

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

DTG Textile 2 BLACK INK

Revision date: 08/09/2005

Supplier Colman & Company, Inc.
5409 S. West Shore Blvd.
Tampa, FL 33611

For non-emergency information contact: 800-891-1094

Emergency telephone number

| | |
|----------------------------------|---------------------------------------|
| Non-Emergency / Colman & Company | 800-891-1094 (9am-5pm M-F, USA – EST) |
| Emergency / Chemtrec | 800-424-9300 (24 hours, USA) |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No. | Concentration |
|---|---------|---------------|
| Acrylic polymer(s) Not Hazardous | | 3.0 - 7.0% |
| Residual monomers Not Required | | < 100.0PPM |
| Aqua ammonia 1336-21-6 | | <= 0.2% |
| Modified carbon black Not Available | | 4.0 - 7.0% |
| Glycol ether Trade Secret | | 8.0 - 10.0% |
| Anionic / nonionic surfactant(s) Trade Secret | | 2.0 - 5.0% |
| Glycols Trade Secret | | 8.0 - 10.0% |
| Water 7732-18-5 | | 69.0 - 74.0% |

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form liquid

Colour black

translucent

Odour ammonia

Hazard Summary Warning! Inhalation of vapor or mist can cause headache, nausea and irritation of the nose, throat and lungs. Causes severe eye irritation. Prolonged or repeated overexposure to the solvent(s) in this material can cause the following: liver damage kidney damage Blood changes Prolonged or repeated overexposure to carbon black can cause lung effects.

Potential Health Effects

Primary Routes of Entry: Inhalation Eye contact Skin contact

Eyes: The solvent(s) in this material can cause the following:
severe irritation
tearing
reddening
conjunctivitis
corneal burns

Skin: The solvent(s) in this material can cause the following:
slight irritation

Ingestion: Material is possibly harmful if swallowed.
Material can cause the following:
abdominal pain
vomiting
nausea
diarrhea
gastrointestinal irritation
dizziness
headache
drowsiness
stupor

Inhalation: Inhalation of solvent vapor or mist can cause the following:
irritation of nose, throat, and lungs
headache
nausea

Chronic Exposure: Prolonged or repeated overexposure to the solvent(s) in this material can cause the following:
kidney damage
liver damage
Blood changes
Prolonged or repeated overexposure to carbon black can cause lung effects.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. Consult a physician.

Skin contact: Wash with water and soap as a precaution. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Eye contact: Immediately flush eye(s) with plenty of water. Get prompt medical attention.

Ingestion: Drink 1 or 2 glasses of water. Consult a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep airway clear.

5. FIRE-FIGHTING MEASURES

| |
|---|
| Flash point Noncombustible |
| Lower explosion limit not applicable |
| Upper explosion limit not applicable |
| Thermal decomposition Combustion generates toxic fumes of the following: nitrogen oxides (NOx), Carbon oxides, sulfur oxides |

| |
|--|
| Suitable extinguishing media: Use the following extinguishing media when fighting fires involving this material: polar solvent (alcohol) foam water spray dry chemical carbon dioxide (CO2) |
|--|

Specific hazards during fire fighting: Dried product can burn. Material can splatter above 100C/212F.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective suit.

Further information: Remain upwind.
Avoid breathing smoke.
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

Methods for cleaning up

Keep spectators away.
Floor may be slippery; use care to avoid falling.
Avoid breathing vapor.
Ventilate the area.

Contain spills immediately with inert materials (e.g., sand, earth).
 Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.
 CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. Handling and storage

Handling

Keep from freezing - product stability may be affected. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep container tightly closed. Store in a cool, dry, well ventilated place.

Storage

Storage temperature: 5 - 25 °C (41 - 77 °F)

Further information:

Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required.

Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

| Component | Regulation | Type of listing | Value |
|--------------|-----------------------------------|-----------------|-------|
| Aqua ammonia | DTG | | |
| | TWA 25 ppm | | |
| | DTG | | |
| | STEL 35 ppm | | |
| | ACGIH TWA 17 mg/m3 25 ppm | | |
| | ACGIH STEL 24 mg/m3 35 ppm | | |
| | OSHA_TRANS PEL 35 mg/m3 50 ppm | | |

| Component | Regulation | Type of listing | Value |
|--------------|------------|-----------------|-------|
| Glycol ether | DTG | | |
| | TWA 50 ppm | | |

| | |
|--|--------------------|
| | DTG STEL 75 ppm |
|--|--------------------|

| Component | Regulation | Type of listing | Value |
|-----------|---------------------|-----------------|-------|
| Glycols | DTG TWA 84 mg/m3 | | |

Eye protection: Use chemical splash goggles (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Neoprene gloves. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Skin and body protection: Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and R95 or P95 filters.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Engineering measures: Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| |
|----------------------|
| Form liquid |
| Colour black |
| translucent |
| Odour ammonia |

| | |
|--|----------------------------------|
| pH 7.5 - 9.5 | |
| Boiling point/range 100 °C (212 °F) water | |
| Melting point/range 0 °C (32 °F) water | |
| Flash point Noncombustible | |
| Lower explosion limit not applicable | |
| Upper explosion limit not applicable | |
| Vapour pressure | 17.0 mmHg at 20 °C (68 °F) water |
| Relative vapour density <1.0water | |
| Water solubility Dilutable | |
| Relative density No data available | |
| Viscosity, dynamic 2.5 - 4 mPa.s | |
| Evaporation rate <1 water | |
| Percent volatility 80 - 92 % | |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Hazardous reactions This material is considered stable. However, avoid temperatures above 177C/350F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.

Materials to avoid Avoid contact with acids, alkalies and strong oxidizing agents.

Hazardous decomposition products Thermal decomposition may yield acrylic monomers.,

polymerization Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

There is no data available for this product.

Component: Agua ammonia

Acute oral toxicity LD50 rat 350 mg/kg

Component: **Aqua ammonia**

Acute oral toxicity LDLo human 43 mg/kg

Component: **Glycol ether**

Acute oral toxicity LD50 rat > 5,000 mg/kg

Component: **Glycols**

Acute oral toxicity LD50 rat 10,000 mg/kg

Component: **Glycol ether**

Acute dermal toxicity LD50 rabbit 4,000 mg/kg

Component: **Glycols**

Acute dermal toxicity LD50 rabbit 10,000 mg/kg

Component: **Glycol ether**

Subchronic toxicity Chronic exposure may lead to: central nervous system damage kidney damage blood disorders

12. ECOLOGICAL INFORMATION

There is no data available for this product.

Glycol ether

Ecotoxicity effects

Toxicity to fish LC50 Bluegill sunfish 96 h 1300 ppm

Toxicity to algae Algae 96 h >100 ppm

Toxicity to aquatic invertebrates EC50 Daphnia magna 48 h >100 ppm

Glycols

Ecotoxicity effects

Toxicity to fish LC50 >100 mg/l

Toxicity to aquatic invertebrates EC50 Daphnia magna 100 mg/l

13. DISPOSAL CONSIDERATIONS

Disposal

Waste Classification: When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

IMO/IMDG

Not regulated (Not dangerous for transport)

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations

15. REGULATORY INFORMATION

Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

SARA Title III: Section 311/312 Categorizations (40CFR370): Chronic Health Hazard
Acute Health Hazard

SARA Title III: Section 313 Information (40CFR372)

This product contains a chemical which is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: (Quantity present is found elsewhere on this MSDS.)

SARA Title III Components:
Glycol ether_

CERCLA Information (40CFR302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

US. Toxic Substances Control Act (TSCA) All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

California (Proposition 65)

This product contains trace levels of a component or components known to the state of California to cause cancer:

| |
|-------------------------------------|
| Components: Ethyl acrylate_140-88-5 |
| Formaldehyde_50-00-0 |

16. OTHER INFORMATION

Hazard Rating

| | Health Fire Reactivity |
|-------------|------------------------|
| HMIS | 2* 0 0 |

Legend

| |
|---|
| ACGIH American Conference of Governmental Industrial Hygienists |
| BAC Butyl acetate |
| OSHA Occupational Safety and Health Administration |
| PEL Permissible Exposure Limit |
| STEL Short Term Exposure Limit (STEL): |
| TLV Threshold Limit Value |
| TWA Time Weighted Average (TWA): |
| Bar denotes a revision from prior MSDS. |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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