Date revised: 1/25/2013

MATERIAL SAFETY DATA SHEET

Conforms to 93/112/EC and ISO 11014-1

1. Chemical Product and Company Identification

Product Name: OptiClear W **Product Number:** OE-106

Chemical Names/Description: 2-pyrollidone

Manufacturer

National Diagnostics305 Patton DriveAtlanta, GA 30336

Telephone Numbers

(800) 526-3867(404) 699-2121

Emergency Numbers

Chemtrec(800) 424-9300 (U.S. & Canada)01-703-527-3887 (outside U.S. & Canada)

2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
N-methylpyrrolidinone	>90	872-50-4	212-828-1	Not established

3. Hazards Identification

Appearance and Odor

Clear, colorless liquid with a mild odor.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED. COMBUSTIBLE LIQUID AND VAPOR. TEMPORARY CORNEAL CLOUDING.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING

MINOR SKIN IRRITATION ON REPEATED CONTACT.

Potential Health Effects

Inhalation

Mild irritant if vapor or mist from heated solvent is inhaled.

Ingestion

Causes irritation to the gastrointestinal tract.

Skin

Mild irritant, may cause discomfort if in contact with the skin for several hours.

Eyes

Causes irritation, redness, and pain. May cause corneal clouding.

Signs and Symptoms of Overexposure

Inhalation

Coughing, possible breathing difficulties.

Ingestion

Nausea, vomiting, and diarrhea.

Skin

Redness, discomfort.

Eyes

Redness, pain.

Carcinogenicity

Not listed as a known or possible carcinogen by NTP or IARC.

Mutagenicity

No information found.

Reproductive Toxicitiy

No information found.

Teratogenic Effects

No information found.

Routes of Entry

No information found.

Target Organ Statement

No information found.

4. First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point	90°C	Flammable Limits	lel: 0.99; uel: 3.9
Flash Point Method	CC	Autoignition temperature	245C-473F

Extinguishing media

Dry powder, foam, carbon dioxide. (Water may be ineffective.)

Protective Equipment

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Hazardous Combustion Products

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

Unusual Fire and Explosion Hazards

Above the flash point, explosive vapor-air mixtures may be formed.

NFPA Codes:	Health	2	Flammability	1	Reactivity 0

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

Eliminate source of ignition. Ventilate area. Cover with absorbent material (soda ash) to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

Personal Precautions
Wear appropriate protective equipment as specified in section 8.

7. Handling and Storage
Handling
Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.
Storage
Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials (section 10).
Storage Temperature
Room Temperature
Disposal
Observe all national, state, and local regulations regarding disposal.

8. Exposure Controls/Personal Protection
Airborne Exposure Limits
Component: N-methylpyrrolidinone
ACGIH Threshold Limit Value (TLV): Not established
OSHA Permissable Exposure Limit (PEL):

Engineering Controls
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.
Respiratory Protection
If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus.
Eye Protection
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Skin Protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Other Control Measures
N.A.

9. Physical Properties

Boiling point	202C (396F)	**Evaporation rate**	0.06 (BuAc=1)
Melting point	-24C (-11F)	**Solubity in water**	Miscible in water
Vapor pressure (mmHg)	0.5@25C (77F)	**pH**	7.7
Vapor density (Air = 1)	3.4	**Specific gravity (H2O = 1)**	1.03
% volatile by volume	100		

10. Stability and Reactivity
Stability
Stable under ordinary conditions of use and storage. Hygroscopic and basic.
Conditions to Avoid
Heat, flames, ignition sources, and incompatibles.
Hazardous Decomposition Products

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization

Will not occur

Incompatibles

N-methylpyrrolidinone:

Strong oxidants and acids. Reacts with chlorinating agents to form the amide. Reacts with sulfur or carbon disulfide at high temperatures and pressures.

11. Toxicological Information

Product LD50 Values

OptiClear W	Oral Rat LD50 (mg/kg):	3914
OptiClear W	Dermal Rabbit LD50 (mg/kg):	> 5000

Component Cancer List Status

	NTP Carcinogen		
	Known	Anticipated	IARC Category
N-methylpyrrolidinone	No	No	None

12. Ecological Information

N-methylpyrrolidinone

When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. The LC50/96-hour values for fish are over 100mg/l.

13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

14. Transport Information

D.O.T.

Proper Shipping Name: Petroleum Products N.O.S.Hazard Class: 3UN Number: 1268Packing Group: 3

I.A.T.A.

Proper Shipping Name: Petroleum Products N.O.S.Hazard Class: 3.UN Number: 1268Packing Group: 3

I.M.O.

Proper Shipping Name: Petroleum Products N.O.S.Hazard Class: 3UN Number: 1268Packing Group: 3

15. Regulatory Information

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
N-methylpyrrolidinone	No	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

NFPA Codes: Health 2 Flammability 1 Reactivity 0

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