



SAFETY DATA SHEET

1. Identification

Product identifier TRIM® MicroSol® 455
Other means of identification None.
Recommended use Metal Working Fluids.
Recommended restrictions Applicable for industrial settings only. No other uses are advised.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name Master Fluid Solutions
Address 501 West Boundary Street
Perrysburg, Ohio 43551-1200
United States
Telephone 419-874-7902
Website www.masterfluidsolutions.com
E-mail info@masterchemical.com
Emergency phone number CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement Causes skin irritation. Causes serious eye irritation.
Precautionary statement
Prevention Wash hands thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.
Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
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 None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
SEVERELY HYDROTREATED PETROLEUM OIL		64742-52-5	10 - < 20
TRADE SECRET*		Proprietary*	5 - < 10

Chemical name	Common name and synonyms	CAS number	%
TRADE SECRET*		Proprietary*	3 - < 5
MONOETHANOLAMINE		141-43-5	1 - < 3
TRADE SECRET*		Proprietary*	1 - < 3
TRADE SECRET*		Proprietary*	1 - < 3
TRADE SECRET*		Proprietary*	1 - < 3
Other components below reportable levels			60 - < 70

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air.
Skin contact	Wash affected area with mild soap and water.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center.
Most important symptoms/effects, acute and delayed	None known.
General information	Get medical attention, if needed.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, CO2, water spray or alcohol resistant foam. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	No unusual fire or explosion hazards noted.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment. Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Use personal protective equipment as required. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material. Clean up in accordance with all applicable regulations.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Do not taste or swallow.
Conditions for safe storage, including any incompatibilities	The product is stable and non-reactive under normal conditions of use, storage and transport. Store in a dry place. Store in a closed container.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
MONOETHANOLAMINE (CAS 141-43-5)	PEL	6 mg/m3	
		3 ppm	
SEVERELY HYDROTREATED PETROLEUM OIL (CAS 64742-52-5)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm	
	TWA	3 ppm	
SEVERELY HYDROTREATED PETROLEUM OIL (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
MONOETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3	
		6 ppm	
	TWA	8 mg/m3	
SEVERELY HYDROTREATED PETROLEUM OIL (CAS 64742-52-5)		3 ppm	
	STEL	10 mg/m3	Mist.

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations

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**Physical state**

Liquid.

Color

Light yellow to amber

Odor

Mild amine

Odor threshold

Not available.

pH

10.1 - 10.3

Melting point/freezing point

25.34 °F (-3.7 °C)

Initial boiling point and boiling range

212.9 °F (100.5 °C)

Flash point

284.0 °F (140.0 °C)

Evaporation rate

Not available.

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)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Flash point class	ASTM D92-90
pH in aqueous solution	8.7 - 9.7
Specific gravity	0.98 - 0.99

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines.
Incompatible materials	Strong acids. Powerful oxidizers.
Hazardous decomposition products	To avoid thermal decomposition, do not overheat.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May be irritating to the skin.
Eye contact	May be irritating to eyes.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics May be irritating to the skin. May be irritating to eyes.

Information on toxicological effects

Acute toxicity	Not classified.
Skin corrosion/irritation	May be irritating to the skin.
Serious eye damage/eye irritation	May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization	Not classified.
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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

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 classified.

Chronic effects None known.

12. Ecological information

Ecotoxicity Not available.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
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	Dispose of contents/container in accordance with local/regional/national/international 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.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Follow precautions for safe handling described in this safety data sheet.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

15. Regulatory information

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical No

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.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 06-27-2018

Revision date 10-12-2018

Version # 02

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. Master Fluid Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Revision information Fire-fighting measures: Special protective equipment and precautions for firefighters
Toxicological information: Aspiration hazard
Toxicological information: Respiratory sensitization
Toxicological information: Specific target organ toxicity - repeated exposure
Toxicological information: Specific target organ toxicity - single exposure
Regulatory information: California Proposition 65
HazReg Data: International Inventories