MATERIAL SAFETY DATA SHEET PAGE: 1 OF 5

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SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE.: DA176

TRADE NAME...: DA176 CATALYST

PRODUCT CLASS: CATALYST

INK SERIES...: DA

- HMIS CODES -
HEALTH - 3*
FLAMMABILITY - 3
REACTIVITY - 1
PPE - X

SECTION 2 -- COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME; COMMON NAME; CAS NUMBER	PERCENT BY WEIGHT	OCCUPATIONAL EXPOSURE LIMITS ACGIH TLV	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	VAPOR PRESSURE IN mmHg	NOTES
RESIN MIXTURES; CAS #: NOT AVAILABLE	73-75	NOT ESTABLISHED	NOT ESTABLISHED	<1 @ 20C	
ACETIC ACID ETHYL ESTER; ETHYL ACETATE; CAS #: 141-78-6	24-26	400 ppm	400 ppm	76 @ 20C	
* 2,6-TOLUENE DIISOCYANATE; 2,6-DIISOCYANATO-1-METHYLBENZENE; CAS #: 91-08-7	.50-1.50	.005 ppm	.005 ppm	<1 @ 20C	(1)

* SUBJECT TO REPORTING REQUIREMENT OF SECTION 313 OF TITLE)III OF SARA (40 CFR PART 372).

1) Exposure limits are based on Toluene-2,4-diisocyanate CAS# 584-84-9.

The recommended permissible exposure limits (PEL) indicated above reflect the levels adopted by OSHA in 1989. Although, some of the 1989 levels have since been vacated, the Nazdar Company recommends that the lower exposure levels be observed as reasonable worker protection.

SECTION 3 -- HAZARDS IDENTIFICATION

GENERAL HEALTH EFFECTS

THE FOLLOWING INFORMATION HAS BEEN DEVELOPED BASED UPON USING THE PRODUCT AS INTENDED BY THE MANUFACTURER. The potential health effects of this product are based on the hazards of its components. The use of this product in combination with other products may produce synergistic (additive) health effects. Cautionary labeling and material safety data sheets of all materials used with this product should be reviewed before use.

EYES

Eye contact with liquid, vapors or mists may cause severe irritation, including burning, tearing, redness or swelling and reversible eye damage.

SKIN

Repeated or prolonged overexposure may cause skin irritation or dermatitis. Symptoms may include dryness, chapping and redness.

INHALATION

Overexposure by inhalation may cause respiratory tract irritation, shortness of breath, bronchitis, bronchial spasms and pulmonary edema. Persons with preexisting sensitivities may develop symptoms at concentrations below the recommended TLV. Repeated overexposures or a single large dose may cause certain individuals to develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels below the TLV. Symptoms may occur up to several hours after exposure. Increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates may cause lung damage, including decreased lung function, which may be permanent. Sensitization may be either temporary or permanent.

INGESTION

Ingestion may cause gastrointestinal tract irritation.

)RONIC EFFECTS/TARGET ORGANS

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Isocyanates can cause lung sensitization. Allergic respiratory reaction may occur in sensitized individuals when exposure to TDI is below TLV. Chronic overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Toluene diisocyanates are classified as possibly carcinogenic by IARC (Group 2B) and NTP.

ANIMAL STUDIES
No Data Available

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Pregnant women and persons with pre-existing health disorders should consult their physician before using this product. Repeated and prolonged overexposure and/or individual sensitivity may increase the potential for and degree of adverse health effects. See Section 3 "Hazards Identification" for effects of certain hazardous ingredients.

ROUTES OF EXPOSURE
Primary exposure routes: Inhalation-Dermal (Contact/Absorption)-Ingestion

SECTION 4 -- FIRST AID MEASURES

EYES
After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists have eyes examined and tested by medical personnel.

SKIN
In case of contact, immediately wash skin with a mild soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Cool water is initially suggested to prevent the pores of the skin from opening. This will minimize both the area and time of skin contact. Lukewarm water may then be used to ensure all contaminants are removed. Skin should be monitored for reddening or chemical burns. Mild soap is suggested to help prevent abrading the skin or rubbing the chemicals into pores during cleansing. Get medical attention if irritation persists or significant contact has occurred. Thoroughly wash (or discard) clothing and shoes before reuse.

INHALATION
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if breathing difficulty is experienced.

INGESTION
If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

OTHER COMMENTS
No Data Available

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT
32 Degrees Fahrenheit (TCC)

OSHA FLAMMABILITY CLASSIFICATION (NFPA)
Class IB Flammable Liquid

LEL - LOWER EXPLOSIVE LIMIT / UEL - UPPER EXPLOSIVE LIMIT
2.0% volume in air / No Data Available

EXTINGUISHING MEDIA
Foam-CO2-Dry Chemical-Water Spray

FIRE AND EXPLOSION HAZARDS
Isolate from heat, electrical equipment, sparks, and open flame. Keep containers tightly closed. Vapors may be heavier than air and can travel to a source of ignition then flash back. Closed containers may explode when exposed to extreme heat. May generate toxic fumes of phosgene and hydrogen cyanide.

FIRE FIGHTING EQUIPMENT
Full protective equipment including self-contained breathing apparatus (SCBA) is recommended to protect firefighters.

SPECIAL FIRE FIGHTING PROCEDURES
Water may be ineffective but may be used to cool containers. Fumes released on burning may be toxic and dangerous.

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RELEASE MANAGEMENT MEASURES
Remove all sources of ignition (flames, hot surfaces and electrical, static or frictional sparks). Avoid contact or breathing vapors. Ventilate area. Contain release and remove with inert absorbent. Use non-sparking tools to place material in

appropriate container for disposal. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. The National Response Center (800-424-8802) and local authorities should be contacted for any reportable spill/release.

SECTION 7 -- HANDLING AND STORAGE

HANDLING AND STORAGE METHODS
Use in a well ventilated area. Follow all MSDS/label precautions even after container is emptied; container may retain product residues. Store in closed containers in cool, dry, well ventilated area away from sources of ignition. Keep containers closed when not in use. Smoke in designated areas only. Avoid prolonged or repeated overexposure to this product. Keep out of reach of children. Follow label directions carefully. Do not take internally. Harmful or fatal if swallowed. Avoid water contamination. Reseal containers using dry air or nitrogen blanket.

SECTION 8 -- EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION
If concentrations of hazardous ingredients exceed exposure limits listed in Section 2 an appropriate NIOSH (National Institute for Occupational Safety and Health) approved respirator with an organic vapor cartridge should be used. If material is handled under mist, spray or dust forming conditions, a P100 (99.97% efficiency) filter should be used in addition to the organic vapor cartridge. Protection provided by air-purifying respirators is limited. If no exposure limits are listed in Section 2, follow general safety guidelines in 29 CFR 1910.134 Respiratory Protection or other applicable respiratory standard.

SKIN PROTECTION
Use neoprene, nitrile or other gloves resistant to chemicals listed in Section 2. Contact a reputable safety supply company for appropriate gloves. Solvent resistant aprons are recommended. Prevent prolonged skin contact with contaminated clothing.

EYE PROTECTION
Use ANSI (American National Standards Institute) approved safety glasses, faceshield or splash proof goggles to prevent eye contact. Contact a reputable safety supply company for appropriate eye protection. The availability of an eye wash is highly recommended.

EXPOSURE GUIDELINES
See Section 2 "Composition, Information on Ingredients" for occupational exposure limits. Excessive concentrations of nuisance dusts or particulates not otherwise classified (PNOC) or regulated (PNOR) may reduce visibility and cause unpleasant deposits in the eyes, ears, and nasal passages. The TLV and PEL has been established for all non-toxic "nuisance dusts" that are not otherwise classified and refers to both organic and inorganic dusts. Exposure or generation of these dusts is not anticipated during normal printing operations. The use of dry pigments and powders, grinding or sanding of printed products may generate quantities of these particulates. Refer to Section 2 Composition, Information on Ingredients for exposure limits.

HYGIENIC PRACTICES
Wash with soap and water before eating, smoking or using toilet facilities. Separately wash or discard clothing and footwear before reuse. NEVER try to remove ink from the skin by using solvent or thinner. Such action is likely to increase the possibility of undesirable effects. Remove contaminated clothing to prevent prolonged skin contact.

ENGINEERING CONTROLS
Use applicable engineering controls, work practices and personal protective equipment to ensure all concentrations are kept below the exposure limits listed in Section 2. Adequate controls should be implemented to ensure employee safety from fine mists which may be produced under some printing conditions.

OTHER PROTECTION
No Data Available

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE:
Viscous liquid

ODOR:
Characteristic

PHYSICAL STATE:
Liquid

pH
Not applicable

VAPOR PRESSURE
See Section 2 for individual ingredients.

