



MATERIAL SAFETY DATA SHEET

Thixon 422
MSDS Number: 1049-1-7
Effective: 10/26/99
Supersedes: 5/05/98

Code: 04220028
Page 1

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product ID: Thixon 422
Generic Description: Resin/solvent solution
Product Use: Adhesive

For customer service/technical information, contact:
Morton Adhesives & Chemical Specialties
10 South Electric Street
West Alexandria OH 45381
800-348-8846

HAZARD RATINGS		
	HMIS	NFPA
Health	2 *	2
Fire	3	3
Reactivity	0	0
* = Chronic		

MSDS prepared by:
Toxicology and Regulated Substance Compliance
David Wienckowski, D.A.B.T.
100 N. Riverside Plaza
Chicago IL 60606
312-807-3422

ChemTrec Emergency
1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

COMMON NAME	CAS #	Approximate % (w/w)
Ethyl alcohol		
Xylene	64-17-5	35.3
Methyl ethyl ketone	1330-20-7	27.9
Ethyl benzene	78-93-3	13.3
Non-hazardous and other ingredients below reportable levels	100-41-4	7.0
	Not Applicable	Balance

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: FLAMMABLE LIQUID AND VAPOR. CAUSES SEVERE EYE IRRITATION. CAUSES SEVERE DIGESTIVE TRACT IRRITATION. INHALATION MAY CAUSE DIZZINESS, HEADACHE AND INCOORDINATION. INGESTION CAN CAUSE DIZZINESS, FAINTNESS, HEADACHE AND INCOORDINATION. INGESTION MAY CAUSE INFLAMMATION OF THE LUNGS. MAY CAUSE RESPIRATORY TRACT IRRITATION. INGESTION MAY CAUSE NAUSEA, VOMITING, PAIN, UPSET STOMACH, DIARRHEA. INHALATION MAY CAUSE NAUSEA, VOMITING, UPSET STOMACH. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. See sections 3, 5, & 6.

PRIMARY ROUTES OF EXPOSURE: Eye. Skin. Inhalation (breathing).

EYE CONTACT: Causes severe irritation. May cause corneal opacity (clouding of the eye surface). Can cause burning sensation, tearing, and redness.

SKIN CONTACT: May cause slight to mild irritation. Prolonged or repeated contact may dry the skin and lead to irritation (i.e. dermatitis). May be absorbed through the skin. Can cause redness, itching, and burning sensation.



MATERIAL SAFETY DATA SHEET

Thixon 422
MSDS Number: 1049-1-7
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Code: 04220028
Page 2

INHALATION (Breathing): Irritating to the eyes, nose, and respiratory tract. Can cause dizziness, headaches, and incoordination. Nausea, vomiting, and stomach upset can occur. Can cause anesthetic and/or narcotic effects.

INGESTION (Swallowing): Severely irritating to the mouth, throat, and stomach. May be harmful if swallowed. May cause nausea, vomiting, pain, and stomach upset (e.g., diarrhea). Can cause dizziness, faintness, headache, and incoordination. Possible aspiration hazard. May cause inflammation of the lungs.

TARGET ORGANS/CHRONIC EFFECTS: Liver. Kidneys. Nervous system. Lungs and respiratory system. Eyes. Skin.

CONDITIONS AGGRAVATED BY EXPOSURE: Liver. Kidneys. Nervous system. Lungs and respiratory system. Skin.

CARCINOGENICITY:

Table with 4 columns: Chemical Name, ACGIH, IARC, NTP, OSHA. Rows include Ethyl alcohol, Xylene, Methyl ethyl ketone, and Ethyl benzene.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT: Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Professionally wash clothing and shoes before re-use.

INHALATION (Breathing): Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.

INGESTION (Swallowing): Seek medical attention. Immediately induce vomiting, as directed by medical personnel. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIANS: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIRE FIGHTING METHODS

Flash Point...: 20F -6.6C
Explosive Lmts: LEL(%) 1.2 UEL(%) Not Determined
Autoignition...: Not Determined
Method...: Setaflash Closed Cup

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.). Formaldehyde and/or other aldehydes.

FIRE AND EXPLOSION HAZARDS: High temperatures can cause sealed containers to rupture due to a build up of internal pressure. Cool with water. Vapors can travel to a source of ignition (flame, electric motor, hot surface, cigarette, etc.) and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition.



