

1. Product and Company Identification

Product Code:	C320	
Product Name:	Liqui Shield	
Company Name:	CYCLO INDUSTRIES, INC. 902 SOUTH US HIGHWAY 1 JUPITER, FL 33477	Phone Number: (800)843-7813
Web site address:	www.cyclo.com	
Email address:	ehs@cyclo.com	
Emergency Contact:	CHEMTREC	(800)424-9300 001 (703)741-5970
Intended Use:	Lubricant	

2. Hazards Identification

Flammable Aerosols, Category 1
Specific Target Organ Toxicity (repeated exposure), Category 2
Skin Corrosion/Irritation, Category 2
Toxic To Reproduction, Category 2
Specific Target Organ Toxicity (single exposure), Category 3
Serious Eye Damage/Eye Irritation, Category 2A
Aspiration Toxicity, Category 1
Aquatic Toxicity (Acute), Category 2
Aquatic Toxicity (Chronic), Category 2



GHS Signal Word:	Danger
GHS Hazard Phrases:	H222 - Extremely flammable aerosol. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H361 - Suspected of damaging fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects. H229 - Pressurized container: may burst if heated.
GHS Precaution Phrases:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition source. No smoking. P211 - Do not spray on an open flame or any other ignition source. P251 - Do not pierce or burn, even after use. P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:	P370+378 - In case of fire, use foam, alcohol foam, carbon dioxide, dry chemical or water fog to extinguish. P362+364 - Take off contaminated clothing and wash it before reuse. P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P403 - Store in well-ventilated place.
P410 - Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

GHS Storage and Disposal Phrases:

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
110-54-3	n-Hexane	20.0 -30.0 %
68476-86-8	Liquified petroleum gas, sweetened	20.0 -30.0 %
8052-41-3	Stoddard solvent	10.0 -20.0 %
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	1.0 -10.0 %
1314-13-2	Zinc oxide	0.1 -1.0 %
13463-67-7	Titanium dioxide	< 0.1 %

4. First Aid Measures

Emergency and First Aid Procedures:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

5. Fire Fighting Measures

Flash Pt: ≥ -141.00 F (-96.1 C) Method Used: Pensky-Marten Closed Cup

Explosive Limits: LEL: N.D. UEL: N.D.

Autoignition Pt: NE

Suitable Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water fog.

Fire Fighting Instructions: Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.

Flammable Properties and Hazards: No data available.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear protective clothing to prevent skin and eye contact. Wear protective equipment specified. Avoid all sources of ignition: heat, sparks and open flames. Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal. Remove sources of ignition. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. Handling and Storage

Precautions To Be Taken in Handling: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition source. No smoking.
Do not spray on an open flame or any other ignition source.
Do not pierce or burn, even after use.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep out of the reach of children.

Precautions To Be Taken in Storing: Store in well-ventilated place.
Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
110-54-3	n-Hexane	PEL: 500 ppm	TLV: 50 ppm	No data.
68476-86-8	Liquified petroleum gas, sweetened	No data.	No data.	No data.
8052-41-3	Stoddard solvent	PEL: 500 ppm	TLV: 100 ppm	No data.
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	No data.	No data.	No data.
1314-13-2	Zinc oxide	PEL: 5 (fume); 15 (dust) mg/m3	TLV: 2 mg/m3 (R) STEL: 10 mg/m3 (R)	No data.
13463-67-7	Titanium dioxide	PEL: 15 (dust) mg/m3	TLV: 10 mg/m3	No data.

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
110-54-3	n-Hexane	Austria	TWA: 72 mg/m3 (20 ppm) STEL: ()	
		California, USA PELs	TWA: 50 ppm	
		Ontario, CA	TWA: 50 ppm	
		China	TWA: 100 mg/m3 STEL: 180 mg/m3 (15 min)	
		Québec, CA	TWA: 176 mg/m3 (50 ppm)	
		Europe	TWA: 72 mg/m3 (20 ppm)	
		Mexico OEL	TWA: 176 mg/m3 (50 ppm) STEL: ()	
		NIOSH	TWA: 180 mg/m3 (50 ppm)	
		New Zealand	TWA: 72 mg/m3 (20 ppm)	
8052-41-3	Stoddard solvent	Austria	TWA: 790 mg/m3 () STEL: ()	
		California, USA PELs	TWA: 100 ppm	

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Supersedes Revision: 09/25/2017

