

SAFETY DATA SHEET

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

Product identifier Product code Product name Product category

4727 Overprint Clear 4700 Series Water-Based Screen Ink

Other means of identification Synonyms

Recommended use of the chemical and restrictions on useRecommended usePrinting operations

None

Details of the supplier of the safety data sheet

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

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

Skin Corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1 - (H317)
Chronic aquatic toxicity	Category 3 - (H412)

Label elements



Signal Word Warning

Hazard Statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

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

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P273 - Avoid release to the environment

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

Hazards not otherwise classified (HNOC)

Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Component	CAS-No	Weight %	Trade Secret	Note
2-(Dimethylamino)ethanol	108-01-0	1 - 5	*	
Additive	Trade Secret	< 0.5	*	

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

4. FIRST AID MEASURES

Description of first aid measures

General Advice Eye Contact	Show this safety data sheet to the doctor in attendance. 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

Treat symptomatically.

Notes to Physician

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Carbon dioxide (CO2). 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. Do not freeze.	
Incompatible Products	Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.	
8. EXPOSURE CONTROLS/PERSONAL PROTECTION		

Control parameters

Exposure limits

Component	Ontario TWAEV
2-(Dimethylamino)ethanol	TWA: 3 ppm
108-01-0	TWA: 11 mg/m ³
	STEL: 6 ppm
	STEL: 22 mg/m ³

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, su	ch 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 a Physical State Odor	and chemical properties Liquid No information available	Appearance Odor Threshold	Colored No information available
Property pH Melting Point / Freezing Point Boiling Point / Boiling Range Flash Point Evaporation rate Flammability Limit in Air Upper flammability limit Lower flammability limit Vapor Pressure Vapor Density Specific Gravity	<u>Values</u> > 100 °C / 212 °F > 94 °C / > 201 °F 1.03	Remarks• MethodNo data availableNo data availableSetaflash closed cupNo data availableNo data available	
Water Solubility Solubility in other solvents Partition coefficient: n-octanol/ Autoignition Temperature Decomposition temperature Kinematic viscosity Dynamic viscosity		No data available No data available No data available No data available No data available No data available No data available	
Explosive Properties Oxidizing Properties Other Information	No data available No data available		
Other Mormation Photochemically Reactive Weight Per Gallon (Ibs/gal)	No 8.58		
VOC by weight % (less water) 16.47 Volatile by weight (including Water) 64.14	VOC by volume % (less water) No information available Water by weight 57.4	VOC Ibs/gal (less water) 1.41	VOC grams/liter (less water) 169.26

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. Do not freeze.

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 (CO2). 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 Ingestion	Specific test data for the substance or mixture is not available. Specific test data for the substance or mixture is not available.

Component	Oral LD50
2-(Dimethylamino)ethanol	= 1803 mg/kg (Rat)
108-01-0	
Additive	= 1470 mg/kg (Rat)

Component	Dermal LD50
2-(Dimethylamino)ethanol	= 1220 mg/kg (Rabbit)
108-01-0	
Additive	> 2000 mg/kg (Rat)

Component	Inhalation LC50
2-(Dimethylamino)ethanol	= 1641 ppm (Rat) 4 h
108-01-0	
Additive	= 0.67 mg/L (Rat)4 h
	= 0.63 mg/L (Rat) 4 h
	= 0.99 mg/L (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. Causes skin irritation (pain, redness and swelling). (based on components).
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 an allergic skin reaction. (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.
STOT - repeated exposure	Specific test data for the substance or mixture is not available.
Chronic Toxicity	Specific test data for the substance or mixture is not available
Aspiration hazard	Specific test data for the substance or mixture is not available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

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

ATEmix (dermal)	75,568.00
ATEmix (inhalation-dust/mist)	59.70
ATEmix (inhalation-vapor)	405.00

12. ECOLOGICAL INFORMATION

Ecotoxicity

Specific test data for the substance or mixture is not available. Harmful to aquatic life with long lasting effects. (based on components).

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

Component	Algae/aquatic plants
2-(Dimethylamino)ethanol	72h EC50 Desmodesmus subspicatus: = 35 mg/L
108-01-0	

Component	Fish
2-(Dimethylamino)ethanol 108-01-0	96h LC50 Pimephales promelas: = 81 mg/L (static)
Additive	96h LC50 Oncorhynchus mykiss: 0.049 - 0.079 mg/L (flow-through) 96h LC50 Pimephales promelas: 0.18 - 0.23 mg/L (flow-through) 96h LC50 Oncorhynchus mykiss: 0.05 - 0.089 mg/L 96h LC50 Lepomis macrochirus: 0.14 - 0.32 mg/L (flow-through)

Component	Crustacea
2-(Dimethylamino)ethanol	48h EC50 Daphnia magna: = 98.77 mg/L
108-01-0	

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Component	Partition coefficient
2-(Dimethylamino)ethanol	-0.55
108-01-0	

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 Proper Shipping Name	Not regulated Printing Ink
ICAO / IATA / IMDG / IMO	Not Regulated
Proper Shipping Name	Printing Ink

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

<u>SARA 313</u>

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

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

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
Dipropylene glycol monomethyl ether	34590-94-8	< 1
Diethylene glycol monobutyl ether	112-34-5	< 0.5

U.S. State Regulations

	Massachusetts Right To Know
2-(Dimethylamino)ethanol	X
108-01-0	

	New Jersey Right To Know
2-(Dimethylamino)ethanol 108-01-0	X
Additive	x

	Pennsylvania Right To Know
2-(Dimethylamino)ethanol	X
108-01-0	

California Prop. 65

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

<u>Canada</u>

Component	NPRI - National Pollutant Release Inventory
2-(Dimethylamino)ethanol	Part 4 Substance
108-01-0	

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 HMIS: Health Flammability Reactivity **Personal Protection** 1 0 Х 1 Key or legend to abbreviations and acronyms used in the safety data sheet Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION TWA (time-weighted average) TWA STEL STEL (Short Term Exposure Limit) Ceilina 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-16-2018

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