



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date May-07-2009

Revision Date May-07-2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product code 2732
Product name Thinner
Product description Ink Product

Manufacturer or supplier's details

UNITED STATES
Nazdar Company
8501 Hedge Lane Terrace
Shawnee, KS 66227
Tel: 1-913-422-1888
Tel: 1-800-677-4657
Fax: 1-913-422-2294

UNITED KINGDOM
Nazdar Limited
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire SK4 3EG
Tel: +44 161 442 2111

Emergency Telephone Number

USA: Chemtrec: 1-800-424-9300
Outside USA: Chemtrec: 1-703-527-3887

Website: www.nazdar.com
MSDS Information: 1-913-422-1888 ext 2305
MSDS Contact: Regulatory Compliance
email: regcomp@nazdar.com

2. HAZARDS IDENTIFICATION

This product is a preparation. Health hazard information is based on its components.

Appearance Water-white
Emergency Overview Irritant.

Eyes Severe eye irritant. The liquid splashed in the eyes may cause irritation and reversible damage.

Skin May cause skin irritation and/or dermatitis. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. May be absorbed through the skin in harmful amounts.

Inhalation Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
1-Methyl-2-pyrrolidone	872-50-4	30 - 60

4. FIRST AID MEASURES

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

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 immediately if irritation develops and persists.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

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Flammable Properties	No information available
Suitable Extinguishing Media	Water spray. Foam. Carbon dioxide (CO ₂). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Methods for Cleaning Up	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.
Environmental Precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Weight %	ACGIH TLV	OSHA PEL	Ontario TWAEV
1-Methyl-2-pyrrolidone	30 - 60			TWA: 400 mg/m ³

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.
Personal Protective Equipment	
Respiratory Protection	Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.
Eye Protection	Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Water-white	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	No information available	Autoignition Temperature	No information available
Boiling point/Boiling Range	>149°C / >300°F	Melting Point/Range	No information available
Freezing Point/Range	No information available	Solubility	No information available
Evaporation Rate	No information available	Partition Coefficient (n-octanol/water)	No information available
Vapour Pressure	No information available	Vapour Density	Heavier than air
Flammability (solid, gas)	No information available	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Method	Pensky Martens Closed Cup (PMCC)
Upper	No information available	Photochemically Reactive	No
Lower	No information available	Specific Gravity	1.01
Weight Per Gallon (lbs/gal)	8.423	VOC by volume	No information available
VOC by weight	40.2	VOC grams/liter (less water)	412.155
VOC lbs/gal (less water)	3.44	Water by weight	59.8
Volatile by weight (including Water)	100		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
Incompatible Products	Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1-Methyl-2-pyrrolidone	3598 mg/kg (Rat)	2000 mg/kg (Rabbit) 2500 mg/kg (Rat)	3.1 mg/L (Rat) 4 h

Chronic Toxicity

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available

Teratogenicity	No information available
Chronic Effects	Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system.
Target Organ Effects	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

We have no quantitative data concerning the ecological effects of this product. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
1-Methyl-2-pyrrolidone	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Lepomis macrochirus: 832 mg/L [static]; 96 Hr LC50 Leuciscus idus: 4000 mg/L [static]; 96 Hr LC50 Pimephales promelas: 1072 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 1400 mg/L [static]	96 Hr EC50 water flea: 3135 mg/L; 48 Hr EC50 Daphnia magna: 4897 mg/L

Persistence and Degradability	No information available
Bioaccumulation	No information available
Mobility in Environmental Media	No information available

Component	log Pow
1-Methyl-2-pyrrolidone	-0.46

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of contents/container in accordance with local regulation.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

Printing Ink Related Material, Liquid, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

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
1-Methyl-2-pyrrolidone	872-50-4	30 - 60	1.0

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

This product does not contain any HAPs.

U.S. State Regulations**California Prop. 65**

WARNING! This product contains a chemical known in the State of California to cause cancer. WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Component	CAS-No	Weight %
1-Methyl-2-pyrrolidone	872-50-4	30 - 60

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
1-Methyl-2-pyrrolidone	Not Listed	Not Listed	X	X	X	Not Listed

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Component	NPRI - National Pollutant Release Inventory
1-Methyl-2-pyrrolidone	Part 4 Substance Part 1, Group 1 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS: Health 2* Flammability 1 Reactivity 0 PPE X

16. OTHER INFORMATION

Revision Date May-07-2009

Revision Summary New MSDS format

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 MSDS