SECTION 1: Identification

1.1 Product identifier

Product name: DNF-600 Intercalating Dye

1.2 Recommended use of the chemical and restrictions on use

For Research and Development/Experimental Use Only

1.3 Supplier's details

Name: Advanced Analytical Technologies, Inc.
Address: 2450 SE Oak Tree Ct.
          Suite 101
          Ankeny, IA 50021
          USA

Telephone: 515-964-8500
Fax: 515-964-7377

1.4 Emergency phone number(s)

515-964-8500 (Monday-Friday 8:00AM-5.00PM CST)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with OSHA (29 CFR 1910.1200)
- Flammable liquids (chapter 2.6), Cat. 4

2.2 GHS label elements, including precautionary statements

Signal word: Warning

Hazard statement(s)
H227 Combustible liquid
H303 May be harmful if swallowed

Precautionary statement(s)
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DNF-600 Intercalating Dye

P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P403+P235 Store in a well ventilated place. Keep cool.
P501 Dispose of contents/container to an approved waste disposal facility.

2.3 Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

3.1 Substances

Hazardous components

1. DIMETHYL SULFOXIDE
   Concentration > 99 %*
   Other names / synonyms A 10846; DELTAN; DEMASORB; DEMAVET; DEMESO; DEMSODROX; DERMASORB; DIMETHYL SULPHOXIDE; DIMEXIDE; DIPIRARTRIL-TROPICO; DMS-70; DMS-90; DMSO; DOLICUR; DOLIGUR; DOMOSO; DROMISOL; DURASORB; GAMASOL 90; HYADUR; INFILTRINA; M 176; Methane, 1,1'-sulfinylbis-; METHANE, SULFINYLBIS-; METHYL SULFOXIDE; METHYLSULFINYLMETHANE; NSC-763; RIMSO-50; SOMIPRON; SQ 9453; SULFINYLBIS(METHANE); SYNTEXAN; TOPSYM
   CAS no. 67-68-5

Trade secret statement (OSHA 1910.1200(i))
*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled No special precautions required.
In case of skin contact Wash with water and soap as a precaution. If skin irritation persists, consult a physician.
In case of eye contact Immediately flush eye(s) with plenty of water. If eye irritation persists, consult a specialist.
If swallowed Immediately give large quantities of water to drink. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Specific hazards arising from the chemical
Heating or fire can release toxic gas.

5.3 Special protective actions for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment.

6.2 Environmental precautions
Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
No special precautions required.

7.2 Conditions for safe storage, including any incompatibilities
Take precautionary measures against static discharges. Keep frozen or refrigerated. Keep container when not in use. Remove all sources of ignition. To maintain product quality, do not store in heat or direct sunlight.

SECTION 8: Exposure controls/personal protection

8.2 Appropriate engineering controls
Use only in area provided with appropriate exhaust ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Tightly fitting safety goggles

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place. No special protective equipment required.

Respiratory protection
No personal respiratory equipment normally required.

SECTION 9: Physical and chemical properties
Information on basic physical and chemical properties

- **Appearance/form**: Liquid
- **Odor**<br>Odorless
- **Odor threshold**: No data available
- **pH**: No data available
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: No data available
- **Flash point**: 89°C
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: No data available
- **Upper/lower flammability limits**: No data available
- **Upper/lower explosive limits**: No data available
- **Vapor pressure**: 0.56 hPa (0.42 mmHg)
- **Vapor density**: No data available
- **Relative density**: 1.101 g/cm³
- **Solubility(ies)**: Completely miscible in water
- **Partition coefficient: n-octanol/water**: No data available
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity**: No data available
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available

SECTION 10: Stability and reactivity

10.3 **Possibility of hazardous reactions**
No dangerous reaction known under conditions of normal use.

10.4 **Conditions to avoid**
Keep away from heat and sources of ignition.

10.5 **Incompatible materials**
Inorganic acid chlorides, strong acids and oxidizing agents, strong reducing agents, Alkali metals, hydrogen bromide

10.6 **Hazardous decomposition products**
Carbon monoxide, carbon dioxide, nitrogen oxides, sulphur oxides, formaldehyde

SECTION 11: Toxicological information

**Information on toxicological effects**

- **Acute toxicity**
  No data available

- **Skin corrosion/irritation**
  No data available

- **Serious eye damage/irritation**
  No data available

- **Respiratory or skin sensitization**
Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

STOT-single exposure
No data available

STOT-repeated exposure
No data available

Aspiration hazard
No data available

SECTION 12: Ecological information

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects
No data available

SECTION 13: Disposal considerations

Disposal of the product
Dispose of in accordance with local regulations.
Disposal of contaminated packaging
Treat as unused product.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards
No SARA hazards.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

New Jersey Right To Know Components
No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right To Know Components
No components are subject to the Pennsylvania Right to Know Act.

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Revision date: August 28, 2015

This information provided concerning this Safety Data Sheet is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information and we assume no liability resulting from its use. Users should make their own investigations to determining the suitability of the information for their particular purposes. This material is for R&D/experimental use only. In no event shall Advanced Analytical be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect,
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