MATERIAL SAFETY DATA SHEET

PRODUCT NAME: 1180-66 TRI-BOND ADDITIVE
PRODUCT CODE: 1180-66
HMIS CODES: H F R P
3*1 2 H

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURED FOR: Triangle Ink Co., Inc.
ADDRESS: 53-57 Van Dyke Street
Wallington, NJ 07057

EMERGENCY PHONE : 800-429-9300 (CHEMTREC)
DATE PRINTED : 09/16/2004
INTRANATIONAL : 703-527-3887
INFORMATION PHONE : 201-935-2777

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS

<table>
<thead>
<tr>
<th>CAS NUMBER</th>
<th>VAPOR PRESSURE MM HG @ TEMP</th>
<th>WEIGHT PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>* DIBUTYL PHTHALATE</td>
<td></td>
<td></td>
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<tr>
<td>OSHA PEL: 5 mg/m3, ACGIH TLV: 5 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 = 1.6 mg/L (96 h, Salmo gairdneri).</td>
<td></td>
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<tr>
<td>EC50 = 3.4 mg/L (48 h, Daphnia magna)</td>
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<td></td>
</tr>
<tr>
<td>EC50 = 0.75 mg/L (96 h, Selenastrum)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-74-2</td>
<td>0.00010</td>
<td>77.00000</td>
</tr>
<tr>
<td>TOLUENE DIISOCYANATE HOMOPOLYMER</td>
<td>9017-01-0</td>
<td>0.00000</td>
</tr>
<tr>
<td>TOLUENE DIISOCYANATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL: .005ppmTWA, ACGIH TLV: .005ppmTWA, OTHER: .020ppmSTE</td>
<td></td>
<td></td>
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<tr>
<td>LC50 -96 hr (static) : 165 mg/liter (fathead minnow)</td>
<td></td>
<td></td>
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<tr>
<td>LC50 -96 hr (static) : greater than 508 mg/liter (Grass shrimp)</td>
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<td></td>
</tr>
<tr>
<td>LC50 - 24 hr (static): Greater than 500 mg/liter (Daphnia magna)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 - ORAL RAT : RANGE OF 4130-6170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26471-62-5</td>
<td>0.00000</td>
<td>0.00000</td>
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</tbody>
</table>

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. TDI residual monomer content is less than 0.7% based on resin solids. Warning: The State of california safe drinking Water and Toxic Enforcement Act of 1986 (Prop. 65) recognizes TDI, cas# 26471-62-5 as a chemical known to cause cancer.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 356 deg F
VAPOR DENSITY: HEAVIER THAN AIR
MATERIAL V.O.C.: . lb/gl
SOLUBILITY IN WATER: Non Soluble
APPEARANCE AND ODOR: Colorless to yellow liquid, with weak aromatic odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 356 deg F
METHOD USED: DIN 51758
FLAMMABLE LIMITS IN AIR BY VOLUME: LOWER: 0.50000 UPPER: 2.50000

EXTINGUISHING MEDIA: ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG, OTHER

SPECIAL FIREFIGHTING PROCEDURES
THE USE OF SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIA, BUT HELPFUL IN KEEPING CONTAINERS COOL.

UNUSUAL FIRE AND EXPLOSION HAZARDS
DURING A FIRE, TDI VAPORS AND OTHER IRRITATING, HIGHLY TOXIC VAPORS MAY BE GENERATED. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT OR BURST WHEN CONTAMINATED WITH WATER.
STABILITY: STABLE

CONDITIONS TO AVOID:
HIGH TEMPERATURES OR CONTACT WITH MOISTURE.

INCOMPATIBILITY (MATERIALS TO AVOID)
AVOID CONTACT WITH WATER, ALCOHOLS, AMINES, STRONG BASES, METAL COMPOUNDS OR SURFACE ACTIVE MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
BY HIGH HEAT AND FIRE CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, HYDROGEN CYANIDE, TDI VAPORS, OTHERS UNDETERMINED.

HAZARDOUS POLYMERIZATION:
MAY OCCUR; HIGH HEAT OR CONTACT WITH MOISTURE OR OTHER MATERIALS WHICH REACT WITH ISOCYANATES MAY CAUSE POLYMERIZATION.

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
INHALATION OF VAPOR ABOVE TLV MAY CAUSE RUNNY NOSE, SORE THROAT, COUGHING, CHEST DISCOMFORT, SHORTNESS OF BREATH AND OR FATIGUE. HEADACHE OR NARCOSSIS IS OTHER POSSIBLE SYMPTOMS AND ARE USUALLY REVERSIBLE EFFECTS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATION OF EYES AND SKIN, REDNESS AND BURNING

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
THIS PRODUCT IN PROLONGED SKIN CONTACT WILL CAUSE SKIN SENSITIZATION AND DRY, DEFATTED SKIN MAY OCCUR.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
CAN RESULT IN IRRITATION IN THE MOUTH, STOMACH TISSUE AND DIGESTIVE TRACT. SYMPTOMS CAN INCLUDE SORE THROAT, ABDOMINAL PAIN, NAUSEA, VOMITING AND DIARRHEA.

