SAFETY DATA SHEET

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

Product identifier

Product name: Eastman(TM) Chlorinated Polyolefin 730-1 (20% Solids in Xylene)

Product No.: EAN 978653. P2493903

Synonyms, Trade Names: 24939-A0

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:

Physical Hazards

Flammable liquids	Category 3

Health Hazards

Acute toxicity (Dermal)	Category 4
Acute toxicity (Inhalation)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity - Repeated Exposure	Category 2
Aspiration Hazard	Category 1

Unknown toxicity - Health

Acute toxicity, dermal	23 %
Acute toxicity, inhalation	23 %

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:

Signal Words: DANGER!

Hazard Statement(s):
H226: Flammable liquid and vapor.
H312: Harmful in contact with skin.
H332: Harmful if inhaled.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H373: May cause damage to organs (auditory organ) through prolonged or repeated exposure.
H304: May be fatal if swallowed and enters airways.

Precautionary Statement:

Prevention:
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P370 + 378: In case of fire: Use water spray, carbon dioxide, dry chemical or foam for extinction.
P314: Get medical advice/attention if you feel unwell.
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.

Storage: P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
xylene	<80%	CAS-No.: 1330-20-7	#
modified chlorinated polyolefin	<20%	CAS-No.: CAS-No: 68609-36-9	
ethylbenzene	<20%	CAS-No.: 100-41-4	#
chlorobenzene	<2.5%	CAS-No.: 108-90-7	#
epoxidized oil	<3%	CAS-No.: 61789-01-3	

* 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: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

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

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

Most important symptoms and effects, both acute and delayed: May irritate and cause redness and pain. Narcotic effect. Symptoms may be delayed.

Indication of any immediate medical attention and special treatment needed

Hazards: Organic solvents may be absorbed into the body by inhalation and cause permanent damage to the nervous system, including the brain. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

General Fire Hazards: Flammable liquid and vapor. USE WATER WITH CAUTION. Material will float and may ignite on surface of water.

Extinguishing media

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

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: 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.

Advice for firefighters

Special fire fighting procedures: Water may be ineffective in fighting the fire. Use water spray to keep fire-exposed containers cool.

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: Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a 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 breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed and in a well-ventilated place. Storage of solutions near 25°C will minimize haze and gel formation. Solutions may become hazy, partially precipitate from solution, or gel with time on exposure to low temperature. Warming the contents, while keeping away from sparks and open flame, to approximately 38-49°C Resolution of thickening or separating may be accomplished through warming with agitation.

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
xylene, m-xylene, o-xylene, p-xylene	TWA	100 ppm	US. ACGIH Threshold Limit Values (01 2010)
	STEL	150 ppm	US. ACGIH Threshold Limit Values (01 2010)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
ethylbenzene	TWA	20 ppm	US. ACGIH Threshold Limit Values (12 2010)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
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. Safety shower.

Eye/face protection:	Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.
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:	liquid
Form:	liquid
Color:	Yellow
Odor:	Slight, Aromatic
Odor Threshold:	Not determined.
pH:	No data available.
Melting Point	No data available.
Boiling Point:	135 °C
Flash Point:	26 °C (Pensky-Martens Closed Cup)
Evaporation Rate:	Not determined.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)–:	No data available.
Flammability Limit - Lower (%)–:	No data available.
Vapor pressure:	Not determined.
Vapor density (air=1):	No data available.
Specific Gravity:	< 1 (estimated)
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:	(DSC) No exotherm to 450°C
Dynamic viscosity:	300 - 400 mPa.s (25 °C)
Kinematic viscosity:	157 - 210 mm2/s
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:	Heat, sparks, flames.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon Dioxide. Carbon Monoxide. hydrogen chloride Chlorinated compounds.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
Ingestion:	May be fatal if swallowed and enters airways.
Skin Contact:	Harmful in contact with skin. Causes skin irritation.
Eye contact:	Causes serious eye irritation.

Information on toxicological effects

Oral

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	Oral LD-50: (Rat, Male.): 3,523 mg/kg Oral LD-50: (Rat, Female.): > 4,000 mg/kg
Specified substance(s): ethylbenzene	Oral LD-50: (Rat): 3,500 mg/kg
Specified substance(s): chlorobenzene	Oral LD-50: (Rat): 2,262 mg/kg
Specified substance(s): epoxidized oil	Oral LD-50: (Rat): > 3,200 mg/kg Oral LD-50: (Mouse): > 3,200 mg/kg

Dermal

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	Dermal LD-50: (Rabbit): > 4,200 mg/kg

Specified substance(s): ethylbenzene	Dermal LD-50: (Rabbit): 15,400 mg/kg
Specified substance(s): chlorobenzene	Dermal LD-50: (Guinea Pig): > 20,000 mg/kg

