

Russian Ministry of Energy  
Autonomous non-profit organization GCSS "NEFTEPROMHIM"  
Russia, Republic of Tatarstan, 420061, Kazan, N. Ershova st. 29  
Phone: (843) 2387415, Fax: (843) 2381561

**CERTIFICATE FOR APPLICATION OF CHEMICAL PRODUCT AT  
TECHNOLOGICAL PROCESSES OF OIL OUTPUT AND OIL TRANSPORTATION**

*№153.39.RU.245844.04284.11.11, November 18, 2011*

**Chemical product: Rheological pour point depressants DMN**

(DMN-1505, DMN-1005 series)

TS 0257-003-26660001-2008

OKP 02 5726

Russian Customs Code 3811 90 0000

**Admitted for application in Russian Federation** as a rheological pour point depressant (maximum allowed content at crude oil 0.3%) and registered in subject Catalogue "Chemical products agreed and admitted for application at oil industry"

**Based on:** test in volume RD 153-39-026-97:

1. Test report №629 on 17.11.2011 (Test laboratory "Neftepromhim", № POCC RU.0001.21XII31)
2. Test report №459 on 11.11.2008, №10 on 02.06.2009 (Test laboratory at Research Center of "Nefteproduct", № POCC RU.0001.21HX23)
3. Letter №108/83 on 17.11.2011 ("DEPRAN" R&D LLP)

Certificate issued based on the test results of chemical product "Rheological pour point depressants DMN series, DMN-1005)

**Declarant "DEPRAN" R&D LLP**

Russian Federation, 111116, Moscow, 6/2 Aviamotornaya st.

Phone: +7(495) 796 97 82

**Valid through:** **November 18, 2014**

Sealed, signed by Krikun, N.G.

004915

**Translated in English**

SYSTEM OF VOLUNTARY CERTIFICATION OF FUEL ENERGY COMPLEX  
Certificate №POCC RU.E.419.04ЮJI01

**COMPLIANCE CERTIFICATE**

**№TЭК RU.XII25.H03883**

Validity period from 18.11.2011 to 18.11.2014

**№ 001985**

**CERTIFYING ORGANIZATION TЭК RU.04ЮJI11-XII25**  
**AUTONOMOUS NON-PROFIT ORGANIZATION GCSS “NEFTEPROMHIM”**  
Russia, Republic of Tatarstan, 420061, Kazan, N. Ershova st. 29  
Phone: (843) 2387415, Fax: (843) 2381561

**PRODUCT Rheological pour point depressant DMN**  
**(DMN series, DMN-1505)**  
**TS 0257-003-26660001-2008**  
*Serial manufacturing*

**OK code 005(OKII):**  
02 5726

**Russian Customs Code:**  
3811 90 0000

**COMPLY WITH REGULATION REQUIREMENTS OF**  
**TS 0257-003-26660001-2008**

**MANUFACTURER NPKF “Neftekhimtehnologii” LLP**  
*Russian Federation, 650001, Kemerovo, 2- 40 years of October*

**CERTIFICATE ISSUED TO “DEPRAN” R&D LLP**  
*Russian Federation, 111116, Moscow, 6/2 Aviamotornaya st.*  
*Phone: +7(495) 796 97 82*

**BASED ON:**

1. *Test report №629 on 17.01.2011 (Test laboratory “Neftepromhim”, № POCC RU.0001.21XII31)*
2. *Certificate for application of chemical product at technological processes of oil output and oil №153.39.RU.245844.04284.11.11 from 18.11.2011, 2012 to 18.11. 2013 (ANP GCSS “Neftepromhim”)*

**ADDITIONAL INFORMATION Certification scheme -1. Certificate issued based on the test results of chemical product “Rheological pour point depressant DMN series, DMN-1505)**

Sealed, signed by Krikun, N.G. (Administrative manager), Biktimerov R.R. (Expert)



# "DEPRAN" R&D LLP

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## MATERIAL SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RHEOLOGICAL POUR POINT DEPRESSANTS DMN-SERIES

**SUPPLIER**

**EMERGENCY TELEPHONE NUMBER:**

+7-495-796-9782

"DEPRAN" R&D LLP

6/2 Aviamotornaya st.,

Moscow, 111116, Russia

For information call +7-(495) 796-9782

Registration number: 26660001-02-21261

Preparer: A. D. Kozlov

Title: FGUP "STANDARTINFORM"

Date of Last Revision: July 06, 2009

Valid through: July 06, 2014

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	HAZARDOUS INGREDIENTS	CAS#	Hazardous Class
01	Copolymer of vinyl acetate with ethylene	24937-78-8	N/A
02	Diesel fuel	68334-30-5	N/A
03	Toluene	108-88-3	3

### SECTION 3 – HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**APPEARANCE:** Dark brown gel/liquid substance

**ODOR:** Sharp petroleum odor

**HAZARDOUS CLASS 4, LOW HAZARD**

**SIGNIFICANT HAZARDS:**

COMBUSTIBLE liquid and vapor. Skin and eye irritant. May cause irritation to the respiratory tract. Contains a material which can cause nervous system effects. Harmful for water environment.

