

1. Identification

Product identifier STARSOL™ 780CF
METALWORKING FLUID

Other means of identification

SDS number Not applicable

Recommended use METALWORKING FLUID

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Milacron Marketing Company LLC
3000 Disney Street
Cincinnati, Ohio 45209

Telephone (General Information) 513-458-8100

Emergency telephone number 1-800-424-9300 (CHEMTREC)

Emergency telephone number (outside USA) 1-703-527-3887 (CHEMTREC)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye irritation Category 2A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes serious eye irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Wear eye protection/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 8.97% of the mixture consists of component(s) of unknown acute dermal toxicity.

Use in manufacturing processes only.

The classified hazards shown on this SDS are associated with the product concentrate. These hazards are not expected under recommended use conditions and dilution.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
SEVERELY-HYDROTREATED NAPHTHENIC DISTILLATES		64742-52-5	40 - 50
AMINOMETHYLPROPANOL		124-68-5	5 - 10
TRIETHANOLAMINE		102-71-6	5 - 10
ALCOHOLS, C13-15, BRANCHED AND LINEAR, ETHOXYLATED		157627-86-6	3 - 5
ETHOXYLATED AMINE		218141-23-2	1 - 3
MONOISOPROPANOLAMINE		78-96-6	1 - 3
Other components below reportable levels			30 - 40

The exact percentages of hazardous ingredients have been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth thoroughly. Do not give liquids. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Foam. Dry chemical powder. Carbon dioxide (CO ₂). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Clean up in accordance with all applicable regulations.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in tightly closed container. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use. Do not allow material to freeze. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

	Type	Value
SEVERELY-HYDROTREATED NAPHTHENIC DISTILLATES (CAS 64742-52-5)	PEL	5 mg/m3

ACGIH

	Type	Value
SEVERELY-HYDROTREATED NAPHTHENIC DISTILLATES (CAS 64742-52-5)	TWA	5 mg/m3

US. ACGIH Threshold Limit Values

	Type	Value
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Do not get in eyes. Eye wash fountain is recommended.

Skin protection

Hand protection

Nitrile gloves are recommended.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

CLEAR

Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	CHEMICAL
Odor threshold	Not available.
pH	10.3
Melting point/freezing point	< -3 °F (< -19.4 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C)
Flash point	Not Applicable
Evaporation rate	Like water when diluted
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	100 % Water Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
pH in aqueous solution	9.2 @ 5%
Specific gravity	0.984
VOC ASTM D2369	18 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines. Acids. Oxidizing agents.
Hazardous decomposition products	Smoke, fumes, oxides of nitrogen, and oxides of carbon

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not classified.
Skin contact	Not classified.
Eye contact	Causes eye irritation.

Ingestion

Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects**Acute toxicity**

Components	Species	Test Results
ALCOHOLS, C13-15, BRANCHED AND LINEAR, ETHOXYLATED (CAS 157627-86-6)		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rat	> 2000 mg/kg
Oral		
<i>Liquid</i>		
LD50	Rat	> 5000 mg/kg
AMINOMETHYLPROPANOL (CAS 124-68-5)		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000 mg/kg
Oral		
<i>Liquid</i>		
LD50	Rat	2900 mg/kg
ETHOXYLATED AMINE (CAS 218141-23-2)		
<u>Acute</u>		
Oral		
<i>Liquid</i>		
LD50	Rat	1000 - 2000 mg/kg
MONOISOPROPANOLAMINE (CAS 78-96-6)		
<u>Acute</u>		
Oral		
<i>Liquid</i>		
LD50	Rat	2813 mg/kg
SEVERELY-HYDROTREATED NAPHTHENIC DISTILLATES (CAS 64742-52-5)		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 5000 mg/kg
Inhalation		
<i>Mist</i>		
LC50	Rat	> 5 mg/l, 4 hours
Oral		
<i>Liquid</i>		
LD50	Rat	> 5000 mg/kg
TRIETHANOLAMINE (CAS 102-71-6)		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000 mg/kg
Oral		
<i>Liquid</i>		
LD50	Rat	4190 mg/kg

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Causes eye irritation.
Corneal opacity value	0.0000
Iris lesion value	0.3333
Conjunctival reddening value	2.0000
Conjunctival oedema value	1.6700
Recover days	14
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Oil /Distillate meets the EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using IP 346.

IARC Monographs. Overall Evaluation of Carcinogenicity

TRIETHANOLAMINE (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Not classified.
Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

12. Ecological information

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

Components	Species		Test Results
ALCOHOLS, C13-15, BRANCHED AND LINEAR, ETHOXYLATED (CAS 157627-86-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	0.1 - 1 mg/l, 48 hours
Fish	LC50	Zebra danio (Danio rerio)	1 - 10 mg/l, 96 hours
AMINOMETHYLPROPANOL (CAS 124-68-5)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	193 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	190 mg/l, 96 hours
MONOISOPROPANOLAMINE (CAS 78-96-6)			
Aquatic			
Fish	LC50	Goldfish (Carassius auratus)	210 mg/l, 96 hours
<i>Acute</i>			
Crustacea	EC50	Daphnia	109 mg/l, 48 hours

Components	Species	Test Results
TRIETHANOLAMINE (CAS 102-71-6)		
Aquatic		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 565.2 - 658.3 mg/l, 48 hours
<i>Acute</i>		
Fish	LC50	Bluegill (Lepomis macrochirus) 450 - 1000 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.	
Bioaccumulative potential		
Partition coefficient n-octanol / water (log Kow)		
MONOISOPROPANOLAMINE		-0.93
TRIETHANOLAMINE		-2.3
Mobility in soil	This product is miscible in water.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
13. Disposal considerations		
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
14. Transport information		
DOT		
Not regulated as dangerous goods.		
IATA		
Not regulated as dangerous goods.		
IMDG		
Not regulated as dangerous goods.		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.	
15. Regulatory information		
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. It may be reportable under the provisions of SARA Sections 311 and 312 if specific threshold criteria are met or exceeded.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)		
ALCOHOLS, C13-15, BRANCHED AND LINEAR, ETHOXYLATED (CAS 157627-86-6)		1.0 % One-Time Export Notification only.
CERCLA Hazardous Substance List (40 CFR 302.4)		
Not listed.		
SARA 304 Emergency release notification		
Not regulated.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Not regulated.		
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
SARA 302 Extremely hazardous substance		
Not listed.		
SARA 311/312 Hazardous chemical	Yes	

Classified hazard categories

Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations**California South Coast Air Quality Management District (SCAQMD) Rule 1144 (VOC Emissions)**

This product is subject to SCAQMD Rule 1144; it is compliant and may be sold and used in the SCAQMD. The VOC content of the product is 144 g/L, measured by ASTM Method E-1868-10. This product has a specified use dilution VOC limit of 75 g/L, the maximum dilution concentration is 52 % to maintain compliance.

California Proposition 65

WARNING: This product can expose you to Diethanolamine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Diethanolamine (CAS 111-42-2)

Listed: June 22, 2012

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Diethanolamine (CAS 111-42-2)

SEVERELY-HYDROTREATED NAPHTHENIC DISTILLATES (CAS 64742-52-5)

International Inventories

Country(s) or region	Inventory name	On inventory or exempt (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision

Issue date	02-27-2015
Revision date	12-05-2018
Version #	08
NFPA ratings	Health: 1 Flammability: 0 Instability: 0

NFPA ratings

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.

Revision information

Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties