

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

1.1. Product identifier

Product name : Master® Red High Strength Threadlocker, Part 271-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : High Strength Anaerobic Thread Locker

1.3. Details of the supplier of the safety data sheet

Master Chemical
4635 Willow Drive
Medina, MN 55340 - USA
T: 612-478-2360

1.4. Emergency telephone number

Emergency number : 1-800-424-9300; CHEMTREC® International Emergency number: 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

: Warning

Hazard statements (GHS-US) :

: H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
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
P362 - Take off contaminated clothing
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/container to local, regional, national, and international regulations

SECTION 3: Composition/information on ingredients

3.1. Substances

Full text of H-phrases: see section 16

3.2. Mixture

Hazardous ingredients:

Name	Product identifier	%	GHS-US classification
Poly(ethylene glycol) Dimethacrylate	(CAS No) 25852-47-5	60 - 85	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
saccharin	(CAS No) 81-07-2	1 - 5	Skin Corr. 1A, H314
cumene hydroperoxide	(CAS No) 80-15-9	1 - 5	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	GHS-US classification
N,N-dimethyl-o-toluidine	(CAS No) 609-72-3	0.1 - 1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT RE 2, H373
N,N-Diethyl-P-Toluidine	(CAS No) 613-48-9	0.1 - 1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT RE 2, H373
methanol	(CAS No) 67-56-1	0.1 - 1	Flam. Liq. 2, H225
cumene	(CAS No) 98-82-8	0.05 - 0.15	Flam. Liq. 3, H226 Carc. 2, H351

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove the victim into fresh air. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.
- First-aid measures after ingestion : Do not induce vomiting. Immediately after ingestion: give lots of water to drink. Get immediate medical attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Alcohol-resistant foam. Dry powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate ventilation. Evacuate area.

6.1.1. For non-emergency personnel

- Protective equipment : Use appropriate personal protection equipment (PPE).
- Emergency procedures : Keep suitable chemically resistant protective clothing readily available for emergency use.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Evacuate unnecessary personnel. Stop release. Ventilate area. Use appropriate personal protection equipment (PPE).

6.2. Environmental precautions

- Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Absorb excess liquid spillage on inorganic adsorbent material such as fine sand, brick dust etc. Place spent adsorbent in sealed packages and contact specialist waste disposal contractor. Collect spillage.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required.

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hygiene measures : Do not eat, drink or smoke in areas where product is used. Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep container closed when not in use. Store in a cool, dry place, out of direct sunlight. Can be stored in LDPE containers. Do not allow to contact or store in aluminum, mild steel, rusty steel, copper (or alloys of) or tin vessels.

Incompatible products : Oxidizing agent. Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methanol (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm
cumene (98-82-8)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA ACGIH	ACGIH STEL (ppm)	50 ppm

8.2. Exposure controls

Appropriate engineering controls : Ensure all national/local regulations are observed. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Protective clothing. Protective goggles. Gloves. Self-contained breathing apparatus.

Materials for protective clothing : Wear fire/flamm resistant/retardant clothing.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Protective clothing.

Respiratory protection : Avoid breathing dust, mist or spray. Wear respiratory protection.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Thin red color liquid.

Colour : red.

Odour : Mild organic odour.

Relative evaporation rate (butylacetate=1) : Low

Boiling point : > 400 °F

Flash point : > 212 °F

Flammability (solid, gas) : Non flammable

Vapour pressure : <5 mm Hg

Solubility : Slightly soluble in water

Solubility in solvents : Miscible in organic solvents, e.g. acetone.

Specific gravity : 1.1 – 1.3

VOC content : < 1.0%; <8.0g/L

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Direct sunlight. High temperature. Sources of ignition, low oxygen environments. Hazardous exothermic polymerization can occur if exposed to elevated temperatures for period of time. Air space/ oxygen above the product is vital to keep formulatory inhibitors active

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.5. Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Irritating fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

cumene hydroperoxide (80-15-9)	
LD50 oral rat	382 mg/kg (Rat)
LD50 dermal rat	1200-1520,Rat
LD50 dermal rabbit	133 mg/kg bodyweight (Rabbit)
LC50 inhalation rat (mg/l)	1.37 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	220 ppm/4h (Rat)
methanol (67-56-1)	
LD50 oral rat	> 5000 mg/kg (1187-2769 mg/kg bodyweight; Rat; Rat)
LD50 dermal rabbit	15800 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat)
cumene (98-82-8)	
LD50 oral rat	> 2000 mg/kg (4000 mg/kg bodyweight; Rat; Rat; Other; Other,4000 mg/kg bodyweight; Rat; Rat; Other; Other)
LD50 dermal rabbit	10578 mg/kg (Rabbit; Other,Rabbit; Other)
LC50 inhalation rat (mg/l)	40 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat)
saccharin (81-07-2)	
IARC group	3 - Not classifiable
cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans

