

**PEER Chain Company**

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Standard carbon steel chain can be routinely used in ambient temperatures of 15 Degrees F to 140 Degrees F. When using a standard carbon steel chain, within the suggested temperature range of 15 Degrees F to 140 Degrees F range, as well as meeting the proper working conditions (e.g. working load, lubrication, aligned sprockets, etc.), the chain will see its full capabilities without losing integrity during the application. Ultimately, elevated temperatures and drastically low temperatures will result in a reduction in the useful life of the chain.

When chain runs through temperatures greater than 140 Degrees F, the following problems occur:

1. Lubrication deterioration
2. Decrease in strength of the chain
3. Stiff links and increased wear due to oxide scale formation on the chain components
4. Increased wear due to decreased hardness of the pin/bushing area

For applications where chain will be running at temperatures greater than 140 Degrees F, consideration should be given to a high temperature lubricant. For temperatures greater than 300 Degrees F, please consult with our engineering department.

When chain runs through low temperature environments of 15 Degrees F or colder, the following problems may occur:

1. Decrease in shock strength capabilities due to low temperature brittleness
2. Lubricant solidification
3. Stiff joints caused by frost or ice

Listed below is a table showing chain capabilities in proper temperature working environments between low temperatures and ambient temperatures.

Operating Temperature	Standard Roller Chain Working Capabilities:
+15 Degrees F to 140 Degrees F	MAX
0 Degrees F to + 14 Degrees F	MAX x 1/2
-1 Degrees F to - 24 Degrees F	MAX x 1/3
-25 Degrees F to -39 Degrees F	MAX x 1/4
-40 Degrees F	Out of use

The “Standard Roller Chain Working Capabilities” column represents the working load capabilities, whereas the term “MAX” means Maximum Working Load as suggested by the chain manufacturer. For further information, consult our engineering or sales department.