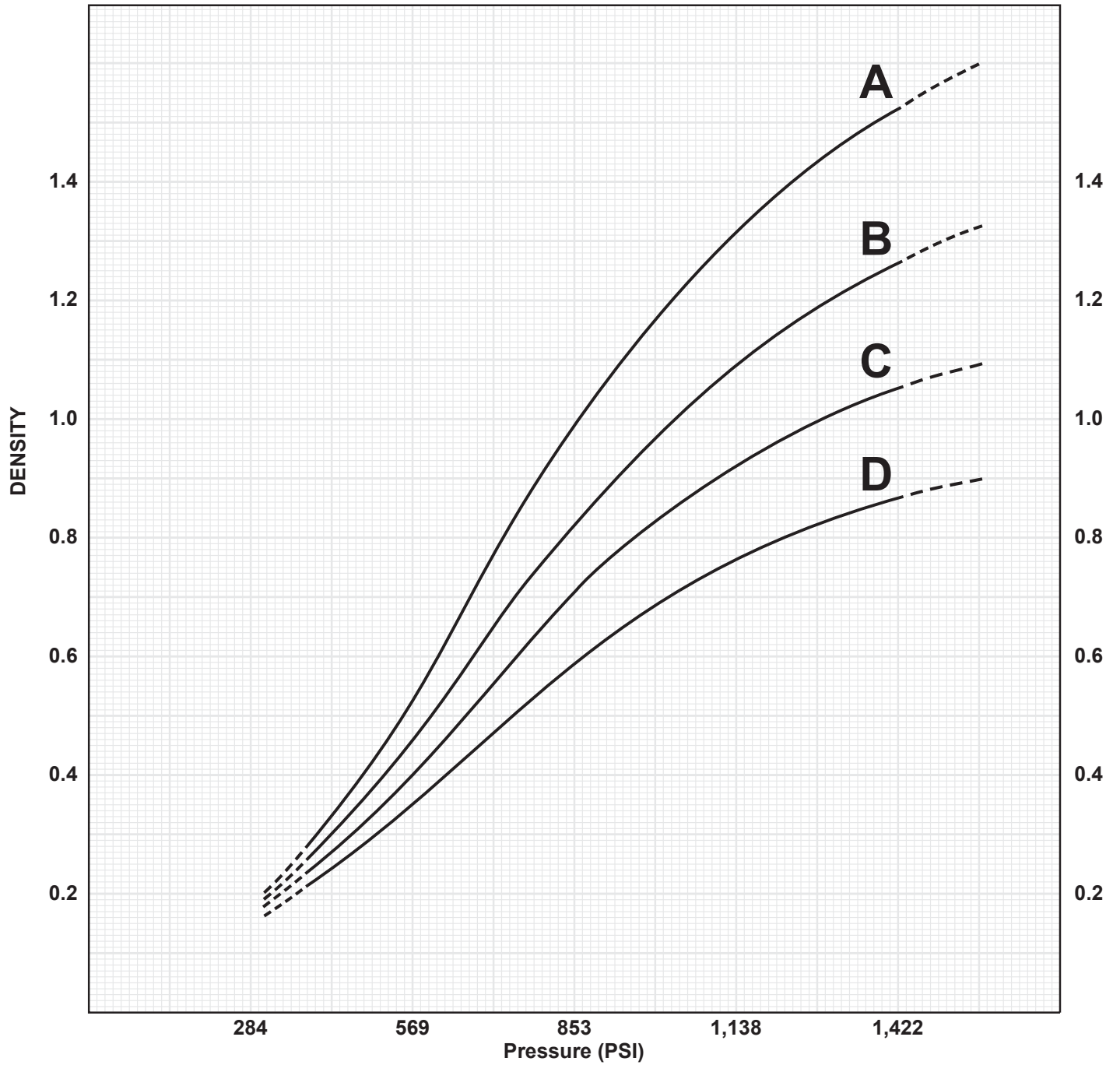
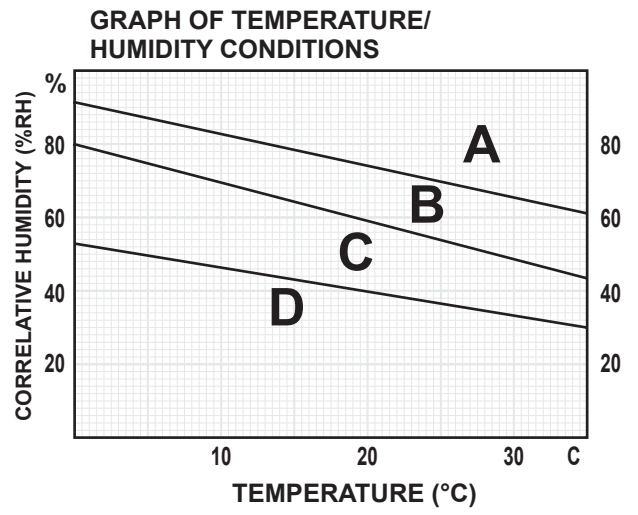