Inhalation

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	LC50 (Rat, 4 h): 6700 ppm
Specified substance(s): ethylbenzene	LC50 (Rat, 4 h): 4000 ppm
Specified substance(s): chlorobenzene	LC50 (Rat, 4 h): 29.7 mg/l

Repeated dose toxicity

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	NOAEL (Rat(Male and Female), Oral Study): 250 mg/kg NOAEC (Rat(Male.), Inhalation): 3515 mg/m³

Skin Corrosion/Irritation

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	(Rabbit, 24 h): moderate
Specified substance(s): ethylbenzene	(Rabbit, 24 h): moderate
Specified substance(s): chlorobenzene	(Guinea Pig, 24 h): moderate
Specified substance(s): epoxidized oil	(Guinea Pig, 24 h): Slight

Serious Eye Damage/Eye Irritation

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	(Rabbit, 24 h): slight to moderate
Specified substance(s): ethylbenzene	(Rabbit): moderate to strong
Specified substance(s): chlorobenzene	(Rabbit): moderate
Specified substance(s): epoxidized oil	(Rabbit): Slight

Respiratory or Skin Sensitization

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	OECD 429: LLNA (mouse): non-sensitizing
Specified substance(s): ethylbenzene	Skin Sensitization: (Human): non-sensitizing
Specified substance(s): chlorobenzene	Skin Sensitization: (Guinea Pig): non-sensitizing
Specified substance(s): epoxidized oil	Skin Sensitization: (Guinea Pig): non-sensitizing

Carcinogenicity

Product:	Expert judgment and weight of evidence determination: Not classified

Toxicity to reproduction

Product:	No data available.

Developmental toxicity

Product:	No data available.

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	Salmonella typhimurium assay (Ames test) (Bacterial Reverse Mutation Assay): negative

In vivo

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	Chromosomal aberration (Genetic Toxicology: Rodent Dominant Lethal Test) intraperitoneal injection (Rat): negative

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	Inhalation: Respiratory tract irritation.
Specified substance(s): ethylbenzene	Inhalation: Narcotic effect.
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): xylene, m-xylene, o-xylene, p-xylene	May be fatal if swallowed and enters airways.
Specified substance(s): ethylbenzene	May be fatal if swallowed and enters airways.
Specified substance(s): chlorobenzene	May be harmful if swallowed and enters airways.

Other effects: Contains ethylbenzene. May cause internal organ effects.

SECTION 12: Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	LC-50 (Oncorhynchus mykiss, 96 h): 2.6 mg/l Read-across from a similar material
ethylbenzene	LC-50 (Sheepshead Minnow, 96 h): 275 mg/l LC-50 (Fathead Minnow, 96 h): 42.3 - 48.5 mg/l LC-50 (Guppy, 96 h): 97.1 mg/l
chlorobenzene	LC-50 (goldfish, 96 h): 73.03 mg/l

Aquatic Invertebrates

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	EC-50 (Water Flea, 24 h): > 3.4 mg/l
chlorobenzene	EC-50 (daphnid, 48 h): 4.3 mg/l

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	NOEC (Oncorhynchus mykiss, 56 d): > 1.3 mg/l

Aquatic Invertebrates

Product:	No data available.
Specified substance(s): xylene, m-xylene, o-xylene, p-xylene	NOEC (Water Flea, 7 d): 0.96 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Specified substance(s):	

xylene, m-xylene, o-xylene, p-xylene	EC-50 (Selenastrum capricornutum, 72 h): 2.2 mg/l NOEC: (Selenastrum capricornutum, 72 h): 0.44 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

xylene, m-xylene, o-xylene, p-xylene	Readily biodegradable
ethylbenzene	Readily biodegradable

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.

Specified substance(s):

xylene, m-xylene, o-xylene, p-xylene	Log Kow: 3.12 - 3.20
ethylbenzene	Log Kow: 3.15

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

xylene, m-xylene, o-xylene, p-xylene	No data available.
modified chlorinated polyolefin	No data available.
ethylbenzene	No data available.
chlorobenzene	No data available.
epoxidized oil	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. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

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

Reportable Quantity: 56 kg (xylene, Chlorobenzene)
Possible Shipping Description(s):

UN 1139 Coating solution 3 III

IMDG - International Maritime Dangerous Goods Code

Possible Shipping Description(s):

UN 1139 COATING SOLUTION 3 III

IATA

Possible Shipping Description(s):

UN 1139 Coating solution 3 III

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: B/2, D/2/A, D/2/B

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

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List
XYLENE (MIXED ISOMERS)
ETHYLBENZENE
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 - 3, 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:	Not relevant.
Key literature references and sources for data:	No data available.
Training information:	No data available.
Issue Date:	05/04/2015
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.