

Issue Date: 01-Jan-2012

Revision Date: 18-Feb-2024

Version 1

1. IDENTIFICATION

Product Identifier

Product Name MICCROPATCH[®]

Other means of identification

SDS # TD-014-OSHA

UN/ID No UN1263

Recommended use of the chemical and restrictions on use

Recommended Use Plating.

Details of the supplier of the safety data sheet

Supplier Address

Tolber Chemical Division
 220 West 5th Street
 Hope, AR 71801

Emergency Telephone Number

Company Phone Number 870-777-3251
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
 1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Black liquid

Physical State Liquid

Odor Ketone

Classification

Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable Liquids	Category 2

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed
 May be harmful in contact with skin

Signal Word

Danger

Hazard Statements

Harmful if inhaled
Causes serious eye irritation
Suspected of causing cancer
May cause respiratory irritation. May cause drowsiness or dizziness
Highly flammable liquid and vapor

**Precautionary Statements - Prevention**

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do not induce vomiting
IN CASE OF FIRE: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

Unknown Acute Toxicity

22.11% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Methyl ethyl ketone	78-93-3	40-50
Methylisobutyl ketone	108-10-1	18-28
Cyclohexanone	108-94-1	5-10
Amorphous silica (glass)	7631-86-9	5-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	Do not induce vomiting. Drink water to dilute. Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms	Harmful if inhaled. May cause drowsiness or dizziness. Headache. Fatigue and weakness. May cause respiratory irritation. Causes serious eye irritation. Skin contact may result in irritation, defatting or dermatitis. Repeated exposure may cause skin dryness or cracking. Ingestion may cause irritation, nausea, vomiting.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO₂). Foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Highly flammable liquid and vapor. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors are heavier than air and may travel along ground to ignition sources and flash back.

Hazardous Combustion Products Carbon oxides. Combustion may release noxious or toxic vapors.

Sensitivity to Static Discharge Take precautionary measures against static discharge.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protection recommended in Section 8.
For Emergency Responders	Use personal protection recommended in Section 8. Remove all sources of ignition.
Environmental Precautions	See Section 12 for additional Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Absorb spillage with non-combustible, absorbent material. Dispose of all contaminated trash in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Use personal protection recommended in Section 8. Wash face, hands, and any exposed skin thoroughly after handling. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Take precautionary measures against static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.
Incompatible Materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl ethyl ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m ³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m ³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m ³ STEL: 300 ppm STEL: 885 mg/m ³
Methylisobutyl ketone 108-10-1	STEL: 75 ppm TWA: 20 ppm	TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m ³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³
Cyclohexanone 108-94-1	STEL: 50 ppm TWA: 20 ppm S*	TWA: 50 ppm TWA: 200 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 100 mg/m ³ (vacated) S*	IDLH: 700 ppm TWA: 25 ppm TWA: 100 mg/m ³
Amorphous silica (glass) 7631-86-9	-	(vacated) TWA: 6 mg/m ³ <1% Crystalline silica TWA: 20 mppcf : (80)/(%) SiO ₂ mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Splash proof chemical safety goggles.

Skin and Body Protection Chemical resistant, impermeable gloves. Suitable protective clothing. Long sleeve shirt and long pants. Protective shoes or boots.

