

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product ID: Thixon 423
 Generic Description: Resin/solvent solution
 Product Use: Adhesive

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

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

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

ChemTrec Emergency
1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS #	Approximate % (w/w)
Methyl ethyl ketone	78-93-3	38.9
Propylene glycol methyl ether acetate	108-65-6	22.8
Bisphenol A based epoxy	25068-38-6	22.4
Toluene	108-88-3	7.4
Dipropylene glycol methyl ether acetate	88917-22-0	4.2
Glycidoxypropyltrimethoxysilane	2530-83-8	1.4
Non-hazardous and other ingredients below reportable levels	Proprietary	Balance

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: MAY CAUSE ALLERGIC RESPIRATORY REACTION AND SENSITIZATION. FLAMMABLE LIQUID AND VAPOR. MAY CAUSE ALLERGIC SKIN REACTION AND SENSITIZATION. CAUSES SEVERE EYE IRRITATION. INHALATION MAY CAUSE DIZZINESS, HEADACHE AND INCOORDINATION. INGESTION CAN CAUSE DIZZINESS, FAINTNESS, HEADACHE AND INCOORDINATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY CAUSE DIGESTIVE TRACT IRRITATION. INGESTION MAY CAUSE NAUSEA, VOMITING, PAIN, UPSET STOMACH, DIARRHEA. INHALATION MAY CAUSE NAUSEA, VOMITING, UPSET STOMACH. 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 moderate irritation. Prolonged or repeated contact may dry the skin and lead to irritation (i.e. dermatitis). May be absorbed



through the skin. May cause allergic skin reactions and sensitization.

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. May cause allergic respiratory reaction and sensitization.

INGESTION (Swallowing): Irritating to the mouth, throat, and stomach. May cause nausea, vomiting, pain, and stomach upset (e.g., diarrhea). Can cause dizziness, faintness, headache, and incoordination.

TARGET ORGANS/CHRONIC EFFECTS: Liver. Kidneys. Nervous system. Lungs and respiratory system. Eyes. Skin. Immune system (e.g, allergic reactions).

CONDITIONS AGGRAVATED BY EXPOSURE: Nervous system. Lungs and respiratory system. Skin. Immune systems and/or specific chemical allergies.

CARCINOGENICITY:

	ACGIH	IARC	NTP	OSHA
Methyl ethyl ketone	No	No	No	No
Propylene glycol methyl ether acetate	No	No	No	No
Bisphenol A based epoxy	No	No	No	No
Toluene	No	No	No	No
Dipropylene glycol methyl ether acetate	No	No	No	No
Glycidoxypropyltrimethoxysilane	No	No	No	No

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate 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...: < 25F -3.8C Method.....: Setaflash Closed Cup
Explosive Lmts: LEL(%) Not Determined UEL(%) Not Determined
Autoignition..: Not Determined

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

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.

EXTINGUISHING MEDIA: SMALL FIRES: Dry chemical, carbon dioxide, halon, 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.

Methyl ethyl ketone
Toluene

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, 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	
Methyl ethyl ketone	200 ppm
Toluene	50 ppm
ACGIH - STEL	
Methyl ethyl ketone	300 ppm
Manufacturer's PEL/TLV	
Glycidoxypropyltrimethoxysilane	5 ppm
Manufacturer's STEL	
Glycidoxypropyltrimethoxysilane	10 ppm
OSHA - PEL	
Methyl ethyl ketone	200 ppm
Toluene	100 ppm
OSHA - STEL	
Methyl ethyl ketone	300 ppm
Toluene	150 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. Neoprene gloves. Butyl rubber gloves. An emergency shower should be readily available.

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. Organic vapor/mist respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance.....: Clear	Odor.....: Solvent
Physical State: Liquid	Solubility....: Slightly soluble
pH.....: Not Applicable	Boiling Point.: 174F 78.8C
Vapor Pressure: Not Determined	Vapor Density.: > 1
Evaporation Rt: Not Determined	VOC Material..: Not Determined
Specific Grvty: 0.936	%Non-Vol(w/w)..: 24

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

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions of use.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Amines. Oxidizers. Acids.

11. TOXICITY INFORMATION

COMPONENTS:

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

Propylene glycol methyl ether acetate:

Oral LD50	Rat	8,532 mg/kg
Dermal LD50	Rabbit	> 5,000 mg/kg
Inhalation LC50	Rat	4,345 ppm/6-hrs.

Bisphenol A based epoxy:

Oral LD50	Rat	11,400 mg/kg
	Mouse	15,600 mg/kg

Toluene:

Oral LD50	Rat	5,000 mg/kg
Dermal LD50	Rabbit	12,124 mg/kg
Inhalation LC50	Mouse	5,320 ppm/8-Hours

Dipropylene glycol methyl ether acetate:
Eye, skin, and respiratory tract irritant.

Glycidoxypropyltrimethoxysilane:

Eye, skin, and respiratory tract irritant. Positive results were obtained in the Ames test. Positive results were obtained in the mouse lymphoma assay.

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 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.



MATERIAL SAFETY DATA SHEET

Thixon 423
MSDS NO: 2984-1-4
Effective....: 9/30/96
Supersedes....: 8/03/96

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.: L141-1
Hazard Class.: 3 (IATA/49CFR) 3.2 (IMO)
Packing Group.: II WHMIS Label....: F141-1

15. REGULATORY INFORMATION

FEDERAL:

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

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
Methyl ethyl ketone
Toluene

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:

Table with 3 columns: State/Chemical Name, ID Number, and Weight/Percentage. Includes entries for Pennsylvania - New Jersey R-T-K and California - California Proposition 65.

California - California Proposition 65
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.
Toluene 108-88-3 7.4

Reproductive Hazard.

* 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 A

Class D Division 2 Sub-division B

CEPA - NPRI

Methyl ethyl ketone

Toluene

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.