



SDS: 0040955
Date Prepared: 01/08/2018

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: ALNOVOL® PN 760/PAST phenolic resins
Synonyms: None
Product Description: Phenol-Novolac
Molecular Formula: Polymer
Molecular Weight: Polymer
Intended/Recommended Use: Additive

Allnex USA Inc., 9005 Westside Parkway, Alpharetta, Georgia 30009, USA

For Product and all Non-Emergency Information call your local Allnex contact point or contact us at <http://www.allnex.com/contact>

EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:

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2. HAZARDS IDENTIFICATION

GHS Classification

Not Classified

LABEL ELEMENTS

Hazard Statements

Not applicable

Precautionary Statements

Not applicable

Hazards Not Otherwise Classified (HNOC), Other Hazards

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.
By excessive exposure to dust, eye and respiratory tract irritation is possible.

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

Component / CAS No.	%	GHS Classification	Carcinogen
Phenol 108-95-2	< 1	Flam. Liq. 4 (H227) Muta. 2 (H341) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT RE 2 (H373) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Formaldehyde 50-00-0	< 0.1	Carc. 1B (H350) Muta. 2 (H341) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Aquatic Acute 2 (H401)	IARC 1 NTP ACGIH A2

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

4. FIRST AID MEASURES**First-aid Measures****Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Wash immediately with plenty of water and soap.

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Most Important Symptoms and Effects, Acute and Delayed

None known

Immediate Medical Attention and Special Treatment

Not applicable

Notes To Physician:

No specific measures have been identified.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Unsuitable Extinguishing Media:

full water jet.

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus.

Special Hazards:

Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

Methods For Cleaning Up:

Sweep up into containers for disposal. Flush spill area with water.

Environmental Precautions:

None known

References to other sections:

See Sections 7, 8 and 13 for additional information.

7. HANDLING AND STORAGE

HANDLING

Precautions: Wash hands thoroughly after handling.

Special Handling Statements: Maintain good housekeeping to control dust accumulations. Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values.

STORAGE

Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from sources of ignition - refrain from smoking. Take precautionary measures against electrostatic loading - earthing necessary during loading operations.

Storage Temperature: Store at 0 - 25 °C 32 - 77 °F

Reason: Quality.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Engineering controls are not usually necessary if good hygiene practices are followed.

Respiratory Protection:

For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment. Recommended respirators include those certified by NIOSH.

Recommended:

Full Face Mask with particle Type P2 filter

Eye Protection:

Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

Hand Protection:

Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

Gloves for repeated or prolonged exposure - non exhaustive list:

Butyl rubber (VB), thickness: > 0.30 mm, break through time: > 480 min

Gloves for short term exposure/splash protection - non exhaustive list:

Natural rubber (NRL), thickness: 0.75 mm, break through time: up to 240 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:

Nitrile rubber (NBR), thickness: 0.12 mm

Natural rubber (NRL), thickness: 0.12 mm

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:

Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

Exposure Limit(s)

108-95-2 Phenol

OSHA (PEL): 5 ppm (TWA)
19 mg/m³ (TWA)
(skin)

ACGIH (TLV):	(skin) 5 ppm (TWA)
Other Value:	Not established
50-00-0 Formaldehyde	
OSHA (PEL):	0.75 ppm (TWA) 2 ppm (STEL) 2 ppm STEL 15 min 0.5 ppm Action Level 0.75 ppm TWA
ACGIH (TLV):	0.3 ppm (Ceiling)
Other Value:	Not established

Biological Exposure Limit(s)

Phenol 108-95-2

Biological Exposure Indices (ACGIH) 250 mg/g creatinine (urine - end of shift)

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	yellow-brown
Appearance:	solid
Odor:	slight
Boiling Point:	Not applicable
Melting Point:	~ 80 °C 176 °F DIN 53181
Vapor Pressure:	Not available
Specific Gravity/Density:	1.25 g/cm ³ DIN EN ISO 2811-2
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	partly soluble
Volatile Organic Content:	Not available
Flash Point:	> 100 °C 212 °F DIN EN ISO 2719
Flammable Limits (% By Vol):	Not available
Autoignition Temperature:	> 400 °C 752 °F DIN 51794
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available
Viscosity (Kinematic):	Not applicable
Viscosity (Dynamic):	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	No information available
Stability:	Stable
Conditions To Avoid:	Excessively high temperatures and ignition sources.
Polymerization:	Will not occur
Conditions To Avoid:	None known

Materials To Avoid:	None known
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO)

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin, Eyes, Respiratory System.