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
8052-41-3 (continued)	Stoddard solvent	Ontario, CA	TWA: 525 mg/m3 STEL: 1050 mg/m3	
		Québec, CA	TWA: 525 mg/m3 (100 ppm)	
		Mexico OEL	TWA: 525 mg/m3 TWA: 523 mg/m3 (100 ppm) STEL: 1050 mg/m3 (200 ppm)	
		NIOSH	TWA: 350 mg/m3 CEIL: 1800 mg/m3 [15m] TWA: 350 mg/m3 CEIL: 1800 mg/m3 [15m]	
1314-13-2	Zinc oxide	New Zealand	TWA: 525 mg/m3 (100 ppm)	
		Austria	TWA: 10 mg/m3 () STEL: () (Total dust)	
		California, USA PELs	TWA: 5 mg/m3 STEL: 10 mg/m3 (Fume)	
		Ontario, CA	TWA: 2 mg/m3 STEL: 10 mg/m3 (Inhalable aerosol)	
		China	TWA: 3 mg/m3 STEL: 5 mg/m3 (15 min) (Total dust)	
		Québec, CA	TWA: 10 mg/m3 (Total dust)	
		Mexico OEL	TWA: 5 mg/m3 () STEL: 10 mg/m3 () (Fume)	
		NIOSH	TWA: 5 mg/m3 STEL: 10 mg/m3 (Fume)	
		New Zealand	TWA: 10 mg/m3 STEL: 10 mg/m3 (Total dust)	
		13463-67-7	Titanium dioxide	Austria
Ontario, CA	TWA: 10 mg/m3			
China	TWA: 8 mg/m3 (Inhalable fraction)			
Québec, CA	TWA: 10 mg/m3			
Mexico OEL	TWA: 10 mg/m3 () STEL: 20 mg/m3 ()			
NIOSH	TWA: 0.3 to 2.4 mg/m3 (p.carc.)(App.A&C) (Total dust)			
New Zealand	TWA: 10 mg/m3 (<1% Silica)			

Respiratory Equipment (Specify Type): Use in a well ventilated area. NIOSH/MSHA approved respirator when exposure is expected to exceed applicable limits.

Eye Protection: Chemical goggles. Wear goggles and/or face shield if splashing or spraying is likely.

Protective Gloves: Chemical resistant gloves.

Other Protective Clothing: Protective clothing as necessary to prevent skin contact.

Engineering Controls (Ventilation etc.): Local exhaust ventilation as necessary to maintain exposures within applicable limits.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	amber. Liquid. Solvent-like odor.
pH:	NE
Melting Point:	NE
Boiling Point:	-23.00 F (-30.6 C) - 387.00 F (197.2 C)
Flash Pt:	>= -141.00 F (-96.1 C) Method Used: Pensky-Marten Closed Cup
Evaporation Rate:	NE
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: N.D. UEL: N.D.
Vapor Pressure (vs. Air or mm Hg):	NE
Vapor Density (vs. Air = 1):	>=Air
Specific Gravity (Water = 1):	.69
Density:	NE
Solubility in Water:	Negligible
Saturated Vapor Concentration:	NE
Octanol/Water Partition Coefficient:	No data.
Percent Volatile:	68.8 % by weight.
Autoignition Pt:	NE
Decomposition Temperature:	NE
Viscosity:	water thin

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Keep away from heat, sparks & flame.
Incompatibility - Materials To Avoid:	Strong oxidizers.
Hazardous Decomposition or Byproducts:	Carbon monoxide. Carbon dioxide.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information: CAS# 64742-52-5:
Mutagenicity: Mutation test: Mutation in microorganisms., 10.00 UL/PLAT, Bacteria - Salmonella typhimurium.,
Results:
Behavioral: Coma.
Biochemical: Metabolism (intermediary): Other.
- Cell Biology and Toxicology., Princeton Scientific Pub., Inc., 301 N. Harrison St., CN 5279, Princeton, NJ 08540, Vol/p/yr: 2,63, 1986

Acute toxicity, LD (Lethal dose), Oral, Rat, > 5.000 GM/KG.
Results:
Tumorigenic: Neoplastic by RTECS criteria.
Lungs, Thorax, or Respiration: Tumors.
Tumorigenic: Tumors at site of application.
- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,133, 1990

Acute toxicity, LD (Lethal dose), Skin, Species: Rabbit, > 5.000 GM/KG.
Results:
Behavioral: Coma.
Biochemical: Metabolism (intermediary): Other.
- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,133, 1990

Tumorigenic Effects: TDLo, Skin, Mouse, 480.0 GM/KG, 80 W.
Results:
Tumorigenic: Neoplastic by RTECS criteria.
Skin and Appendages: Other: Tumors.
Tumorigenic: Tumors at site of application.
- United States Environmental Protection Agency, Office of Pesticides and Toxic Substances., U.S. Environmental Protection Agency, Office of Pesticides and Toxic Substances, 401 M St., SW, Washington, DC 20460, Vol/p/yr: 8EHQ-0887-,

Tumorigenic Effects: TDLo, Skin, Mouse, 402.0 GM/KG, 78 W.
Results:
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Skin and Appendages: Other: Tumors.
Tumorigenic: Tumors at site of application.
- British Journal of Cancer., Macmillan Press Ltd, Houndmills, Basingstoke, Hampshire RG21 2XS UK, Vol/p/yr: 48,429, 1983

Tumorigenic Effects: TDLo, Skin, Mouse, 398.0 GM/KG, 22 W.
Results:
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Skin and Appendages: Other: Tumors.
Tumorigenic: Tumors at site of application.
- British Journal of Cancer., Macmillan Press Ltd, Houndmills, Basingstoke, Hampshire RG21 2XS UK, Vol/p/yr: 48,429, 1983

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, Severe.
Results:

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Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

Skin and Appendages: Other: Tumors.