momentary exposure



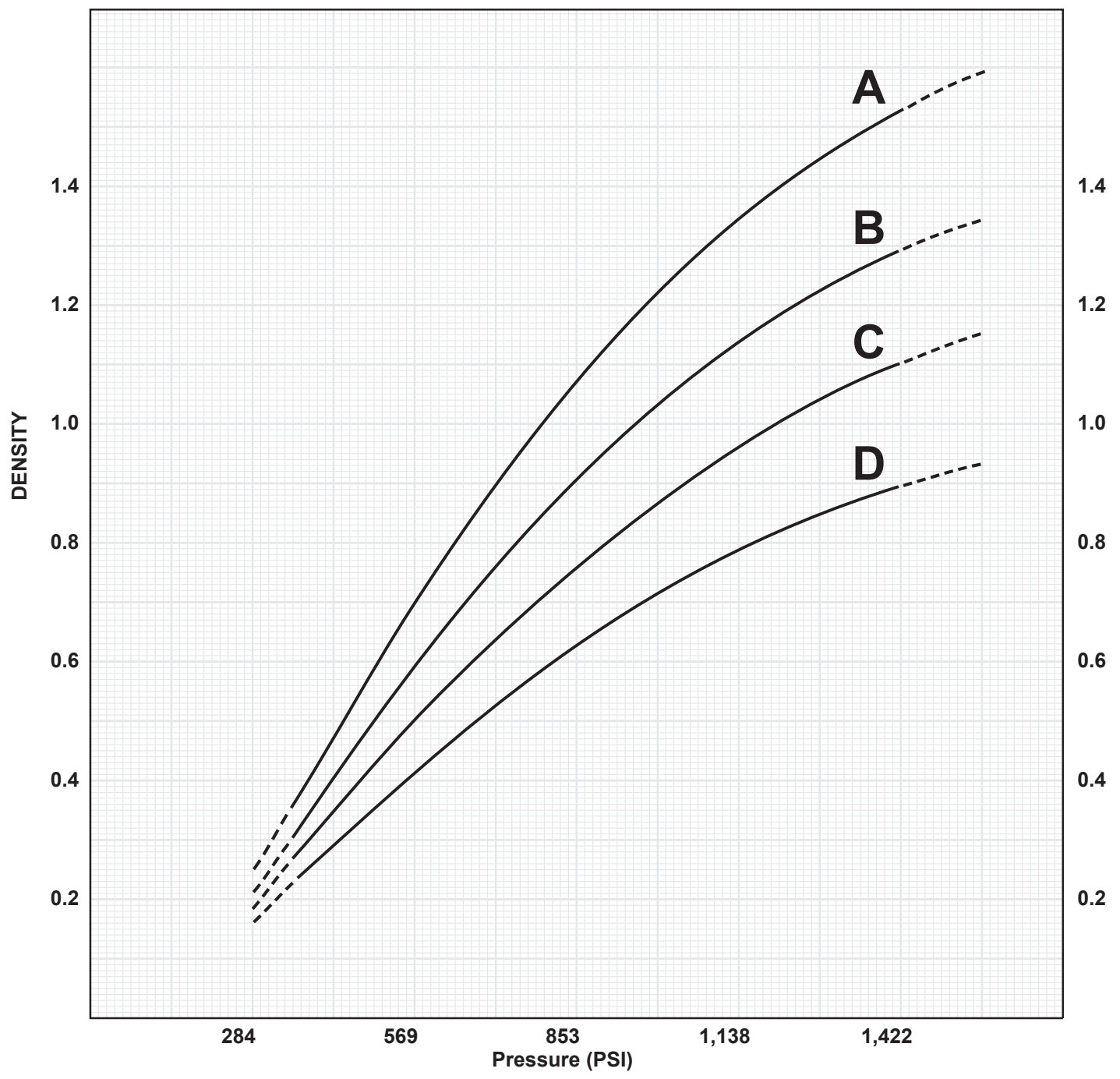
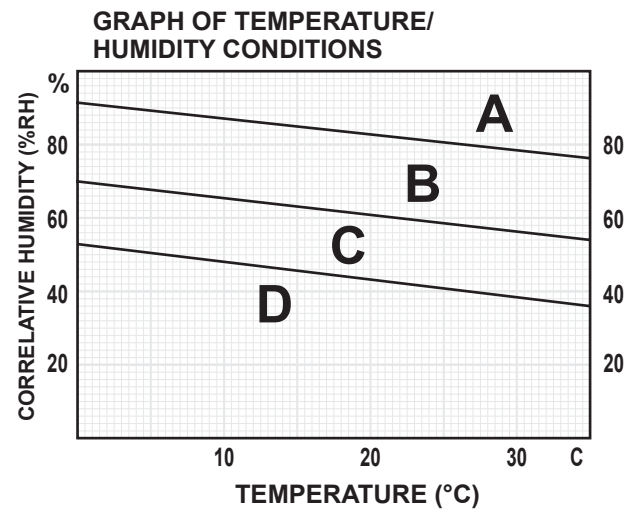