MATERIAL SAFETY DATA SHEET

Thixon 422

MSDS Number: 1049-1-7

Effective: 10/26/99

Supersedes: 5/05/98

Code: 04220028

Page 3

EXTINGUISHING MEDIA: Water may be ineffective. SMALL FIRES: Dry chemical, carbon dioxide, water spray, or foam. LARGE FIRES: Water spray, fog, or alcohol foam.

FIRE FIGHTING PROCEDURES/EQUIPMENT: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

EVACUATION: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition.

CONTAINMENT: Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

CLEAN-UP/PERSONAL PROTECTION EQUIPMENT: Appropriate safety measures and protective equipment should be used. Use supplied air respirator or self-contained breathing apparatus in enclosed spaces or if airborne exposure limits can be exceeded. See Section 8.

COLLECTION AND DISPOSAL: Stop discharge, if safe to do so. Use proper protective equipment. Use non-sparking tools and/or explosion-proof equipment. Stop ignition sources. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

REPORTING: Spills of this material in excess of a component's RQ must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.

Xylene

Methyl ethyl ketone

Ethyl benzene

RQ = 100 LB

RQ = 5000 LB

RQ = 1000 LB

7. HANDLING AND STORAGE

Storage Temperature < 140F 60C

STORAGE CONDITIONS: Store in cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed.

WARNING: Hot organic chemical vapors or mists can suddenly and without warning combust when mixed with air. Ignition can occur at typical elevated temperature process conditions. Any use in such processes should be evaluated thoroughly to assure safe operating conditions.

TRANSFER: Containers should be supported and grounded before opening, dispensing, mixing, pouring, and emptying. Open with non-sparking tools. If container is warm, open bung slowly to release internal pressure.

PERSONAL HYGIENE: Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing before re-use.

EMPTY CONTAINER PRECAUTIONS: Attention! This container hazardous when empty. Follow label warnings even after container is emptied since empty containers may retain product residues. Do not use heat, sparks, open flames, torches,



MATERIAL SAFETY DATA SHEET

Thixon 422
MSDS Number: 1049-1-7
Effective: 10/26/99
Supersedes: 5/05/98

Code: 04220028
Page 4

cigarettes on or near empty container. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

ACGIH - TLV

Table with 2 columns: Chemical Name and Limit. Rows include Ethyl alcohol, Xylene (1000 ppm), Methyl ethyl ketone (100 ppm), Ethyl benzene (200 ppm), and another Ethyl benzene entry (100 ppm).

ACGIH - STEL

Table with 2 columns: Chemical Name and Limit. Rows include Xylene, Methyl ethyl ketone (150 ppm), and Ethyl benzene (300 ppm, 125 ppm).

OSHA - PEL

Table with 2 columns: Chemical Name and Limit. Rows include Ethyl alcohol, Xylene (1000 ppm), Methyl ethyl ketone (100 ppm), and Ethyl benzene (200 ppm, 100 ppm).

ENGINEERING CONTROLS/VENTILATION: Local exhaust ventilation is recommended when vapors, mists, or dusts can be released in excess of established airborne exposure limits (TLVs or PELs).

EYE PROTECTION: Wear chemical splash goggles. An eye wash facility should be readily available.

SKIN PROTECTION: Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, consult glove manufacturer to determine the proper type for a specific operation.

RESPIRATORY PROTECTION: Avoid breathing vapor and/or mists. Wear NIOSH/MSHA-approved equipment. Determine the appropriate type by consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910.134.

9. PHYSICAL AND CHEMICAL PROPERTIES

Table with 2 columns: Property and Value. Rows include Appearance (Colorless), Physical State (Liquid), pH (Not Applicable), Vapor Pressure (Not Determined), Evaporation Rt (Not Determined), Specific Grvty (0.88), Odor (Solvent), Solubility (Insoluble), Boiling Point (147F 63.8C), Vapor Density (Not Determined), VOC Material (735 g/L 6.1 lbs/gal), and %Non-Vol (w/w) (18).

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY



MATERIAL SAFETY DATA SHEET

Thixon 422

MSDS Number: 1049-1-7

Effective: 10/26/99

Supersedes: 5/05/98

Code: 04220028

Page 5

CHEMICAL STABILITY: Stable under normal conditions of use.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizers. Acids. Strong bases.

11. TOXICITY INFORMATION

COMPONENTS:

Ethyl alcohol:

Fetal abnormalities have been reported in studies with laboratory animals. Can cause liver and kidney injury.

