SAFETY DATA SHEET

NIPAGIN M

Substance key: 000000051881
Revision Date: 03/13/2018
Version : 5-0 / USA
Date of printing : 03/21/2018

SECTION 1. IDENTIFICATION

Identification of the company: Clariant Corporation
4000 Monroe Road
Charlotte, NC, 28205
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Product Stewardship, +1-704-331-7710
Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: NIPAGIN M
Material number: 166901
CAS number: 99-76-3
Synonyms: Product has no synonyms
Chemical family: methyl-4-hydroxybenzoate
Primary product use: Personal Care Preservatives
Chemical family: methyl-4-hydroxybenzoate

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Eye irritation: Category 2B
Combustible dust

GHS label elements
Signal word: Warning
Hazard statements: H320 Causes eye irritation.
Precautionary statements: Prevention:
P264 Wash skin thoroughly after handling.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P243 Take precautionary measures against static discharge.
Response:
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.
Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Chemical nature : 
Substance name : methyl-4-hydroxybenzoate
CAS-No. : 99-76-3

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl paraben</td>
<td>99-76-3</td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : Remove/Take off immediately all contaminated clothing. Get medical advice/attention if you feel unwell.

If inhaled : Move the victim to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical advice/attention. Never give anything by mouth to an unconscious person.

In case of skin contact : Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

In case of eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

If swallowed : IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Most important symptoms and effects, both acute and delayed : The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.

Notes to physician : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray jet
Alcohol-resistant foam

Unsuitable extinguishing media : High volume water jet
Carbon dioxide (CO2)
Dry powder

Specific hazards during firefighting: In case of fires, hazardous combustion gases are formed:
Carbon monoxide (CO)
Carbon dioxide (CO2)
Emits toxic fumes under fire conditions. This product presents no unusual fire or explosion hazards while sealed in a shipping container. During usage, if a dust cloud is generated, organic powders have the potential to be explosive with static spark or flame initiation.

Further information: Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

Special protective equipment for firefighters: Self-contained breathing apparatus
Full protective suit

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear suitable protective clothing.
Ensure adequate ventilation.
Avoid dust formation.
Avoid contact with skin and eyes.
Wear proper protective equipment. Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Do not discharge into storm drains or the aquatic environment.

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities.
Do not empty into drains.

Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal.
Take up mechanically

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Dust can form an explosive mixture in air.
Take measures to prevent the build up of electrostatic charge.
Keep away of sources of ignition.
Keep away from heat.

Advice on safe handling: Store in a dry place.
Keep only in the original container.
Do not expose to temperatures exceeding 50 °C/ 122 °F.

Conditions for safe storage: Keep only in the original container.
Keep container tightly closed.
Keep container tightly closed in a dry and well-ventilated place.

Technical measures/Precautions:
- Store in original container.
- Keep container closed.

Materials to avoid: not required

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures:
- Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.

Personal protective equipment

Respiratory protection:
- If airborne concentrations pose a health hazard, become irritating or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134

Hand protection
Remarks:
- Chemical resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water.

Eye protection:
- Tightly fitting safety goggles

Skin and body protection:
- Protective clothing to minimize skin contact should be worn. Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.

Protective measures:
- Avoid contact with skin and eyes.
- Do not breathe dust.

Hygiene measures:
- Use only in well-ventilated areas.
- Take off immediately all contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
- Crystalline powder

Colour:
- white

Odour:
- odourless
Odour Threshold: not tested.

pH: 7 (20 °C)
Concentration: 1 g/l

Melting point: 125 °C
Method: OECD Test Guideline 102

Boiling point (decomposition): approx. 270 - 280 °C
(1,013 hPa)
Decomposition: yes

Flash point: Not applicable

Evaporation rate: Not applicable

Self-ignition: Method: EC A.16
The substance or mixture is not classified as self heating.

Burning number: 1
Does not catch fire

Upper explosion limit / upper flammability limit: Not applicable

Lower explosion limit / Lower flammability limit: Not applicable

Vapour pressure: 0.000028 Pa (20 °C)
Method: OECD Test Guideline 104

Relative vapour density: Not applicable

Relative density: not tested.

Density: 1.3775 g/cm³
Method: OECD Test Guideline 109

Bulk density: approx. 880 kg/m³

Solubility(ies):
Water solubility: approx. 1.88 g/l (20 °C)
Method: OECD Test Guideline 105

Partition coefficient: n-octanol/water: log Pow: 1.98
Method: OECD Test Guideline 107

Auto-ignition temperature: not tested.

Decomposition temperature: > 270 - 280 °C
Heating rate: 3 K/min
Decomposition energy (mass): 499 kJ/kg
Method: DSC
No decomposition if used as directed.

Viscosity
  Viscosity, dynamic : Not applicable

Explosive properties : Not explosive
  Method: Expert judgement

Oxidizing properties: The substance or mixture is not classified as oxidizing.
  Method: Tested according to Directive 92/69/EEC.

Surface tension: Based on chemical structure, no surface activity is expected or can be predicted.

Sublimation point: not determined

Dust deflagration index (Kst): 197 m.b./s

Dust explosion class: ST1 Capable of dust explosion

Minimum ignition energy: 3 - 5 mJ (590 °C)

Particle size: 110 - 150 µm
  Median value

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions.

Conditions to avoid : None known.
  not known

Incompatible materials : not known

Hazardous decomposition products : When handled and stored appropriately, no dangerous decomposition products are known

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Ingestion

Inhalation

Acute toxicity

Product:
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Acute oral toxicity : LD50 (Rat, male): 2,100 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

Components:

Methyl paraben:
Acute oral toxicity : LD50 (Rat, male): 2,100 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

Skin corrosion/irritation

Product:
Species: Rabbit
Method: Other
Result: No skin irritation

Components:

Methyl paraben:
Species: Rabbit
Method: Other
Result: No skin irritation

Serious eye damage/eye irritation

Product:
Species: Rabbit
Result: No eye irritation
Method: Other

Components:

Methyl paraben:
Species: Rabbit
Result: No eye irritation
Method: Other

Respiratory or skin sensitisation

Product:
Test Type: Maurer optimisation test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
Components:
Methyl paraben:
Test Type: Maurer optimisation test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.

Germ cell mutagenicity
Product:
Genotoxicity in vitro
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Concentration: 125 μg/mL
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo
Test Type: Dominant lethal assay
Species: Rat (male)
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 5, 50, 500 mg/kg/bw
Method: OECD Test Guideline 478
Result: negative

Germ cell mutagenicity - Assessment
In vitro tests did not show mutagenic effects

Components:
Methyl paraben:
Genotoxicity in vitro
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Concentration: 125 μg/mL
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Genotoxicity in vivo: Test Type: Dominant lethal assay
Species: Rat (male)
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 5, 50, 500 mg/kg/bw
Method: OECD Test Guideline 478
Result: negative

Germ cell mutagenicity - Assessment: In vitro tests did not show mutagenic effects

Carcinogenicity

Product:
Species: Rat, (male and female)
Exposure time: 52 weeks
Frequency of Treatment: twice weekly
3.5 mg/kg bw/day
Method: Other
Result: negative

Species: Mouse, (male and female)
2.5 mg/kg body weight
Method: Other
Result: negative

Carcinogenicity - Assessment: Not classifiable as a human carcinogen.

Components:

Methyl paraben:
Species: Rat, (male and female)
Exposure time: 52 weeks
Frequency of Treatment: twice weekly
3.5 mg/kg bw/day
Method: Other
Result: negative

Species: Mouse, (male and female)
2.5 mg/kg body weight
Method: Other
Result: negative

Carcinogenicity - Assessment: Not classifiable as a human carcinogen.