Tumorigenic: Tumors at site of application.

- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,133, 1990

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
110-54-3	n-Hexane	n.a.	n.a.	n.a.	n.a.
68476-86-8	Liquified petroleum gas, sweetened	n.a.	n.a.	n.a.	n.a.
8052-41-3	Stoddard solvent	n.a.	n.a.	n.a.	n.a.
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	n.a.	n.a.	n.a.	n.a.
1314-13-2	Zinc oxide	n.a.	n.a.	n.a.	n.a.
13463-67-7	Titanium dioxide	n.a.	2B	A4	n.a.

12. Ecological Information

General Ecological Information: Do not allow to enter sanitary drains, sewer or surface or subsurface waters.

13. Disposal Considerations

Waste Disposal Method: Dispose of contents/container in accordance with local/regional/national/international regulation.

Waste Disposal Method: DISP

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Aerosols, 2.1, Ltd Qty.
DOT Hazard Class: 2.1 FLAMMABLE GAS
UN/NA Number: UN1950

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Aerosols, 2.1, Ltd Qty.

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Aerosols, 2.1, Ltd Qty.
UN Number: 1950
Hazard Class: 2.1 - FLAMMABLE GAS

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Aerosols, 2.1, Ltd Qty.
UN Number: 1950
Hazard Class: 2.1 - FLAMMABLE GAS

Packing Group:

IMDG MFAG Number:

IMDG EMS Page:

Marine Pollutant:

No

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Aerosols, flammable, 2.1 Ltd Qty.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
110-54-3	n-Hexane	No	Yes 5000 LB	Yes
68476-86-8	Liquified petroleum gas, sweetened	No	No	No
8052-41-3	Stoddard solvent	No	No	No
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	No	No	No
1314-13-2	Zinc oxide	No	No	Yes-Cat. N982
13463-67-7	Titanium dioxide	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
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110-54-3	n-Hexane	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: No; FDA/DEA CSA: No; CA PROP.65: Yes: RTox(M); CA TAC, Title 8: TAC; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: Yes; NJ EHS: Yes - 1340; NY Part 597: Yes; PA HSL: Yes - 1; SC TAP: Yes; WI Air: Yes
68476-86-8	Liquified petroleum gas, sweetened	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: No; FDA/DEA CSA: No; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
8052-41-3	Stoddard solvent	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: Yes - Active - 063504, Inert: F/NF; FDA/DEA CSA: No; CA PROP.65: No; CA TAC, Title 8: Title 8; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: Yes
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: No; FDA/DEA CSA: No; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
1314-13-2	Zinc oxide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: Yes - Active - 088502, Inert: F/NF, 25(b) - 910, 930; FDA/DEA CSA: No; CA PROP.65: No; CA TAC, Title 8: Yes - Cat., Title 8; MA Oil/HazMat: Yes - Cat.; MI CMR, Part 5: Yes - Cat.; NC TAP: No; NJ EHS: Yes - Cat.; NY Part 597: No; PA HSL: Yes - E; SC TAP: No; WI Air: No
13463-67-7	Titanium dioxide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: Yes - Active - -, Inert: F/NF; FDA/DEA CSA: No; CA PROP.65: Yes: Canc.; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
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110-54-3	n-Hexane	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 9-2602; Japan ISHL: No; Korea ECL: Yes - KE-18626; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P)
68476-86-8	Liquified petroleum gas, sweetened	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes;

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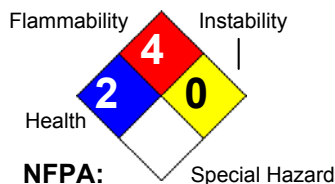
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8052-41-3	Stoddard solvent	Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: No; Japan ISHL: No; Korea ECL: Yes - KE-28192; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P), C1, C2, M2
64742-52-5	Mineral oil, petroleum distillates, hydrotreated heavy naphthenic	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 9-1702; Japan ISHL: No; Korea ECL: Yes - KE-32199; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P), C2, M2
1314-13-2	Zinc oxide	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 9-1703; Japan ISHL: No; Korea ECL: Yes - KE-12543; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P), C2
13463-67-7	Titanium dioxide	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 1-561; Japan ISHL: No; Korea ECL: Yes - KE-35565; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P)
		Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 5-5225; Japan ISHL: Yes - 2-(3)-509; Korea ECL: Yes - KE-33900; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P)

16. Other Information

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Hazard Rating System:



Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

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