HEALTH HAZARDS (ACUTE AND CHRONIC)
Acute hazards are listed above. Chronic hazards from inhalation include sensitization to lower than TLV levels, memory loss, lung damage and other Neurotoxic effects. Eye contact may cause conjunctivitis. Skin contact may cause skin sensitization. Ingestion may cause chronic hazards such as testicular atrophy and loss of testicular zinc.

CARCINOGENICITY: NTP CARCINOGEN: Yes IARC MONOGRAPHS: Yes OSHA REGULATED: No TDI is listed under NTP in its Fourth Annual Report on carcinogens. IARC lists TDI as a possible human carcinogen (Group 2B)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
ASTHMA and other respiratory disorders (BRONCHITIS, EMPHYSEMA, BRONCHIAL HYPERACTIVITY): SKIN ALLERGIES, ECZEMA

EMERGENCY AND FIRST AID PROCEDURES
INHALATION: MOVE TO FRESH AIR. ADMINISTER OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. SKIN CONTACT: REMOVE CONTAMINATED CLOTHING IMMEDIATELY. WASH AFFECTED AREAS WITH SOAP OR TINCTURE OF GREEN SOAP AND LARGE AMOUNT OF WATER, PREFERABLY UNDER SAFETY SHOWER. EYE CONTACT: FLUSH WITH LARGE AMOUNT OF WATER, HOLDING EYELIDS OPEN UNTIL IRRITATION SUBSIDES. IF IRRITATION PERSISTSS, SEEK MEDICAL HELP. INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. ONLY IF VICTIM IS NOT UNCONSCIOUS, GIVE A GLASS OF MILK OR WATER TO DRINK. GET PROMPT MEDICAL ATTENTION. DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO A DROWSY OR UNCONSCIOUS PERSON.
MATERIAL SAFETY DATA SHEET

1180-66 TRI-BOND ADDITIVE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
KEEP SPECTATORS AWAY. FLOORS MAY BE SLIPPERY; USE CARE TO AVOID FALLING. CONTAIN SPILLS IMMEDIATELY BY WIPING UP WITH ABSORBENT MATERIAL, THEN RINSE WITH WATER AND REPEAT WIPE UP.

WASTE DISPOSAL METHOD
MUST BE DISPOSED OF IN A PERMITTED INCINERATOR (PREFERRED) OR LANDFILL IN ACCORDANCE WITH FEDERAL, STATE OR LOCAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
KEEP AWAY FROM HEAT, SPARKS OR OPEN FLAME. GROUND CONTAINERS WHEN HANDLING AND TRANSFERRING CONTENTS. TIGHTLY CLOSE ALL CONTAINERS TO PREVENT MOISTURE CONTAMINATION. IDEAL STORAGE TEMPERATURE IS 50 - 81 °F (10 - 27°C).

OTHER PRECAUTIONS
LIMIT STORAGE TO 6 (SIX) MONTHS AT 77 °F (25 °C).

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION
When spraying this material use a NIOSH approved cartridge respirator or gas mask suitable to keep airborne mists and vapor concentrations below the time-weighted threshold limit values. When using in poorly ventilated and confined spaces, use a fresh-air supplying respirator or a self-contained breathing apparatus.

VENTILATION
General mechanical ventilation may be sufficient to keep product concentration within specified time weighted TLV range.

PROTECTIVE GLOVES
THE USE OF IMPERMEABLE GLOVES IS ADVISED TO PREVENT SKIN IRRITATION.

EYE PROTECTION
SAFETY GLASSES WITH SIDE SHIELDS, CHEMICAL GOGGLES AND/OR FACE SHIELDS ARE RECOMMENDED. CONTACT LENSES SHOULD NOT BE WORN.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
SKIN PROTECTIVE CLOTHING MUST BE WORN.

WORK/HYGIENIC PRACTICES
EYE WASHES AND SAFETY SHOWERS IN THE WORKPLACE ARE RECOMMENDED.

