

Date: 10/9/2021 1  
 Heat#: 20524010\* Tag: T21100821  
 Lba SO#: A681325 Ln#: 1 PO#: P0228600-08 Part: CR09320\* Qty: 4



Vulcan Threaded Products  
 10 Cross Creek Trail  
 Pelham, AL 35124  
 Tel (205) 620-5100  
 Fax (205) 620-5150

### Material Certification

Customer:   
 Ship To:   
 Customer PO No: **SSW097528**  
 Order No: **332233**  
 Order Line: **4**  
 Shipped Qty: **2066**  
 Part No: **CDR 1018 .9375x240**  
 Customer Part No: **CDR 1018 .9375x240**  
 Customer Part Description:   
 Reference No:   
 Country of Origin: **USA**  
 Rolled Mill: **Charter Steel**  
 Melted Mill: **Charter Steel**  
 Grade: **1018**  
 Heat: **20524010**  
 Note:   
 Spec No: **AISI 1018**  
 Spec Note:   
 Spec No: **ASTM A108-13**  
 Spec Note:

Material Specification Type	Material Specification	Actual
Chemistry	Carbon (C)	0.16 %
	Manganese (Mn)	0.74 %
	Phosphorus (P)	0.008 %
	Sulfur (S)	0.005 %
	Silicon (Si)	0.200 %
	Copper (Cu)	0.11 %
	Nickel (Ni)	0.04 %
	Chromium (Cr)	0.06 %
	Molybdenum (Mo)	0.01 %
	Vanadium (V)	0.001 %
	Tin (Sn)	0.004 %
	Columbium/Niobium (Nb)	0.002 %
	Aluminum (Al)	0.003 %
	Titanium (Ti)	0.001 %
	Nitrogen (N)	0.0070 %
	Boron (B)	0.0001 %
Reduction Ratio	62:1	

This document certifies that the foregoing data is furnished by the producing mill and test lab. No mercury, lead, radium, or alpha containing material or equipment is used or deliberately added in the production of this steel. No weld or weld repairs were performed on this material.