# Material Safety Data Sheet



---

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: N-7 Novolak

Catalog Number(s): 838 0008 - 1 kilogram(s)

Supplier: Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608; Carestream Health Canada Company, 6 Monogram Place, Suite 200, Toronto, Ontario, M9R 0A1

For Emergency Health Information call, (800) 424-9300

For other information contact 800-328-2910.

Synonym(s): CIN 10041205, W-0002.010

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

| | |
|---|---|
| 54-64 | Acetone (000067-64-1) |
| 30-36 | Novolak N-7 polymer (not available) |
| 4-6 | Water (007732-18-5) |
| < 4 | m-cresol (000108-39-4) |

## 3. HAZARDS IDENTIFICATION

CONTAINS: Acetone (000067-64-1), m-cresol (000108-39-4)
DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR - VAPOR MAY CAUSE FLASH FIRE
CAN CAUSE LIVER DAMAGE
CAN CAUSE KIDNEY DAMAGE
CAN CAUSE CNS EFFECTS
CAN CAUSE PANCREAS DAMAGE
CAN CAUSE CARDIAC EFFECTS
HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT

HMIS Hazard Ratings:
Health - 2, Flammability - 3, Reactivity - 0, Personal Protection - G

NFPA Hazard Ratings:
Health - 1, Flammability - 3, Reactivity (Stability) - 0

NOTE: HMIS and NFPA hazard indexes involve data review and interpretation that may vary among companies. They are intended only for rapid, general identification of the magnitude of the potential hazards. The personal protection index is only intended for general guidance on personal protection equipment (PPE) that is suitable for the potential hazards of the material. PPE (e.g., respirators) may not be needed if engineering controls (e.g., local ventilation) are adequate. An asterisk (*), in the HMIS health field, designates potential chronic or target organ

---

## 4. FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Eyes: Immediately flush with plenty of water for at least 15 minutes. In case of irritation from airborne exposure, move to fresh air. Get medical attention.

Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

## 5. FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide ($CO_2$), dry chemical, foam

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. USE WATER WITH CAUTION.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide

Unusual Fire and Explosion Hazards: Extremely flammable. Material contains an extremely flammable solvent that may accumulate in the container headspace. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

## 6. ACCIDENTAL RELEASE MEASURES

Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

## 7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing vapor at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat, sparks, and flame. Keep from contact with oxidizing materials. Use with adequate ventilation. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

Storage: Keep container tightly closed in a cool, well-ventilated place. Keep away from incompatible substances (see Incompatibility section).

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Acetone: 500 ppm TWA; 750 ppm STEL
m-cresol: 5 ppm TWA, Skin

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Acetone: 1000 ppm TWA
m-cresol: 5 ppm TWA, Skin

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: Wear safety glasses with side shields (or goggles).

Skin Protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: Eye bath, washing facilities, safety shower

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid
Color: Not available
Odor: Not available
Specific Gravity (water = 1): Not available
Vapor Pressure: Not available
Vapor Density (Air = 1): Not available
Volatile Fraction by Weight: 60-65 %
Boiling Point: >35°C (>95°F)
Solubility in Water: Not available
pH: Not available
Flash Point (estimated): <-7°C (<20°F)

---

## 10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong oxidizing agents, halogenated materials, strong acids

Hazardous Polymerization: Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General:

CONTAINS: Acetone. Extensive human experience and animal data indicate that acetone is of low toxicity. However, ingestion of very large amounts or inhalation of extremely high vapor concentrations can cause irritation, nausea, vomiting, confusion, drowsiness, convulsions, and coma with possible liver and kidney injury.

CONTAINS: m-cresol. Cresol is toxic by all routes of exposure. Acute exposure may cause skin and eye burns, CNS effects, cardiac effects, muscle weakness, headache, dizziness,loss of vision, and lung damage. Chronic over exposure or several acute exposures may cause kidney damage, liver damage, and pancrease damage.

Inhalation: Harmful if inhaled. High vapor concentrations may cause drowsiness and irritation.

Eyes: Causes irritation. However, immediate flushing of the eyes with water will minimize any irritative effect. High vapor concentrations may cause irritation.

Skin: Causes irritation. Harmful if absorbed through skin. May cause allergic skin reaction based on human experience.

Ingestion: Harmful if swallowed. May cause irritation of the gastrointestinal tract.

Acute Toxicity Data for acetone : (KAN 900297)

Oral LD-50 (rat): 8.5-10.7 mL/kg
Oral LD-50: 4000-8000 mg/kg
Oral LD-50: 5.3 g/kg
Dermal LD-50: 20 g/kg
Inhalation LC-50 (rat): 16000 ppm/4 hour(s), 1/6 died
Skin irritation: slight
Eye irritation: moderate

---

## 12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.

Summary: Data for the major components of this material have been used to estimate the environmental impact of this material. However, this material, itself, has not been tested for environmental effects.

It is expected to have the following properties: a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect algal growth, a low potential to bioconcentrate, a low potential to persist in the environment. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse

environmental effects.

---

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal is subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

---

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package.

United Nations:

UN Number: 1090
Proper Shipping Name: Acetone Solution
Primary Hazard Class: 3
Packing Group: II

USA Department of Transportation (DOT) Hazardous Materials Classification:

DOT (USA) Status: R
DOT Hazard Class: 3
DOT Packing Group: II
DOT Hazardous Substance(RQ): No, when shipped in non-bulk packages.
Marine Pollutant: No

R = Regulated, NR = Not Regulated, NA = Not Accepted, LQ = Limited Quantity, EX = Exempted Quantity, CAO = Cargo Aircraft Only

For more transportation information, go to: http://ship.carestreamhealth.com.

---

15. REGULATORY INFORMATION

- Material(s) known to the State of California to cause cancer: None
- Material(s) known to the State of California to cause adverse reproductive effects: None

- Carcinogenicity Classification (components present at 0.1% or more):
  - International Agency for Research on Cancer (IARC): None
  - American Conference of Governmental Industrial Hygienists (ACGIH) (acetone): not classifiable as a human carcinogen (A4)
  - National Toxicology Program (NTP): None
  - Occupational Safety and Health Administration (OSHA): None

- Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: m-cresol

---

16. OTHER INFORMATION

US/Canadian Label Statements:

CONTAINS: Acetone (000067-64-1), m-cresol (000108-39-4)
DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR - VAPOR MAY CAUSE FLASH FIRE
CAN CAUSE LIVER DAMAGE
CAN CAUSE KIDNEY DAMAGE
CAN CAUSE CNS EFFECTS
CAN CAUSE PANCREAS DAMAGE
CAN CAUSE CARDIAC EFFECTS
HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
CAUSES SKIN AND EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT

Keep container tightly closed.
Keep away from heat, sparks, and flame.
Avoid breathing vapor at concentrations greater than the exposure limits.
Avoid contact with eyes, skin, and clothing.
Use with adequate ventilation.
Wash thoroughly after handling.
Residual vapors may explode on ignition: do not cut, drill, grind, or weld on or near this container.

FIRST AID: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. In case of eye irritation from airborne exposure, move to fresh air. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Keep out of reach of children.

Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood.

Additional hazard precautions for containers greater than 1 gallon of liquid or 5 pounds of solid:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

IN CASE OF FIRE: Use water spray, carbon dioxide ($CO_2$), dry chemical, foam. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.

IN CASE OF SPILL: Eliminate all ignition sources.

R-2, S-2, F-3, C-0