Acute toxicity - oral: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - dermal: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - inhalation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Serious eye damage / eye irritation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Respiratory sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Germ cell mutagenicity: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Reproductive toxicity: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Aspiration hazard: Not Classified - Based on physical form, not an expected route of exposure.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50	> 2000 mg/kg
dermal	rabbit	Acute LD50	> 2000 mg/kg
inhalation	rat	Acute LC50 4 hr	> 5 mg/l (Dust/Mist)

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	Not irritating
Acute Irritation	eye	Not irritating

ALLERGIC SENSITIZATION

Sensitization	Skin	No data
Sensitization	respiratory	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay

No data

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Phenol has an acute oral (rat) and acute dermal (rabbit) LD50 of 650 mg/kg and 660 mg/kg respectively. The 8-hour inhalation (rat) LC0 is 900 mg/m³. Acute exposure to phenol vapor may cause severe eye and respiratory irritation. Phenol may cause skin, eye and mucous membrane burns, and is readily absorbed through the skin or digestive tract. Exposure by any route (oral, dermal, inhalation) can cause effects on the heart and nervous system including changes in heart rate, blood pressure, respiration, as well as tremors and lung disorders, possibly resulting in death. Chronic dermal exposure can cause digestive disturbances, liver and kidney damage. Ingestion of phenol may also cause damage to the liver and muscle fibers and gastrointestinal, circulatory and urinary systems. Phenol produced fetotoxic effects in laboratory animals as well as damage to the thymus and spleen after ingestion. Chronic ingestion caused a decrease in red blood cell numbers and a decrease in immune response. Chronic inhalation in laboratory animals caused liver and kidney damage. Phenol was clastogenic in several in vivo and in vitro screening tests. The AMES mutation showed no mutagenic effects. Teratogenic effects were seen in animal studies. No carcinogenic effects were observed.

Formaldehyde has oral (rat) and dermal (rabbit) LD50 values of 640 mg/kg and 270 mg/kg, respectively. 50% of the mice had reduced respiration rate following a 10 minutes inhalation exposure at a concentration of 4.9 ppm. Irritation of the nose and throat has been observed in people exposed to formaldehyde vapor levels in excess of 1 ppm. Normal breathing may be seriously impaired and serious lung damage can occur. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Formaldehyde solutions can cause severe eye and skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly genotoxic in a number of in vitro genotoxicity tests and positive in certain in vivo genotoxicity studies. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. However, a study using higher levels did show a slight but statistically significant reduction in male fetal body weight. Lifetime inhalation of formaldehyde vapor at concentrations above 5 ppm for 6 hours per day, caused nasal tumors in laboratory animals. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukemia. Inhalation caused liver and kidney damage in laboratory animal tests.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is not classified as dangerous for the environment.

The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Fish
Phenol (108-95-2)	LC50 = 22 mg/L - LC50 - <i>Poecilia reticulata</i> (14d) LC50 24.9 mg/L - <i>Pimephales promelas</i> (96h) LC50 8.9 mg/L - <i>Oncorhynchus mykiss</i> (96h) NOEC = 0.077mg/l - <i>Cirrhina mrigala</i> (60d)
Formaldehyde (50-00-0)	LC50 = 6.7 mg/L - <i>Morone saxatilis</i> (96h)

Component / CAS No.	Toxicity to Water Flea
Phenol (108-95-2)	EC50 = 3.1 mg/L - <i>Daphnia magna</i> (48h) NOEC = 0.16 mg/L - <i>Daphnia magna</i> (16d)
Formaldehyde (50-00-0)	EC50 = 5.8 mg/L - <i>Daphnia pulex</i> (48h)

Component / CAS No.	Toxicity to Algae
Phenol (108-95-2)	EC50 = 61.1 mg/L - <i>Pseudokirchnerella subcapitata</i> (96hrs)
Formaldehyde (50-00-0)	EC50 = 4.89 mg/L - <i>Desmodesmus subspicatus</i> (72hrs)

Component / CAS No.	Partition coefficient
Phenol (108-95-2)	1.5
Formaldehyde (50-00-0)	0.35

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this SDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Dangerous Goods? Not applicable/Not regulated

TRANSPORT CANADA

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

15. REGULATORY INFORMATION**Inventory Information**

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL).

European Economic Area (including EU): When purchased from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by NICNAS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: One or more components of this product are NOT included on the Japanese (ENCS and/or ISHL) inventories.

Korea: One or more components of this product are NOT included on the Korean (ECL) inventory.

Philippines: One or more components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
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Formaldehyde 50-00-0	< 0.1	500	100	Yes	No
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PRODUCT HAZARD CATEGORY UNDER SECTIONS 311 AND 312 OF EPCRA**Physical Hazards**

Not applicable

Health Hazards

Not applicable

16. OTHER INFORMATION**NFPA Hazard Rating (National Fire Protection Association)**

Health: 1 - Materials that, under emergency conditions, can cause significant irritation.

Fire: 1 - Materials that must be preheated before ignition can occur.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 15**Date Prepared:** 01/08/2018**Date of last significant revision:** 10/13/2015**Component - Hazard Statements**

Phenol

- H227 - Combustible liquid.
- H301 - Toxic if swallowed.
- H311 - Toxic in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H331 - Toxic if inhaled.
- H341 - Suspected of causing genetic defects.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H401 - Toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.

Formaldehyde

- H301 - Toxic if swallowed.
- H311 - Toxic in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H331 - Toxic if inhaled.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.
- H401 - Toxic to aquatic life.

Prepared By: Product Stewardship & Regulatory Affairs Department, <http://www.allnex.com/contact>

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