extended exposure



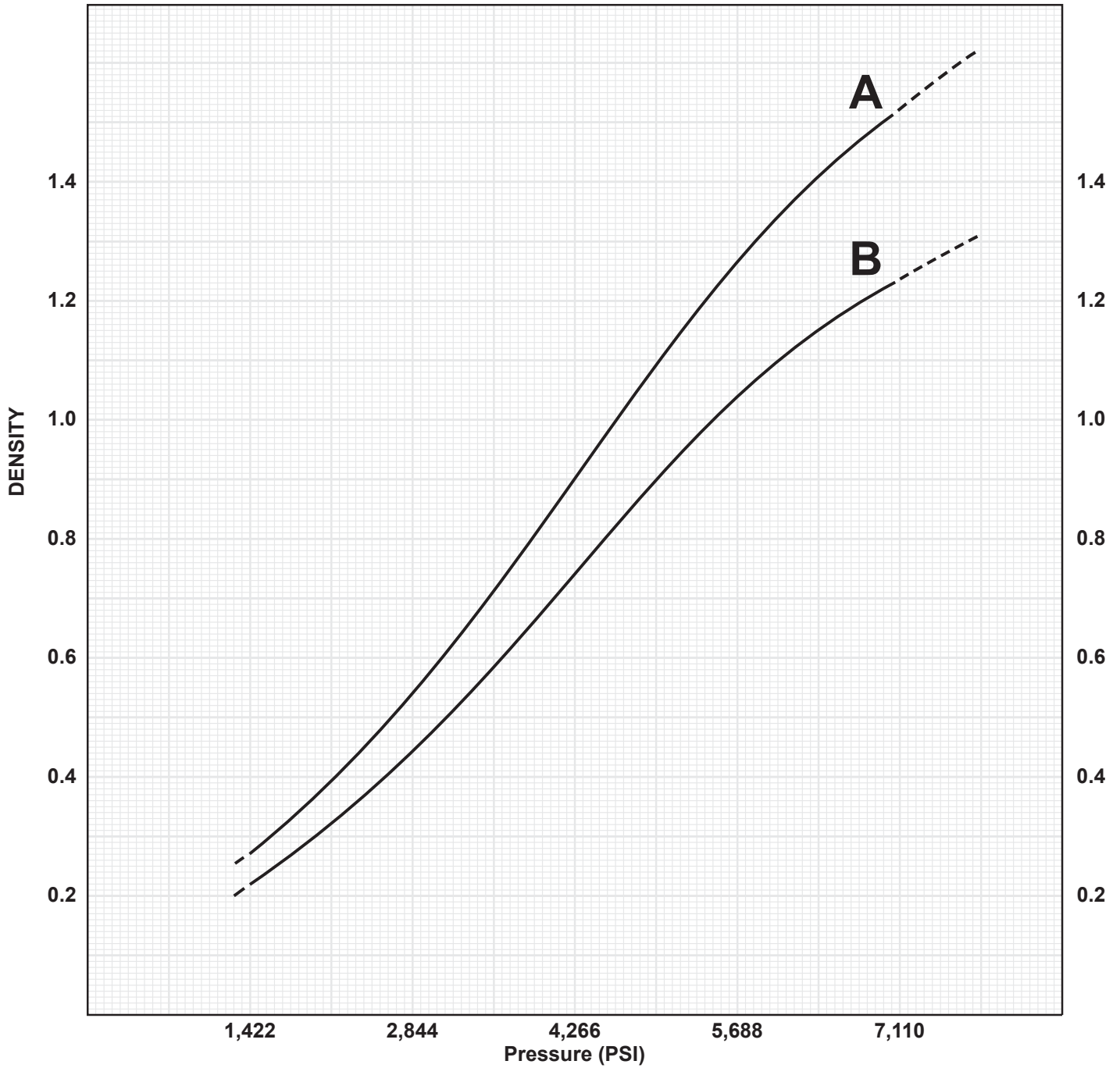
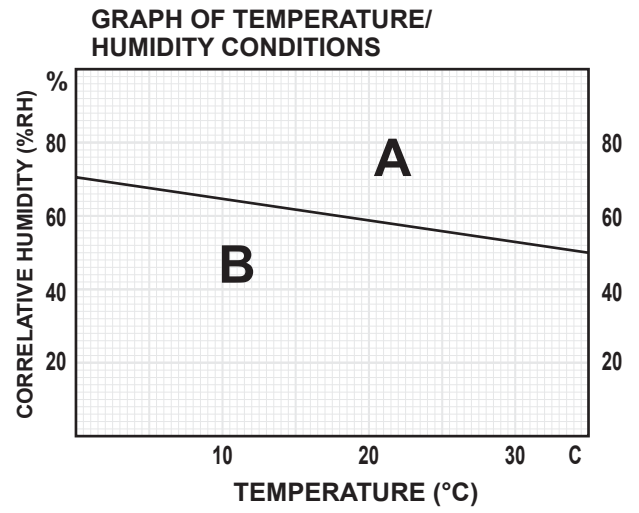