#### POTENTIAL HEALTH EFFECTS

**EYE CONTACT:**

Direct eye contact may cause reddening, swelling, possible lacrimation with festering, irritation, pain, colic, eye constriction

**SKIN CONTACT:**

Skin contact may cause reddening and swelling.

**Product Name: RHEOLOGICAL POUR POINT DEPRESSANTS DMN-SERIES**

**SECTION 3 – HAZARDS IDENTIFICATION – continued**

**INHALATION:**

Prolonged, repeated or high exposures may cause excitement followed by flabbiness, general weakness, easy fatigability, nausea, throat tickling, coughing, lacrimation, drowsiness and possibly narcosis. Prolonged, repeated or high exposures may cause chest pain, central nervous system depression leading to headaches, dizziness and in extreme cases loss of consciousness.

**INGESTION:**

Harmful if swallowed. May cause severe gastrointestinal disturbance with headache, nausea vomiting and diarrhea, In extreme cases may cause hallucinations, convulsions, loss of consciousness.

**CARCINOGENICITY:**

From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact in the absence of good personal hygiene.

**SECTION 4 – FIRST AID MEASURES**

**EYES:**

If material gets into eyes, flush with large amount of water immediately for 10-15 minutes. Consult a physician.

**SKIN:**

Remove contaminated cloth. In case of skin contact, wash skin immediately with soap and water. If skin burned use aseptic dressing. If rash or irritation develops, consult a physician. Launder clothing before reuse.

**INHALATION:**

If inhaled, remove to fresh air. Administer oxygen if necessary. Administer tranquilizer if necessary. Consult a physician if symptoms persist or exposure was severe. If loss of consciousness occurred have the victim to inhale liquid ammonia. If respiratory arrest occurred administer artificial ventilation. Call ambulance immediately.

**INGESTION:**

Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Have the victim drink 8 to 10 ounces (240 - 300 ml) of water to dilute the material in the stomach and administer activated carbon. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have the victim lean forward to reduce the risk of aspiration into the lungs. Consult a physician immediately. Avoid use of milk, alcohol, castrol oil.

**NOTE TO PHYSICIAN**

**NOTE TO PHYSICIAN:**

Administer activated carbon if necessary. Avoid adrenalin and adrenomimetic drugs.

**SECTION 5 – FIRE-FIGHTING MEASURES**

Flashpoint: 40°C Autoignition Temperature: 300°C.

Flammable Limits: LEL: 62°C UEL: 119°

**HAZARDOUS COMBUSTION PRODUCTS:**

Carbon monoxide. Carbon dioxide

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Combustible liquid. At elevated temperatures, vapors can form an ignitable/explosive mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

**EXTINGUISHING MEDIA:** CO<sub>2</sub>, Foam, Water Fog, Superheated Steam. Prohibited use of compact water jet.

**Product Name: RHEOLOGICAL POUR POINT DEPRESSANTS DMN-SERIES**

**SECTION 5 – FIRE-FIGHTING MEASURES – continued**

**FIRE-FIGHTING INSTRUCTIONS:**

Use a self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure mode. Combustible. Cool fire-exposed containers using water spray.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**LEAKS OR SPILLS:**

Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container.

**OTHER:**

No known information.

**SECTION 7 – HANDLING AND STORAGE**

**HANDLING AND STORAGE:**

Combustible liquid. Avoid heat, sparks and open flames. Avoid breathing vapor and contact with eyes, skin and clothing. Keep container closed when not in use. Use in well ventilated area. After handling this product, wash hands before eating, drinking or smoking. If necessary, take first aid action shown in section 4.

**SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:**

Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

**THRESHOLD LIMIT VALUES:** Toluene 150/50mg/m<sup>3</sup> (vapors), aliphatic hydrocarbons (C<sub>2</sub>-C<sub>10</sub>) = 900/300mg/m<sup>3</sup>. Periodic monitoring of work zone threshold values is required

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Chemical resistant gloves and chemical goggles should be used to prevent skin and eye contact.

