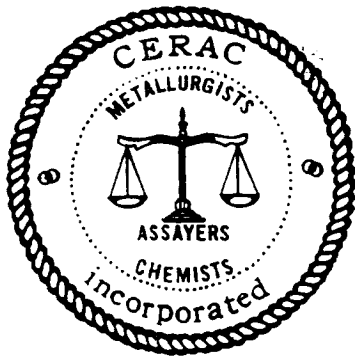


TiC



CERAC incorporated

Certificate of Analysis

This is the analysis of the starting material for your TiC piece PO# 89031

MATERIAL T-1151 TITANIUM CARBIDE, TiC LOT NUMBER 27016-A-2
-325 mesh
Typically 99.5% pure

1. SPECIFIC ANALYSIS OR PROPERTY

Fisher size = 3.85 microns
C total (Theo.) = 20.05%
C total (Found) = 19.34%
C free (Found) = 0.4%

2. SPECTROGRAPHIC ANALYSIS

| | | | |
|----|------|----|------|
| Al | 0.1% | Fe | 0.1% |
| Ca | 0.01 | Mg | 0.01 |
| Cr | 0.03 | Ni | 0.04 |
| Cu | 0.05 | Si | 0.1 |

3. X-RAY DIFFRACTION ANALYSIS (if applicable)

TiC matches PDF 31-400, Cubic.

FILM NUMBER D-4602

CERAC, incorporated

Mailing Address ... P.O. Box 1178, Milwaukee, WI 53201
Plant/Laboratory... 407 N. 13th St., Milwaukee, WI 53233

Ronald L. Coates

by Dr. Ronald L. Coates, QC 083088 cm