

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

**MARKING COMPOUND, SPRAYABLE TiO₂ (ANATASE)
PIGMENTED, NON-ABRASIVE**

ESW-M99B111-B

1. SCOPE

The material defined by this specification is a combination of pigment, thickener, and emulsifier, which makes a suitable product for use as a marking compound, and which can be sprayed onto the gears.

2. APPLICATION

This specification was released originally for material used to indicate the tooth contact pattern and other gear set characteristics when a pinion and gear are rolled together in position on a gear test machine. It is normally restricted to areas where the abrasive characteristics of the compound are of primary consideration.

3. REQUIREMENTS

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 CONSISTENCY

The material shall be a homogeneous, milled product, free from sediment. There shall be no hardening, stratification, or separation during normal periods of storage. No oil is to be added to dilute the grease to the penetration level required.

3.3 COMPOSITION

3.3.1	Titanium Dioxide (Anatase) per ASTM D 476, Type I (ASTM D 1394)	45 - 47 %
3.3.2	Calcium Base Grease (ASTM D 128)	49 - 51 %
3.3.3	Non-Ionic Emulsifier (ASTM D 800)	3 - 5 %

Date	Action	Revisions
2002 08 20	Revised	Updated and released
1990 09 10	NDOW-E-10081866000	Released H.L. Chambers

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3.4 PHYSICAL PROPERTIES

3.4.1 Penetration (unworked) 330 - 350
(ASTM D 217)

3.4.2 Ease of Removal

The material shall be as easily and completely removed in existing washing equipment as presently approved materials.

3.4.3 Film Characteristics

The material shall not harden after application nor upon standing for normal periods, to any degree whereby removal is made difficult. The film shall not be corrosive to steel surfaces.