



Natural Resources
Canada

Ressources naturelles
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Protected Business Information

Canada Centre for
Mineral and Energy
Technology

Centre canadien de la
technologie des minéraux
et de l'énergie

CANMET

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05 June 1998

CIE 9287

HNS EXPLOSIVE IN POWDER FORM

Submitted by: Organic Technology, Inc.
c/o Owen Compliance Services, Inc., 8717-A Forum Way
Fort Worth, Texas 76140

For: Classification.

Summary:

At the request of Organic Technologies, Inc., the Canadian Explosives Research Laboratory tested a sample of HNS at CANMET Bells Corners Complex, Nepean, Ontario. The sample was received in good condition on 22 April 1998 and 21 May 1998. The tests detailed in the attached Report of Properties were carried out between 14 May 1998 and 1 June 1998.

Based on the results of the tests, the product is recommended as being suitable for transport with the classification given below.

The results in this report relate only to the sample supplied. This report shall not be reproduced except in full, without the written approval of the Manager of the Canadian Explosives Research Laboratory.

Recommended Classification:

U.N. Class 1.1 **Compatibility Group D**
U.N. Number 0392
U.N. Name Hexanitrostilbene
Packing instruction 112(b) or 112(c)

R.A. Bowes

R.A. Bowes
Head, Explosives Certification and Hazards Analysis
Canadian Explosives Research Laboratory

Attach.

The Canadian Explosives Research Laboratory is accredited by the Standards Council of Canada as a testing laboratory for specific tests registered with the Council.



REPORT OF PROPERTIES

Identification:

CIE No. 9287

Item HNS EXPLOSIVE IN POWDER FORM

Submitted by:**Name** Organic Technology, Inc.**Address** c/o Owen Compliance Services, Inc., 8717-A Forum Way
Fort Worth, Texas 76140**Reason for submission:** Classification.**Composition:****Colour** Yellow.**Consistency** Powder**Comment:**

The sample was received in two shipments. The first was a 0.025 kg sample shipped in a DOT-E 8451 exempt packaging. The mechanical sensitivity, sensitivity to electrostatic discharge, and a thermal stability test were conducted on this shipment. The second shipment was a 0.5 kg sample received in outer-fibreboard box / inner-plastic pail combination of packagings. The UN thermal stability and the UN small scale burning tests were conducted on the latter shipment.

Thermal Stability:**75 Celsius Test:**

Weight loss after 48 hours was 0 %

The sample reached a constant weight after 10 days
with a total weight loss of 0 %**Mechanical Sensitivity:****Bureau of Explosives Impact Apparatus:**2/10 fires at 10 cm drop height (Series 3 criterion: >5/10
fires (10 cm) is "+")**BAM Friction Apparatus:**

Limiting load 360 N (Series 3 criterion: <80 N is "+")

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Static Electricity Sensitivity:

Metal to Metal - at 30 kV and 500 pF
0/3 fires at 10, 15, 20, 25, 30 kV.

Thermal Stability at 75°C - UN 3(c):

100 g of the powder was heated to 75+/-2°C for in excess of 48 h. The temperatures of both the oven and the sample were monitored and recorded.

Result:

There was no ignition, explosion or any indication of decomposition.

The result of the test was "-" by the UN criteria.

Small Scale Burning Test UN 3(d):

Two trials were performed each with 100 g amounts of sample. The preliminary trials with 10 g amounts of sample were not performed.

Result:

In each trial, the sample burned slowly with a yellow scintillating flame. The burning times were 20 s and 28 s. There was no explosion.

The test results was "-" (negative) by UN criteria.

Recommended Classification:

U.N. Class 1.1 **Compatibility Group** D
U.N. Number 0392
U.N. Name Hexanitrostilbene
Packing instruction 112(b) or 112(c)

Disposal:

HNS manufactured by Organic Technologies, Inc. is recommended as being suitable for transport with the classification given above.

