SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Eastman(TM) Chlorinated Polyolefin 164-1 (100% Solids)

Product No.: EAN 970091. S12075F3

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Adhesion promoter

Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard Classification:

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A

OSHA Specified Hazards:

Combustible dust	May form combustible dust concentrations in air.

Warning label items including precautionary statement:

Pictogram:

Signal Words: WARNING!

Hazard Statement(s): H319: Causes serious eye irritation.
May form combustible dust concentrations in air.

Precautionary Statement:

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P243: Take precautionary measures against static discharge.
P264: Wash hands thoroughly after handling.
P280: Wear eye protection/face protection.

Response: 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.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
modified chlorinated polyolefin	>92%	CAS-No.: not assigned	
epoxidized oil	<4%	CAS-No.: 61789-01-3	
chlorobenzene	<2%	CAS-No.: 108-90-7	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation: Treat symptomatically. Move to fresh air. Get medical attention if symptoms persist.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Seek medical advice.

Most important symptoms and effects, both acute and delayed: May irritate and cause redness and pain.

Indication of any immediate medical attention and special treatment needed

Hazards: None known.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

General Fire Hazards: Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

Extinguishing media

Suitable extinguishing media: Water spray. Dry chemical. Carbon Dioxide.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: Powdered material may form explosive dust-air mixtures.

Advice for firefighters

Special fire fighting procedures: Minimize dust generation and accumulation.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment.

Environmental Precautions: Avoid release to the environment.

Methods and material for containment and cleaning up: Sweep up and place in a clearly labeled container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling: Avoid contact with eyes. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container closed.

Specific end use(s): Adhesion promoter

SECTION 8: Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical name	type	Exposure Limit Values	Source
chlorobenzene	TWA	10 ppm	US. ACGIH Threshold Limit Values (01 2010)

	PEL	75 ppm 350 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Biological Limit Values

Chemical name	Exposure Limit Values	Source
chlorobenzene (4-Chlorocatechol, with hydrolysis: Sampling time: End of shift at end of work week.)	100 mg/g (Creatinine in urine)	ACGIH BEL (01 2010)
chlorobenzene (p-Chlorophenol, with hydrolysis: Sampling time: End of shift at end of work week.)	20 mg/g (Creatinine in urine)	ACGIH BEL (01 2010)

Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Eye bath. Washing facilities.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection

Hand Protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other: No data available.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures: Observe good industrial hygiene practices.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	solid
Form:	solid
Color:	Tan
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Softening Point:	88 °C
Boiling Point:	No data available.
Flash Point:	not applicable, combustible solid
Evaporation Rate:	not applicable
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)–:	No data available.
Flammability Limit - Lower (%)–:	No data available.
Vapor pressure:	not applicable
Vapor density (air=1):	No data available.
Specific Gravity:	1.016 (25 °C)
Solubility(ies)	
Solubility in Water:	Negligible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	(method unspecified) No exotherm to 400°C
Dynamic viscosity:	No data available.
Kinematic viscosity:	not applicable
Explosive properties:	No data available.
Oxidizing properties:	No data available.

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	None at ambient temperatures.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon Dioxide. Carbon Monoxide. hydrogen chloride

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	None known.
Ingestion:	None known.

Skin contact: None known.

Eye contact: Causes eye irritation.

Information on toxicological effects

Oral
Product: Oral LD-50: (Rat): > 3,200 mg/kg (highest dose tested)

Dermal
Product: Dermal LD-50: (Guinea Pig): > 2,000 mg/kg
(highest dose tested)

Inhalation
Product: No data available.

Specified substance(s):
chlorobenzene — LC50 (Rat, 4 h): 29.7 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: (Guinea Pig, 24 h): Slight

Serious Eye Damage/Eye Irritation
Product: unwashed eyes (Rabbit): moderate
washed eyes (Rabbit): slight

Respiratory or Skin Sensitization
Product: Skin Sensitization: (Guinea Pig): non-sensitizing

Carcinogenicity
Product: No data available.

Specified substance(s):
chlorobenzene — IARC Not Listed. NTP Not Listed. OSHA Not Listed.

Toxicity to reproduction
Product: No data available.

Developmental toxicity
Product: No data available.

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s):

chlorobenzene — Inhalation: Narcotic effect.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s):

chlorobenzene — May be harmful if swallowed and enters airways.

Other effects: No data available.

SECTION 12: Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

chlorobenzene — LC-50 (goldfish, 96 h): 73.03 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

chlorobenzene — EC-50 (daphnid, 48 h): 4.3 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Specified substance(s):

chlorobenzene	7.32 %

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

SECTION 13: Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Class 9, Packing Group III when material is shipped in quantities in one package at or above the Reportable Quantity and when no other hazard class applies; otherwise, not regulated.

Reportable Quantity: 2,270 kg

IMDG - International Maritime Dangerous Goods Code

Class not regulated

IATA

Class not regulated

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture.:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
WHMIS (Canada) Status: controlled
WHMIS (Canada) Hazard Classification: D/2/B

SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List
CHLOROBENZENE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of this product are listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): All components of this product are listed on AICS or otherwise comply with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): All components of this product are listed in the Handbook or have been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): All components of this product are listed on the Korean inventory or otherwise comply with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : All components of this product are listed on the Philippine inventory or otherwise comply with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 2, Flammability - 1, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information:	New SDS
Key literature references and sources for data:	No data available.
Training information:	No data available.
Issue Date:	05/21/2015
SDS No.:	
Disclaimer:	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.