Respiratory Protection In case of inadequate ventilation wear respiratory protection.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands with soap and water before handling food. Avoid breathing fumes emitted during drying.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Ketone
Appearance	Black liquid	Odor Threshold	Not determined
Color	Black		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	50 °C / 122 °F	(at 760 mm Hg)	
Flash Point	2 °C / 36 °F	Tag Closed Cup	
Evaporation Rate	1.4	(butyl acetate = 1)	
Flammability (Solid, Gas)	Liquid-Not applicable		
Upper Flammability Limits	12%		
Lower Flammability Limit	2%		
Vapor Pressure	Not determined		
Vapor Density	1.0	(Air=1)	
Specific Gravity	1.2		
Water Solubility	Negligible		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep away from heat, sparks and open flame.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition may produce oxides of carbon. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Eye Contact	Causes serious eye irritation. May cause eye damage if direct contact occurs.
Skin Contact	May be harmful in contact with skin. Repeated exposure may cause skin dryness or cracking.
Inhalation	Harmful if inhaled. Avoid breathing vapors or mists.
Ingestion	May be harmful if swallowed. Ingestion can cause irritation, nausea, or stomach distress.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl ethyl ketone 78-93-3	= 2737 mg/kg (Rat)	= 6480 mg/kg (Rabbit)	-
Methylisobutyl ketone 108-10-1	= 2080 mg/kg (Rat)	> 16000 mg/kg (Rabbit)	= 8.2 mg/L (Rat) 4 h
Cyclohexanone 108-94-1	= 800 mg/kg (Rat)	= 948 mg/kg (Rabbit)	= 10.7 mg/L (Rat) 4 h = 8000 ppm (Rat) 4 h
Amorphous silica (glass) 7631-86-9	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Formaldehyde, polymer with 1,3 dimethylbenzene 6422-86-2	20000 mg/kg (rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested. Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Methylisobutyl ketone 108-10-1	A3	Group 2B		X
Cyclohexanone 108-94-1	A3	Group 3		
Amorphous silica (glass) 7631-86-9		Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity

22.11% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methyl ethyl ketone 78-93-3		3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 3403 mg/L 30 min EC50 = 3426 mg/L 5 min	520: 48 h Daphnia magna mg/L EC50 5091: 48 h Daphnia magna mg/L EC50 4025 - 6440: 48 h Daphnia magna mg/L EC50 Static
Methylisobutyl ketone 108-10-1	400: 96 h Pseudokirchneriella subcapitata mg/L EC50	496 - 514: 96 h Pimephales promelas mg/L LC50 flow- through	EC50 = 79.6 mg/L 5 min	170: 48 h Daphnia magna mg/L EC50
Cyclohexanone 108-94-1	20: 96 h Chlorella vulgaris mg/L EC50	481 - 578: 96 h Pimephales promelas mg/L LC50 flow- through 8.9: 96 h Pimephales promelas mg/L LC50	EC50 = 18.5 mg/L 5 min EC50 = 21.3 mg/L 10 min EC50 = 25 mg/L 5 min	800: 24 h Daphnia magna mg/L EC50
Amorphous silica (glass) 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static		7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Methyl ethyl ketone 78-93-3	0.29
Methylisobutyl ketone 108-10-1	1.19
Cyclohexanone 108-94-1	0.86

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl ethyl ketone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159
Methylisobutyl ketone 108-10-1		Included in waste stream: F039		U161
Cyclohexanone 108-94-1		Included in waste stream: F039		U057

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Methyl ethyl ketone 78-93-3	Toxic Ignitable

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1263
 Proper Shipping Name Paint
 Hazard Class 3
 Packing Group II

IATA

UN/ID No UN1263
 Proper Shipping Name Paint
 Hazard Class 3
 Packing Group II

IMDG

UN/ID No UN1263
 Proper Shipping Name Paint
 Hazard Class 3
 Packing Group II
 Marine Pollutant This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methyl ethyl ketone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Methylisobutyl ketone 108-10-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Cyclohexanone 108-94-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Methylisobutyl ketone - 108-10-1	108-10-1	18-28	1.0

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Methylisobutyl ketone - 108-10-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl ethyl ketone 78-93-3	X	X	X
Methylisobutyl ketone 108-10-1	X	X	X
Cyclohexanone 108-94-1	X	X	X
Amorphous silica (glass) 7631-86-9	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

Not determined

Not determined

Not determined

Not determined

HMIS**Health Hazards****Flammability****Physical Hazards****Personal Protection**

Not determined

Not determined

Not determined

Not determined

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18-Feb-2024

Revision Note:

New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet