

SAFETY DATA SHEET



MOTOR MEDIC® SUPER HEAVY DUTY RADIATOR FLUSH

Version 2.2 Revision Date: 03/29/2023 SDS Number: 600000001496 Date of last issue: 05/11/2021
Date of first issue: 07/30/2018

SECTION 1. IDENTIFICATION

Product name : MM SUPER RADTR FLUSH 12/22 OZ
Product code : C2124

Manufacturer or supplier's details

Company name of supplier : Niteo Products, LLC
Address : Dallas TX 75225
Email Address : EHS@niteoproducts.com
Telephone : 1-844-696-4836
Emergency telephone number : 1-800-424-9300 / 1-703-741-5970

Recommended use of the chemical and restrictions on use

Recommended use : RADIATOR FLUSH
Restrictions on use : Use only outdoors or in a well-ventilated area.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity : Category 2
Reproductive toxicity : Category 1B
Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Respiratory Tract)

GHS label elements

Hazard pictograms :

Signal word : Danger

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Hazard statements : Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage:
Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Citric acid	77-92-9	>= 5 - < 10
Tetrasodium EDTA	64-02-8	>= 1 - < 5
Potassium dodecylbenzene sulfonate	27177-77-1	>= 1 - < 5
2-Butoxyethanol	111-76-2	>= 1 - < 5
N-Methylpyrrolidone	872-50-4	>= 1 - < 5
Trisodium nitrilotriacetate	5064-31-3	>= 0.1 - < 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

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- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if inhaled.
- Notes to physician : Treat symptomatically.
-

SECTION 5. FIREFIGHTING MEASURES

- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Nitrogen oxides (NO_x)
Carbon oxides
Sulphur oxides
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Do not store near acids.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m ³	NIOSH REL
		TWA	50 ppm	OSHA Z-1

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			240 mg/m3	
		TWA	25 ppm 120 mg/m3	OSHA P0
N-Methylpyrrolidone	872-50-4	TWA	10 ppm	US WEEL

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
2-Butoxyethanol	111-76-2	Butoxyace-tic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	ACGIH BEI
N-Methylpyrrolidone	872-50-4	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	End of shift (As soon as possible after exposure ceases)	100 mg/l	ACGIH BEI

Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
 Tightly fitting safety goggles
 Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
 When using do not smoke.
 Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
 Colour : No data available
 Odour : No data available
 Odour Threshold : No data available
 pH : 4.4

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Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : estimated > 93.4 °C

Evaporation rate : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : 1.0633 g/cm³

Solubility(ies)
Water solubility : soluble

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : No data available

Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.

Conditions to avoid : No data available

Incompatible materials : Strong oxidizing agents
Not applicable

Hazardous decomposition products : Carbon oxides

Hazardous decomposition products :

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Acute inhalation toxicity : LC50 (Guinea pig): > 633 ppm
Exposure time: 1 h
Test atmosphere: dust/mist
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : LD50 (Guinea pig): > 2,000 mg/kg
Assessment: The component/mixture is moderately toxic after single contact with skin.

N-Methylpyrrolidone:

Acute oral toxicity : LD50 (Rat): 4,150 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 8,000 mg/kg

Trisodium nitrilotriacetate:

Acute oral toxicity : LD50 (Rat, male and female): 1,740 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC0 (Rat): 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

Citric acid:

Result: Possibly irritating to skin

Tetrasodium EDTA:

Species: Rabbit

Result: No skin irritation

Potassium dodecylbenzene sulfonate:

Result: Corrosive after 1 to 4 hours of exposure

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Remarks: Information given is based on data obtained from similar substances.

2-Butoxyethanol:

Method: Directive 67/548/EEC, Annex V, B.4.
Result: Irritating to skin.

N-Methylpyrrolidone:

Assessment: Irritating to skin.
Result: irritating

Trisodium nitrilotriacetate:

Result: Possibly irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: May cause irreversible eye damage.

Components:

Citric acid:

Result: Irritating to eyes.

Tetrasodium EDTA:

Result: Irritating to eyes.

Potassium dodecylbenzene sulfonate:

Result: Corrosive
Method: OECD Test Guideline 405
Remarks: Information given is based on data obtained from similar substances.

2-Butoxyethanol:

Result: Irritating to eyes.
Method: OECD Test Guideline 405

N-Methylpyrrolidone:

Result: Irritation to eyes, reversing after 7 to 21 days
Assessment: Irritating to eyes.

Trisodium nitrilotriacetate:

Result: Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

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2-Butoxyethanol:

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Result: negative

N-Methylpyrrolidone:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Test Type: Micronucleus test
 Species: Mouse
 Application Route: Oral
 Result: negative

Test Type: Chinese hamster
 Application Route: Oral
 Result: negative

Trisodium nitrilotriacetate:

Genotoxicity in vitro : Test Type: Ames test
 Metabolic activation: with and without metabolic activation
 Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
 Result: negative

Test Type: In vitro mammalian cell gene mutation test
 Test system: Chinese hamster fibroblasts
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
 Species: Mouse (male)
 Application Route: Oral
 Method: OECD Test Guideline 474
 Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:**Trisodium nitrilotriacetate:**

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

IARC

Group 2B: Possibly carcinogenic to humans

Trisodium nitrilotriacetate 5064-31-3

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

May damage fertility or the unborn child.

Components:

N-Methylpyrrolidone:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Not classified based on available information.

Components:

N-Methylpyrrolidone:

Exposure routes: Inhalation
Target Organs: Nose
Assessment: May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Components:

Tetrasodium EDTA:

Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

N-Methylpyrrolidone:

Species: Rat
NOAEL: 169 mg/kg
Application Route: Ingestion
Exposure time: N11.00322330

Species: Rat
NOAEL: 0.5 mg/l
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: N11.00322330

Species: Rabbit
NOAEL: 826 mg/kg
Application Route: Skin contact

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Exposure time: N11.00322320

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated below) may not reflect quantity, end-use, or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

49 CFR

Not regulated as a dangerous good

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SECTION 15. REGULATORY INFORMATION
EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium hydroxide	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Carcinogenicity
 Reproductive toxicity
 Specific target organ toxicity (single or repeated exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

2-Butoxyethanol	111-76-2	>= 1 - < 5 %
N-Methylpyrrolidone	872-50-4	>= 1 - < 5 %

California Prop. 65

WARNING: This product can expose you to chemicals including N-Methylpyrrolidone, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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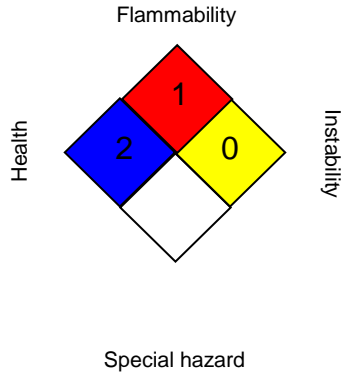
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SECTION 16. OTHER INFORMATION

Further information

NFPA:



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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.

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