SECTION 12: Ecological information

12.1. Toxicity

cumene hydroperoxide (80-15-9)	
LC50 fishes 1	14 mg/l (48 h; Leuciscus idus; GLP)
EC50 Daphnia 1	7 mg/l (24 h; Daphnia magna; Static system)
LC50 fish 2	3.9 mg/l (96 h; Oncorhynchus mykiss)
EC50 Daphnia 2	18.84 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	1.2 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	7.4 mg/l (Scenedesmus quadricauda)
methanol (67-56-1)	
LC50 fishes 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna)
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)
cumene (98-82-8)	
LC50 fishes 1	2.7 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); GLP)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	2.14 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	5.1 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 2	8 - 43 mg/l (96 h; Gammarus sp.)
TLM fish 1	10 - 100,96 h; Pisces
TLM other aquatic organisms 1	10 - 100,96 h
Threshold limit other aquatic organisms 1	10 - 100,96 h; Protozoa

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

cumene (98-82-8)	
Threshold limit other aquatic organisms 2	3.017 mg/l (24 h)
Threshold limit algae 1	0.92 - 1.2, Algae
Threshold limit algae 2	2.6 mg/l (72 h; Selenastrum capricornutum)

12.2. Persistence and degradability

Master® Red High Strength Threadlocker, Part 271-2	
Persistence and degradability	No data available.

saccharin (81-07-2)	
Persistence and degradability	Biodegradability in water: no data available.

cumene hydroperoxide (80-15-9)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.

methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 % ThOD

cumene (98-82-8)	
Persistence and degradability	Inherently biodegradable. Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.28 g O ₂ /g substance
Chemical oxygen demand (COD)	2.42 g O ₂ /g substance
ThOD	3.20 g O ₂ /g substance
BOD (% of ThOD)	0.40 % ThOD

12.3. Bioaccumulative potential

Master® Red High Strength Threadlocker, Part 271-2	
Bioaccumulative potential	No bioaccumulation data available.

saccharin (81-07-2)	
Log Pow	0.91
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

cumene hydroperoxide (80-15-9)	
BCF other aquatic organisms 1	9
Log Pow	1.6 (Experimental value; 25 °C, Experimental value; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

methanol (67-56-1)	
BCF fish 1	< 10 (Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other, Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

cumene (98-82-8)	
BCF fish 1	35.5 (Carassius auratus)
BCF other aquatic organisms 1	94.69
Log Pow	3.66 (3.55; Experimental value; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

cumene hydroperoxide (80-15-9)	
Surface tension	0.028 N/m (-9 °C)

methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Remove waste in accordance with local and/or national regulations.

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Waste disposal recommendations : Product residues can be cleaned out of containers. Dispose in a safe manner in accordance with local/national regulations
Alternatively, product can be polymerized using AC64 activator (care should be taken if polymerizing a large quantity of product due to exothermic reaction). Hardened product can be disposed of as chemical waste by incineration or licensed contractors. Clean containers can be disposed of by landfill or by incineration or possibly recycled.

SECTION 14: Transport information

In accordance with DOT : Not Regulated
Proper Shipping Name : N/A
Transport document description : N/A
Hazard Class : N/A
Packing Group : N/A
UN-No.(DOT) : None
DOT NA no. : N/A
Marine Pollutant : N/A

Additional information

Other information : No supplementary information available.

ADR

Not regulated :

Transport by sea

Not Regulated

Air transport

Not Regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Master® Red High Strength Threadlocker, Part 271-2

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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saccharin (81-07-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	100 lb
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cumene hydroperoxide (80-15-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	10 lb
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N,N-dimethyl-o-toluidine (609-72-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

N,N-Diethyl-P-Toluidine (613-48-9)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
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cumene (98-82-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
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Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

WHMIS Hazard Class: D2B

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2A H319

STOT SE 3 H335

15.2.2. National regulations

cumene (98-82-8)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

methanol (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
	Yes			

cumene (98-82-8)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				

saccharin (81-07-2)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

cumene hydroperoxide (80-15-9)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

methanol (67-56-1)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

cumene (98-82-8)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Liq. 4	Flammable liquids, Category 4
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

Master® Red High Strength Threadlocker, Part 271-2

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation

HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

SDS US (GHS HazCom 2012)

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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