VAPOR DENSITY

Heavier than air

BOILING POINT
Greater than 300 degrees Fahrenheit

FREEZING POINT
Not available

SOLUBILITY IN WATER
Not tested

EVAPORATION RATE
Slower than ether

VISCOSITY
Greater than water

PERCENT VOLATILE BY VOLUME: 31.69 %

WEIGHT PER GALLON: 9.75 lbs/gal

VOC: 304.20 g/L
2.54 lb/gal

PHOTOCHEMICALLY REACTIVE
No

Percent volatile = Percent VOC

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY
Stable

CONDITIONS TO AVOID
Avoid excessive heat, ignition sources, sparks and open flame. Contact with moisture and other materials which react with isocyanates.

INCOMPATIBILITY WITH OTHER MATERIALS
Strong acids and bases, water.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide and other noxious gases including hydrogen cyanide (HCN).

HAZARDOUS POLYMERIZATION
May occur if in contact with moisture, heat, or other materials which react with isocyanates. Water contamination will cause pressure build-up in sealed containers. Blanket containers with dry air or nitrogen before closing.

SECTION 11 -- TOXICOLOGICAL INFORMATION

EXPERIMENTAL TOXICITY DATA
Refer to Section 3 Hazards Identification for additional toxicological data.

SECTION 12 -- ECOLOGICAL INFORMATION

ECOTOXICITY
Because this product may be a mixture of chemicals, some of which may be ecologically toxic, it is strongly suggested that it not be disposed of into the environment, i.e. soil, water courses, lakes, landfills, sewers, etc.

ENVIRONMENTAL FATE
No Data Available

SECTION 13 -- DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of in accordance with applicable local, county, state, provincial and federal regulations. Emptied containers may retain hazardous properties. Empty containers should be disposed of in an environmentally safe manner in accordance with applicable regulations.

SECTION 14 -- TRANSPORT INFORMATION

TRANSPORT INFORMATION
DOT Proper Shipping Description: Paint Related Material, 3, UN1263, PG II.

SECTION 15 -- REGULATORY INFORMATION

SARA TITLE III 313 INFORMATION
See Section 2 "Composition, Information on Ingredients" for applicable chemicals.

TOXIC SUBSTANCES CONTROL ACT STATUS
All ingredients in Section 2 are listed on the U.S. Environmental Protection Agency's Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substance List.

OTHER REGULATORY INFORMATION
OCCUPATIONAL SAFETY and HEALTH ADMINISTRATION (OSHA) - MSDS is compliant with Occupational Safety and Health Administration Hazard Communication Standard - 29 CFR 1910.1200. AMERICAN NATIONAL STANDARDS INSTITUTE - This MSDS follows the ANSI Z400.1-1998 format. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) - This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION (CANADA):
B2 _ Flammable Liquids; D1A _ Material causing immediate and serious toxic effects, very toxic material; D2A _ Materials causing other toxic effects, very toxic material; D2B _ Materials causing other toxic effects, toxic material;

SECTION 16 -- OTHER INFORMATION

DISCLOSURE
The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind express or implied is made with respect to the information contained herein. The data in this MSDS relates only to the specific material designated herein and does not apply to use in combination with any other material or process.

DEFINITIONS

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CEILING: (TLV-Ceiling and PEL Ceiling Limit) The ceiling exposure limit or concentration not to be exceeded for even brief times.

DOT: Department of Transportation

HMIS: The Hazardous Materials Identification System (HMIS) developed by the National Paint and Coatings Association (NPCA) to provide information on the acute health hazards, reactivity and flammability of products encountered in the workplace at room temperatures.

HMIS codes assigned for this product are only suggested ratings based on anticipated normal screen printing applications. The employer has the ultimate responsibility for assigning these ratings and should fully evaluate the MSDS, work practices and environmental conditions prior to assigning the appropriate ratings.

HMIS rating involves data interpretations that may vary from company to company.

HMIS Personal Protection Index of "X-Ask your supervisor" is given on this MSDS due to varying work conditions which may dictate different levels of protection. Please review this MSDS before determining appropriate protective equipment and beginning work.

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Association

NTP: National Toxicology Program

STEL: Short-Term Exposure Limit: ACGIH terminology for the short-term exposure limit or maximum concentration for a continuous exposure period of 15 minutes.

TLV: Threshold Limit Value. A term ACGIH uses to express the airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

TWA: Time-Weighted Average

VOC: Volatile Organic Compound