**RESPIRATORY PROTECTION:**

When concentrations exceed nuisance levels, use appropriate respirator. In extreme cases a Self Contained Breathing Apparatus (SCBA) may be necessary.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Solubility in Water: Insoluble

Soluble in diesel fuel and organic solvents

Kinematic Density @ 50°C: <400mm<sup>2</sup>/s for DNM-1505 and  
<200mm<sup>2</sup>/s for DMN-1005

Physical State: Gel/ Liquid

Boiling point: N/D

Vapor pressure: N/D

Pour point: not less than 15-40 °C

Vapor density: N/D

**SECTION 10 – STABILITY AND REACTIVITY**

**HAZARDOUS POLYMERIZATION:** Will not occur under normal conditions.

**STABILITY:** This product is stable under normal storage conditions.

**REACTION ABILITY:** Will oxidize, reaction ability increases at elevated temperatures.

**INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:**

Keep away from strong oxidizing agents, heat and open flames.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Heating or thermal destruction may cause formation of carbon monoxide, carbon dioxide

**Product Name: RHEOLOGICAL POUR POINT DEPRESSANTS DMN-SERIES**

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**PRODUCT TOXICOLOGICAL INFORMATION**

No known information.

**OTHER:**

Constant exposure with petroleum products overtime may cause allergic dermatitis and professional eczema.

**COMPONENT TOXICOLOGICAL INFORMATION:**

<u>Component</u>	<u>DL<sub>50</sub>R</u>	<u>DL<sub>50</sub>M</u>	<u>DL<sub>50</sub>RB</u>	<u>CL<sub>50</sub>R</u>	<u>CL<sub>50</sub>M</u>	<u>CL<sub>50</sub>R</u>
Toluene	1960 mg/kg	1126 mg/kg	8390-18090 mg/kg	45000-53600 mg/m <sup>3</sup> (4hrs)	20000-35000 mg/m <sup>3</sup> (2hrs)	
Fuel	N.D.	N.D.	N.D.	N.D.	N.D.	4600-7640 mg/m <sup>3</sup> (4hrs)

**LEGEND:** R = Rat  
RB = Rabbit  
M = Mouse  
GP = Guinea Pig

**SECTION 12 – ECOLOGICAL INFORMATION**

**OTHER:**

Air contamination with product vapors. Avoid spills. Change in organoleptic properties of water are expected. Toxic to aquatic organisms and hazardous for marine life. Soil hazardous at 3ml/10g.

**SECTION 13 – DISPOSAL INFORMATION**

**DISPOSAL INFORMATION:**

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with applicable regulations. Note that these regulations may also apply to empty containers, drums, liners, and rinsate. Processing, use, dilution, or contamination of this product may cause its physical and chemical properties to change.

**SECTION 14 – TRANSPORTATION INFORMATION**

**The data provided in this section is for information only. The description shown may not apply to all shipping situations. Consult appropriate regulations to properly classify your shipment for transportation.**

PROPER SHIPPING NAME: DOT None-regulated - Rheological pour point depressant DMN

TRANSPORTATION METHOD: Railroad or tractor trailer in accordance with Federal Regulations

INTERNATIONAL TRANSPORTATION HAZARD (ADR, RID, IMDG, ICAO/IATA, etc.): Code 33

REPORTABLE QUANTITY: None

LABEL: Danger, Avoid sunlight, Avoid fire

HAZARD CLASS: 3, sub-class 3.3, label danger

UN CODE: Code 1993

**Product Name: RHEOLOGICAL POUR POINT DEPRESSANTS DMN-SERIES**

**SECTION 15 – REGULATORY INFORMATION**

RUSSIAN FEDERATION REGULATION: “Technical regulations”, “Sanitary-hygienic wellness population”, “Environmental protection”.

INTERNATIONAL REGULATIONS: N/A

INTERNATIONAL LABELS VALID IN EUPORIAN UNION COUNTRIES: Xi, R11-36/37/38, S 20/21-24/25-36/37/39-61

**SECTION 16 – OTHER INFORMATION**

APPLICATION RECOMMENDATIONS: These additives are best suited for crude oils with high paraffin content and high solidification temperature. These additives also decrease crude oil viscosity at oil output and during transportation within pipelines. Apply at temperatures 40-60°C.

REVISION HISTORY: First issue

FOOT NOTES:

N/A: Not applicable >= Greater than

N/D: No data available <= Less than

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