Oral LD50	Rat	7,060 mg/kg
	Mouse	3,450 mg/kg
	Guinea pig	5,560 mg/kg
Inhalation LC50	Rat	20,000 ppm
	Mouse	39,000 mg/M3/4-Hours

Xylene:

This chemical has been shown to cause fetal injury when tested in laboratory animals. Adverse effects to kidneys and liver will be increased by the presence of ethanol. Chronic exposure has been shown to cause auditory impairment in laboratory animals. Exposure by chronic inhalation has been shown to cause cardiac irregularities in laboratory animals. Similar effects have been observed in some humans.

Oral LD50	Rat	3,523 mg/kg
Dermal LD50	Rabbit	> 5 mL/kg
Inhalation LC50	Rat	5,000 ppm/4-Hours

Methyl ethyl ketone:

Oral LD50	Rat	2,737 mg/kg
	Mouse	4,050 mg/kg
Dermal LD50	Rabbit	6,480 mg/kg
Inhalation LC50	Mouse	40,000 ppm/2-Hours
	Rat	23,500 mg/M3-8-hours

Ethyl benzene:

In 2-year inhalation studies, there was "clear evidence of carcinogenic activity" of ethylbenzene in male rats based on increased incidences of renal tubule neoplasms and testicular adenoma. There was "some evidence of carcinogenic activity" in female rats based on renal tubule adenoma. There was "some evidence of carcinogenic activity" in male mice based on increased incidences of alveolar/bronchiolar neoplasms and in female mice based on increased incidences of hepatocellular neoplasms. Exposure to laboratory animals has caused some fetotoxic effects at doses that also caused maternal toxicity. Positive results were obtained in the mouse lymphoma assay.

Oral LD50	Rat	3,500 mg/kg
Dermal LD50	Rabbit	17,800 mg/kg
Inhalation LC50	Rat	4,000 ppm/4-Hours

12. ECOLOGICAL INFORMATION

No data are available on this product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL: When a decision is made to discard this material as supplied, it



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Thixon 422
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Effective: 10/26/99
Supersedes: 5/05/98

Code: 04220028
Page 6

meets RCRA's characteristic definition of ignitability.

GENERAL STATEMENTS: Federal regulations may apply to empty container. State and/or local regulations may be different.

GENERAL RECOMMENDATIONS: Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

SPECIAL INSTRUCTIONS: Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. TRANSPORT INFORMATION

Weight (lb) Shipping Name
Adhesives

49 CFR IATA IMO
Y Y Y

DOT Label.....: Flammable Liquid UN/NA Id Num...: UN 1133
DOT Label No...: L152-1
Hazard Class...: 3 (IATA/49CFR) 3.2 (IMO)
Packing Group...: II WHMIS Label...: F152-1

15. REGULATORY INFORMATION

FEDERAL:

SARA Title III - Section 311/312 - Hazard Categories:

- Y- Fire Hazard
N- Sudden Release of Pressure Hazard
N- Reactivity Hazard
Y- Immediate (acute) Health Hazard
Y- Delayed (chronic) Health Hazard

Ozone-Depleting Chemicals - No regulated ingredients.

SARA Section 302 Extremely Hazardous Mat - No regulated ingredients.

SARA Section 313 Toxic Chemicals

- Xylene
Methyl ethyl ketone
Ethyl benzene

TSCA Section 8(d) Data Reporting Rule

- Methyl ethyl ketone
Ethyl benzene

CHEMICAL LISTING - Listed on the following Country's Chemical Inventories:

United States Toxic Substance Control Act
Chemical component(s) in this product are on the section 8(b) Chemical Substance Inventory List (40 CFR 710).

STATE RIGHT-TO-KNOW:

Pennsylvania - New Jersey R-T-K
Ethyl alcohol

64-17-5 35.3



MATERIAL SAFETY DATA SHEET

Thixon 422
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Effective: 10/26/99
Supersedes: 5/05/98
Code: 04220028
Page 7

Table with 3 columns: Hazard description, CAS number, and Concentration. Rows include Xylene (1330-20-7, 27.9), Methyl ethyl ketone (78-93-3, 13.3), Ethyl benzene (100-41-4, 7.0), and Non-hazardous trade secret ingredient(s) (Proprietary, Balance).

California - California Proposition 65
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Formaldehyde
Cancer Hazard. 50-00-0 Trace *

* Trace = present at less than 0.01 percent.

CONEG - No data available.

CANADA:

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Class B Division 2

Class D Division 2 Sub-division B

CEPA - NPRI

- Xylene
Methyl ethyl ketone
Ethyl benzene

Canadian Chemical Inventory

Domestic Substance List
Listed.

16. OTHER INFORMATION

USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

End of Material Safety Data Sheet