momentary exposure





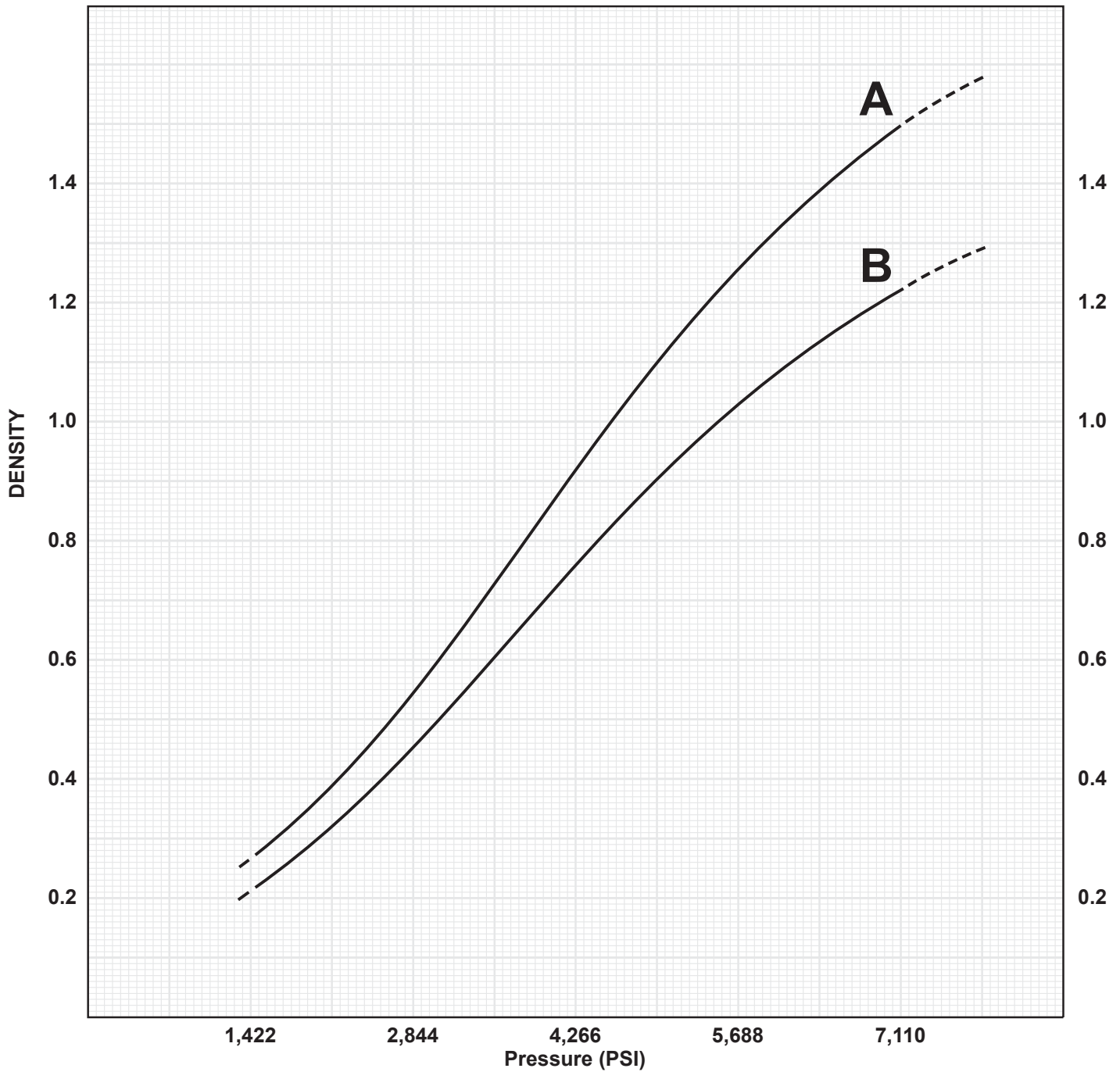
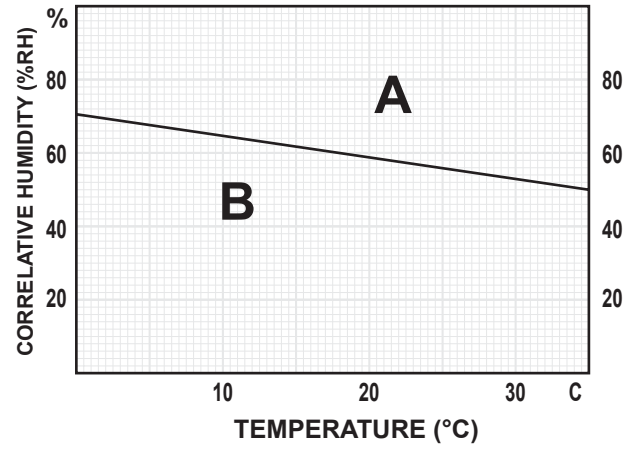
extended exposure