SECTION 1X – TRANSPORTATION & REGULATORY

TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME ……………: Polyisocyanate in Dibutyl phthalate contains Toluene Diisocyanate

FREIGHT CLASS PACKAGE ……………: Isocyanate

FREIGHT CLASS PACKAGE ……………: Chemicals NOI (Isocyanate) (NMFC 60000)

PRODUCT LABEL…………………………: 1180-66 Tri-Bond Additive

DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME ……………: Environmentally Hazardous Substance, Liquid N.O.S.
HAZARD CLASS OR DIVISION: 9
UN/NA NUMBER: UN3082
PACKING GROUP: III
DOT PRODUCT RQ lbs (kgs): 14 lbs (6.4 kgs)
HAZARD LABEL(s): Class 9

- When in individual containers of less than the Product RQ, this material ships as non-regulated.

IMO / IMDG CODE (OCEAN)

PROPER SHIPPING NAME: Environmentally Hazardous Substance, Liquid, N.O.S.
HAZARD CLASS DIVISION NUMBER: 9
UN NUMBER: UN3082
PACKAGING GROUP: III
HAZARD LABEL(s): Marine Pollutant (Mark)
HAZARD PLACARD(s): Marine Pollutant

ICAO / IATA (AIR)

PROPER SHIPPING NAME: Environmentally Hazardous Substance, Liquid, N.O.S.
HAZARD CLASS DIVISION NUMBER: 9
UN NUMBER: UN3082
SUBSIDIARY RISK: None
PACKING GROUP: III
HAZARD LABEL(s): Miscellaneous
RADIOACTIVE?: Non-Radioactive
PASSENGER AIR – MAX. QTY: No Limit
PASSENGER PACKING INSTRUCTION: 914
CARGO AIR – MAX. QTY: No Limit
CARGO AIR PACKING INSTRUCTION: 914

REGULATORY INFORMATION

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Communication Standard 29 CFR 1910-1200
TSCA STATUS: On TSCA Inventory
CERCLA REPORTABLE QUANTITY: Tolune Diisocyanate (TDI) – 100 lbs; Dibutyl Phthalate (DBP) – 10 lbs

SARA TITLE III:
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: 2,4-Toluene Diisocyanate (TDI), (CAS # 584-84-9), Less than 0.10%
2,6-Toluene Diisocyanate (TDI), (CAS # 91-08-7), Less than 0.10%
SECTION 311/312 HAZARD CATEGORIES: Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard

SECTION 313 TOXIC CHEMICALS: 2,4- Toluene Diisocyanate (TDI), (CAS # 584-84-9), Less than 0.10%
2,6- Toluene Diisocyanate (TDI), (CAS # 91-08-7), Less than 0.10%
Dibutyl Phthalate (DBP), (CAS # 84-74-2) – 70%

RCRA STATUS: Dibutyl Phthalate (DBP) and Toluene Diisocyanate (TDI) are listed as RCRA Hazardous wastes and should be managed as hazardous wastes (EPA Hazardous
The following chemicals are specifically listed by individual States; other product specific health and safety data in other sections of the MSDS may also be applicable for your State requirements. For details on your regulatory requirements you should contact the appropriate Agency in your State.

<table>
<thead>
<tr>
<th>COMPONENT NAME/ CAS NUMBER</th>
<th>CONCENTRATION</th>
<th>STATE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyl Phthalate (DBP) 84-74-2</td>
<td>60 – 80 %</td>
<td>PA1, PA4, MA, NJ1, NJ2, CN1</td>
</tr>
<tr>
<td>Toluene Diisocyanate Homopolymer 9017-01-0</td>
<td>20 – 40 %</td>
<td>PA3, NJ4</td>
</tr>
<tr>
<td>Toluene Diisocyanate (TDI) 26471-62-5</td>
<td>&lt; 0.2 %</td>
<td>CA1, MA</td>
</tr>
<tr>
<td>Aromatic Sulfonate</td>
<td>&lt; 0.3 %</td>
<td>MA</td>
</tr>
</tbody>
</table>

CA1 = Warning! This chemical is known to the State of California to cause cancer.
MA = Massachusetts Hazardous Substance List
NJ1 = New Jersey Hazardous Substance List
NJ2 = New Jersey Environmental Hazardous Substance List
NJ4 = New Jersey Other – included in 5 predominant ingredients >1%
PA1 = Pennsylvania Hazardous Substance List
PA3 = Pennsylvania Non-hazardous present at 3% or greater.
PA4 = Pennsylvania Environmental Hazardous Substance List.
CN1 = Canada WHMIS Ingredient Disclosure List over 1%

OTHER INFORMATION

HMIS RATINGS:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

SECTION X - DISCLAIMER

TO THE BEST OF TRIANGLE INK CO., INC.'S KNOWLEDGE, THE INFORMATION CONTAINED HERE IS ACCURATE, OBTAINED FROM SOURCES BY OUR RAW MATERIALS SUPPLIERS. HOWEVER, NO WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. SUCH DATA MUST BE VERIFIED FOR USE BY YOU IN AN INDUSTRIAL ATMOSPHERE ONLY.