

**Published Date**  
Aug-28-2018

**Revision Date**  
Aug-28-2018

**Revision Number**  
2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

**Product code** DA176  
**Product name** Catalyst  
**Product category** Ink Product

**Other means of identification**

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended use** Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
 Outside USA: Chemtrec: +001-703-527-3887  
 24 Hour Emergency Phone Number

## 2. HAZARDS IDENTIFICATION

**Classification**

Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitization	Category 1 - (H334)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Flammable liquids	Category 2 - (H225)

**Label elements**



**Signal Word**  
Danger

**Hazard Statements**

H319 - Causes serious eye irritation  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H336 - May cause drowsiness or dizziness  
 H225 - Highly flammable liquid and vapor

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P235 - Keep cool

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Hazards not otherwise classified (HNOC)**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
Ethyl acetate	141-78-6	10 - 30	*	
Toluene 2,6-diisocyanate	91-08-7	< 1	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

### Methods and material 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 (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products** Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure limits

Component	ACGIH TLV
Ethyl acetate 141-78-6	TWA: 400 ppm
Toluene 2,6-diisocyanate 91-08-7	TWA: 0.001 ppm inhalable fraction and vapor STEL: 0.005 ppm inhalable fraction and vapor Skin

Component	OSHA PEL
Ethyl acetate 141-78-6	TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
Ethyl acetate 141-78-6	TWA: 400 ppm TWA: 1400 mg/m <sup>3</sup>

Component	Ontario TWA EV
Ethyl acetate 141-78-6	TWA: 400 ppm
Toluene 2,6-diisocyanate 91-08-7	TWA: 0.005 ppm STEL: 0.02 ppm Ceiling: 0.02 ppm

Component	Mexico OEL (TWA)
Ethyl acetate	TWA/VLE-PPT: 400 ppm

141-78-6	TWA/VLE-PPT: 1400 mg/m <sup>3</sup>
----------	-------------------------------------

**Appropriate engineering controls**

**Engineering Measures** Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Wear safety glasses with side shields (or goggles). If splashes are likely to occur. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

**Skin Protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Appearance</b>	Water-white
<b>Odor</b>	Characteristic	<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No data available
Melting Point / Freezing Point		No data available
Boiling Point / Boiling Range	> 149 °C / 300 °F	
Flash Point	0 °C / 32 °F	Tag closed cup
Evaporation rate		No data available
Flammability Limit in Air		
Upper flammability limit		No data available
Lower flammability limit		No data available
Vapor Pressure		No data available
Vapor Density		No data available
Specific Gravity	1.17	
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition Temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

<b>Explosive Properties</b>	No data available
<b>Oxidizing Properties</b>	No data available

**Other Information**

<b>Photochemically Reactive</b>	No
<b>Weight Per Gallon (lbs/gal)</b>	9.75

<b>VOC by weight % (less water)</b> 25	<b>VOC by volume % (less water)</b> No information available	<b>VOC lbs/gal (less water)</b> 2.44	<b>VOC grams/liter (less water)</b> 292.37
---	---	---	---

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Inhalation**

Specific test data for the substance or mixture is not available.

#### **Eye Contact**

Specific test data for the substance or mixture is not available.

#### **Skin Contact**

Specific test data for the substance or mixture is not available.

#### **Ingestion**

Specific test data for the substance or mixture is not available.

<b>Component</b>	<b>Oral LD50</b>
Ethyl acetate 141-78-6	= 5620 mg/kg ( Rat )

<b>Component</b>	<b>Dermal LD50</b>
Ethyl acetate 141-78-6	> 18000 mg/kg ( Rabbit )

<b>Component</b>	<b>Inhalation LC50</b>
Ethyl acetate 141-78-6	= 4000 ppm ( Rat ) 4 h

### Information on toxicological effects

#### **Symptoms**

Specific test data for the substance or mixture is not available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### **Skin corrosion/irritation**

Specific test data for the substance or mixture is not available.

#### **Eye damage/irritation**

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).

#### **Irritation**

Specific test data for the substance or mixture is not available.

#### **Corrosivity**

Specific test data for the substance or mixture is not available.

#### **Sensitization**

Specific test data for the substance or mixture is not available. May cause allergy or asthma symptoms or breathing difficulties if inhaled. (based on components).

#### **Mutagenic Effects**

Specific test data for the substance or mixture is not available.

#### **Carcinogenic effects**

Specific test data for the substance or mixture is not available.

#### **Reproductive Effects**

Specific test data for the substance or mixture is not available.

#### **STOT - single exposure**

Specific test data for the substance or mixture is not available. May cause drowsiness or dizziness. (based on components).

**STOT - repeated exposure**  
**Chronic Toxicity**  
**Aspiration hazard**  
**Carcinogenicity**

Specific test data for the substance or mixture is not available.  
 Specific test data for the substance or mixture is not available.  
 Specific test data for the substance or mixture is not available.  
 The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Toluene 2,6-diisocyanate 91-08-7	A3

Component	IARC
Toluene 2,6-diisocyanate 91-08-7	Group 2B

Component	OSHA
Toluene 2,6-diisocyanate 91-08-7	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg mg/l

**ATEmix (inhalation-dust/mist)** 10.02 mg/l  
**ATEmix (inhalation-vapor)** 100.20 mg/l

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Fish
Ethyl acetate 141-78-6	96h LC50 Oncorhynchus mykiss: 352 - 500 mg/L (semi-static) 96h LC50 Pimephales promelas: 220 - 250 mg/L (flow-through) 96h LC50 Oncorhynchus mykiss: = 484 mg/L (flow-through)

Component	Crustacea
Ethyl acetate 141-78-6	48h EC50 Daphnia magna: = 560 mg/L Static

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
Ethyl acetate 141-78-6	0.6

**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION**

**Note:** This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

**UN/ID no.** UN1210  
**Proper Shipping Name** Printing Ink Related Material  
**Hazard Class** 3  
**Packing Group** II

**ICAO / IATA / IMDG / IMO**

**UN/ID no.** UN1210  
**Proper Shipping Name** Printing Ink Related Material  
**Hazard Class** 3  
**Packing Group** II

**15. REGULATORY INFORMATION**

**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Toluene 2,6-diisocyanate	91-08-7	< 1	0.1

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

**U.S. State Regulations**

Component	Massachusetts Right To Know
Ethyl acetate 141-78-6	X
Toluene 2,6-diisocyanate 91-08-7	X

Component	Minnesota Right To Know
Ethyl acetate 141-78-6	X
Toluene 2,6-diisocyanate 91-08-7	X

Component	New Jersey
-----------	------------

	Right To Know
Ethyl acetate 141-78-6	X
Toluene 2,6-diisocyanate 91-08-7	X

Component	Pennsylvania Right To Know
Ethyl acetate 141-78-6	X
Toluene 2,6-diisocyanate 91-08-7	X

**California Prop. 65**

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

**Canada**

Component	NPRI - National Pollutant Release Inventory
Ethyl acetate 141-78-6	Part 5, Individual Substances; Part 4 Substance
Toluene 2,6-diisocyanate 91-08-7	Part 1, Group B Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

<u>HMIS:</u>	Health	Flammability	Reactivity	Personal Protection
	3 *	3	1	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

- X - Present

**Revision Date** Aug-28-2018

**Disclaimer**

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.

**End of Safety Data Sheet**