



시험성적서 CERTIFICATE

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- Client : Graphene Square Inc.
- Product name : Graphene Oxide solution
- Request date and number : June 22, 2012, No. 2012-03-06-189

4. Test Results

| Items | Results | Test Standards |
|-----------------------------|---|---|
| State | Liquid at 20 °C | With reference to * KHMSCA |
| Flash Point (Closed Cup) | No flash occurred under 93 °C | ASTM D56 : 2005 Tag Closed Cup |
| Flash Point (Open Cup) | No flash occurred under 250 °C | ASTM D92 : 2005a Cleveland Open Cup |
| Autoignition Temperature | No spontaneous combustion under 500 °C | ASTM E659(78) : 2005 |
| pH | 3.11 at 20 °C | KS M 0011 : 2008 |
| Boiling Point (Initial) | > 100 °C | KS M ISO 4626 : 2002 |
| Viscosity | 1.3 mPa · s (cP) at 20 °C | KS M 3705 : 2006 |
| Density | 1.000 at 20 °C | KS M 0004 : 1997 (2007 confirmation) |
| Water Solubility | Soluble at 20 °C | With reference to KHMSCA |
| Spontaneous Combustion Test | No spontaneous combustion at 20 °C | ** UN TDG Test N.2 |
| Water Contact Test | No water reaction hazard at 20 °C - Rate of gas emission = 0 L/kg·h | UN TDG Test N.5 |
| Pressure Vessel Test | No self-reaction hazard - No rupture of the 0.6 MPa disc of the vessel * orifice range = (0.6 ~ 9.0) mm | UN TDG Test E.3 |

* KHMSCA : Korea Hazardous Materials Safety Control Act.

** UN TDG : UN Recommendations on the Transport of Dangerous Goods - Tests and Criteria.

Note : 1. These are the results tested with the sample provided by the above mentioned client.

2. This certificate cannot be used for advertisement, administrative litigation or lawsuit.

June 26, 2012

Technical Manager : Vincent Park