momentary exposure

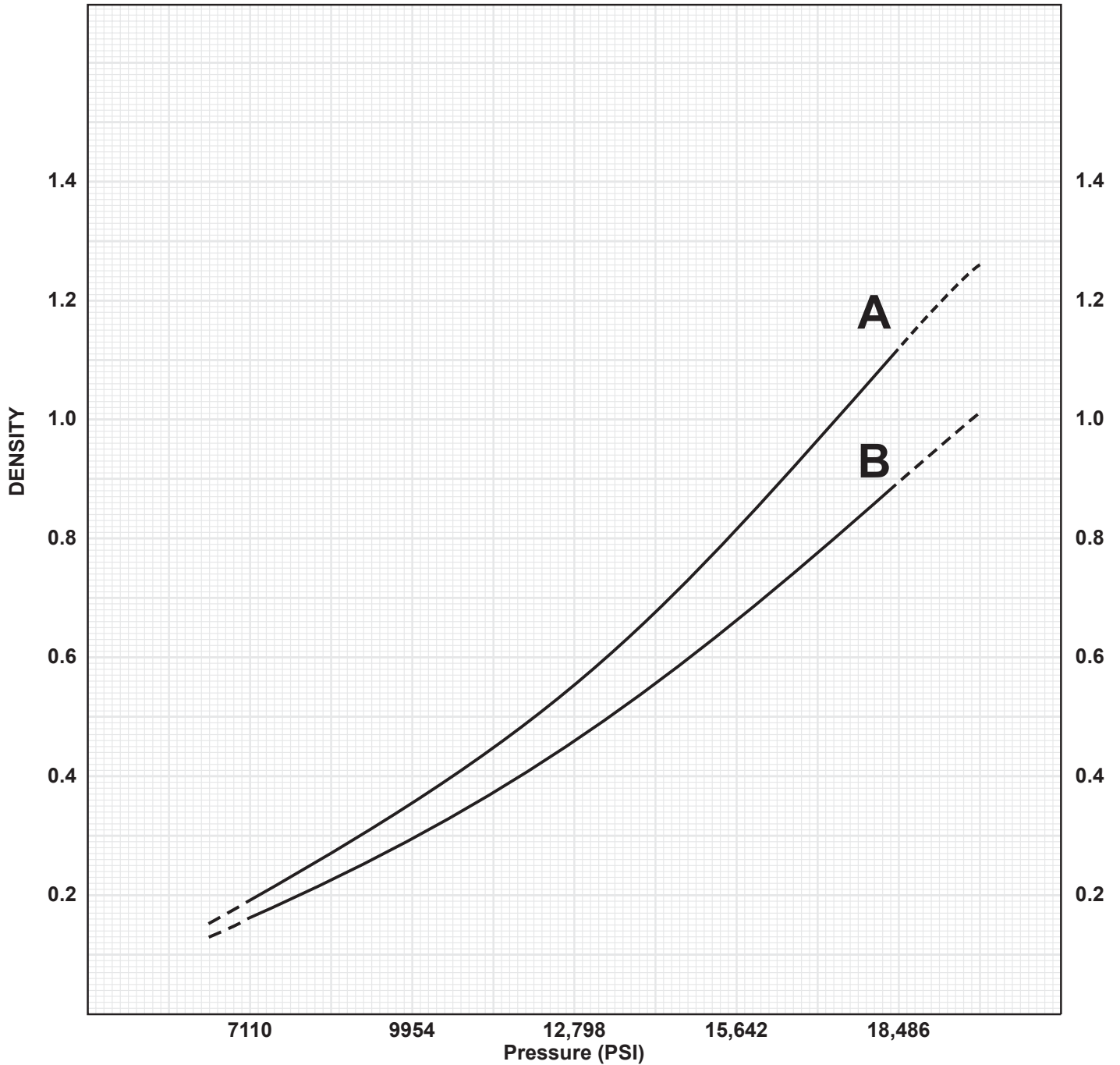
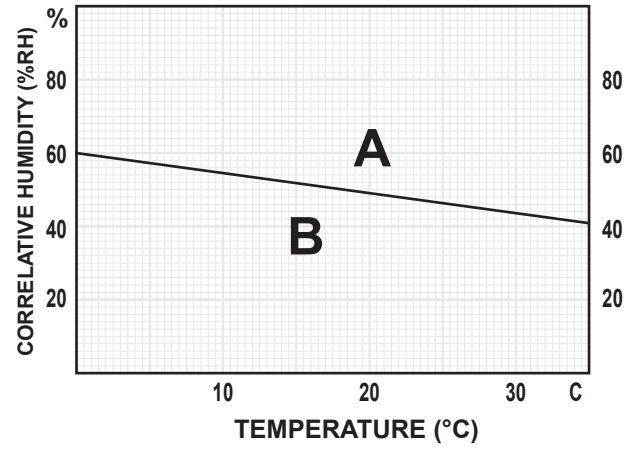
GRAPH OF TEMPERATURE/
HUMIDITY CONDITIONS





