

Vérifié par: *Handwritten signature*Date: 2020/10/14**KRONOS®**KRONOS INTERNATIONAL, Inc  
Peschstr. 5, D-51373 Leverkusen  
0049 (0) 214 356 0  
kronos.leverkusen@kronosww.com**Certificate of Analysis**  
Titanium Dioxide KRONOS 1171 (E171)

Leverkusen	October 05, 2021
Lot No:	0043982
Date of Production:	August 27, 2021
Use-by-Date:	August 2026
Production Site:	KRONOS Canada, Inc., 3390 Boulevard Marie-Victorin, Varenes, Québec, Canada J3X 1T4
Analysis Laboratory:	KRONOS INTERNATIONAL, Inc., Department Research Services, Leverkusen / Germany

Test Report - 3.1 acc. to DIN EN 10204:2005

The Lot, as analyzed, meets the specification of the Commission Regulation (EU) No. 231/2012 of the current version at the time of printing.

KRONOS 1171 is applicable in tobacco products according to the German tobacco ordinance (Tabakerzeugnisverordnung - TabakerzV).

KRONOS 1171 is approved for food, feed, and cosmetic applications, and for use in food contact materials.

KRONOS 1171 is applicable in animal nutrition according to Regulation (EC) 1831/2003.

Property	Unit	Standard based on	Value	Limits
Identity		DIN EN 13925-3	complies	complying
Assay, Titanium Dioxide (TiO <sub>2</sub> ) (calc. to dried substance)	%(m)	DIN EN ISO 591-1	99.2	>= 99.0
Appearance		EU No.231/2012	white to almost white Powder	
Solubility		EU No.231/2012	meets specification EU No. 231/2012	
PLV Brightness		DIN 53163	98.8	98.4 - 99.4
PLV Tone b*		DIN 53163	0.42	0.00 - 1.00
pH Value in 10% Suspension		ISO 787-9	7.2	7.0 - 8.5
Loss on Drying (105 °C, 3 h)	%(m)	EU No.231/2012	0.15	<= 0.5
Loss on Ignition (800 °C)	%(m)	EU No.231/2012	0.02	<= 1.0
Acid (HCl 0.5 mol/l) Soluble Substances	%(m)	EU No.231/2012	0.27	<= 0.5
Water Soluble Substances	%(m)	EU No.231/2012	0.36	<= 0.5
Aluminium Oxide and Silicon Dioxide	%(m)	DIN 51418	0.02	<= 2
Arsenic (As), HCl soluble	mg/kg	EU No.231/2012	< 0.1	<= 1
Antimony (Sb), HCl soluble	mg/kg	EU No.231/2012	< 0.1	<= 2
Lead (Pb), HCl soluble	mg/kg	EU No.231/2012	0.2	<= 10
Cadmium (Cd), HCl soluble	mg/kg	EU No.231/2012	< 0.1	<= 1
Mercury (Hg), HCl soluble	mg/kg	EU No.231/2012	< 0.1	<= 1

i. V. *Handwritten signature*  
Dr. Thomas Koch  
Manager Analytical Intelligencei. A. *Handwritten signature*  
René Müller  
Supervisor Instrumental AnalyticsBoard of Directors/Verwaltungsrat: James Walbrown - Ulrich Kabelac - Hans-Jürgen Thaus  
Registergericht: Köln HRB 48238 · Sitz der Gesellschaft: Wilmington, Del. (USA) / Leverkusen  
UST-ID-No./VAT-ID-No.: DE 123660321