extended exposure

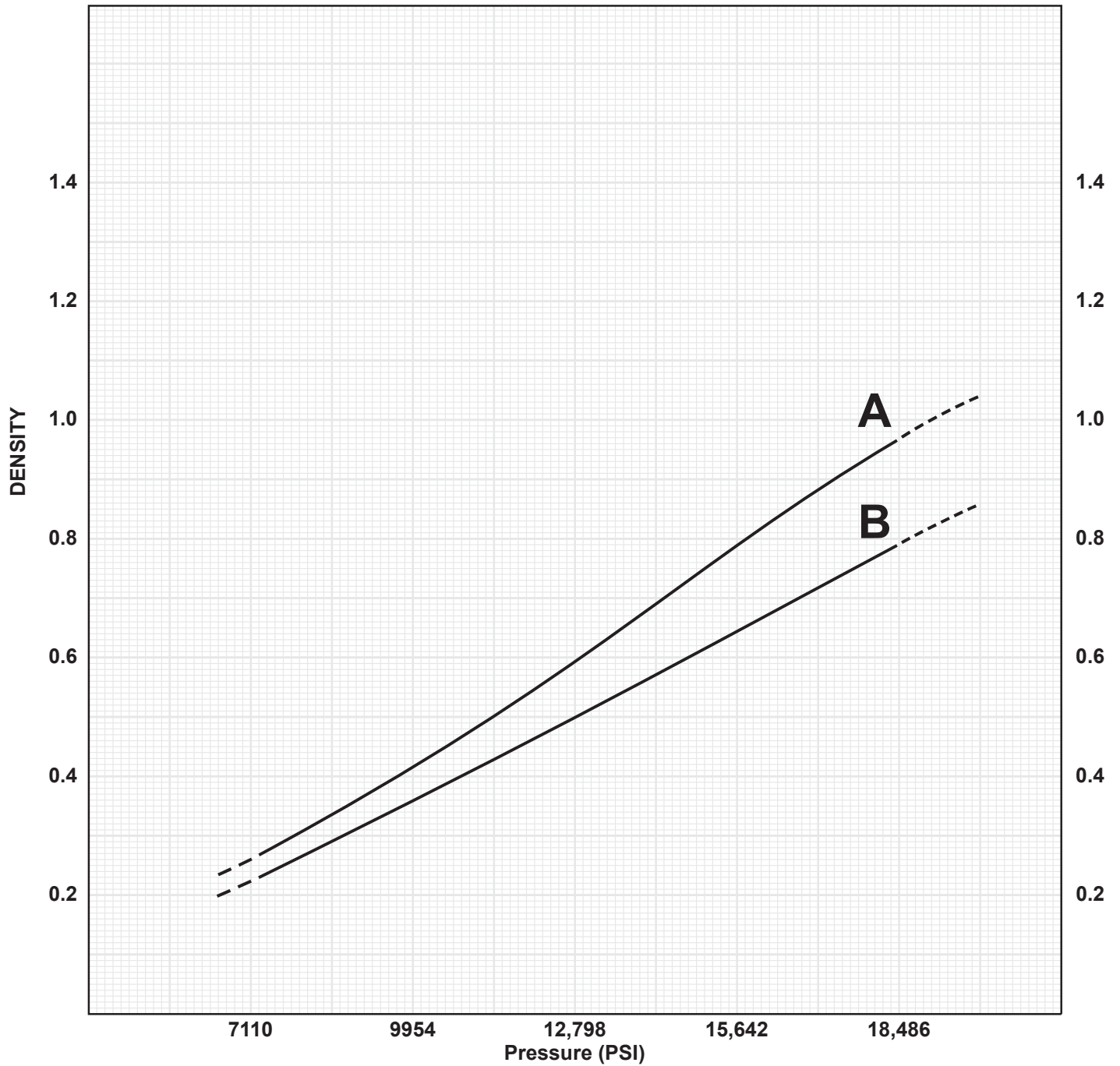
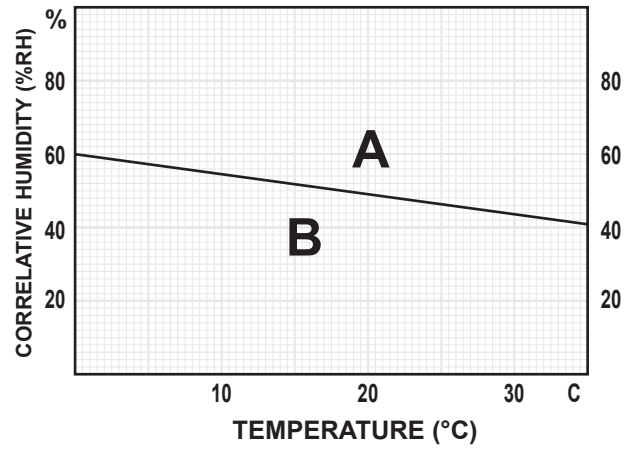
GRAPH OF TEMPERATURE/
HUMIDITY CONDITIONS





momentary exposure

GRAPH OF TEMPERATURE/
HUMIDITY CONDITIONS



SUPER HIGH PRESSURE FILM

GRAPH OF TEMPERATURE/
HUMIDITY CONDITIONS