IARC: Not listed
OSHA: Not listed
NTP: Not listed
Reproductive toxicity

**Product:**
Effects on fertility : Test Type: Fertility  
Species: Rat, male  
Application Route: oral (feed)  
Dose: 100, 1000, 10000 ppm  
General Toxicity - Parent: NOAEL: 1,000 ppm  
Method: Other

Effects on foetal development : Test Type: reproductive and developmental toxicity study  
Species: Rat  
Strain: wistar  
Application Route: Oral  
Developmental Toxicity: NOAEL: 550 mg/kg body weight  
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

**Components:**

**Methyl paraben:**
Effects on fertility : Test Type: Fertility  
Species: Rat, male  
Application Route: oral (feed)  
Dose: 100, 1000, 10000 ppm  
General Toxicity - Parent: NOAEL: 1,000 ppm  
Method: Other

Effects on foetal development : Test Type: reproductive and developmental toxicity study  
Species: Rat  
Strain: wistar  
Application Route: Oral  
Developmental Toxicity: NOAEL: 550 mg/kg body weight  
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

**STOT - single exposure**

**Product:**
Remarks: not tested.

**Components:**

**Methyl paraben:**
Remarks: no data available
STOT - repeated exposure

Product:
Remarks: not tested.

Components:
Methyl paraben:
Remarks: no data available

Repeated dose toxicity

Product:
Species: Rat, male and female
NOAEL: >= 250 mg/kg
Application Route: oral (gavage)
Exposure time: 28 d
Number of exposures: daily
Dose: 50, 250, 1000 mg/kg/day
Method: Other

Components:
Methyl paraben:
Species: Rat, male and female
NOAEL: >= 250 mg/kg
Application Route: oral (gavage)
Exposure time: 28 d
Number of exposures: daily
Dose: 50, 250, 1000 mg/kg/day
Method: Other

Aspiration toxicity

Product:
no data available

Components:
Methyl paraben:
no data available

Experience with human exposure

Product:
General Information: The possible symptoms known are those derived from the labelling (see section 2).
Further information

**Product:**
Remarks: Inhalation of dust causes slight irritation of the respiratory tract.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish:
- LC50 (Oryzias latipes (Orange-red killifish)): 59.5 mg/l
  - Exposure time: 96 h
  - Test Type: semi-static test
  - Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): 11.2 mg/l
  - Exposure time: 48 h
  - Test Type: static test
  - Method: ISO 6341

Toxicity to algae:
- EC50 (Pseudokirchneriella subcapitata (algae)): 91 mg/l
  - End point: Growth rate
  - Exposure time: 72 h
  - Test Type: static test
  - Method: ISO 8692

Toxicity to fish (Chronic toxicity):
- Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): 0.2 mg/l
  - End point: Reproduction rate
  - Exposure time: 21 d
  - Test Type: semi-static test
  - Method: OECD Test Guideline 211

Toxicity to microorganisms:
- Remarks: not tested.

Toxicity to soil dwelling organisms:
- Remarks: not tested.

Plant toxicity:
- Remarks: not tested.

Toxicity to terrestrial organisms:
- Remarks: not tested.

**Ecotoxicology Assessment**

Chronic aquatic toxicity:
- Harmful to aquatic life with long lasting effects.

**Components:**

**Methyl paraben:**

Toxicity to fish:
- LC50 (Oryzias latipes (Orange-red killifish)): 59.5 mg/l
<table>
<thead>
<tr>
<th>Test Type</th>
<th>Method</th>
<th>EC50</th>
<th>End point</th>
<th>Exposure time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates</td>
<td>OECD Test Guideline 203</td>
<td>11.2 mg/l</td>
<td>Daphnia magna (Water flea)</td>
<td>96 h</td>
<td></td>
</tr>
<tr>
<td>Toxicity to algae</td>
<td>ISO 6341</td>
<td>91 mg/l</td>
<td>Pseudokirchneriella subcapitata (algae)</td>
<td>48 h</td>
<td></td>
</tr>
<tr>
<td>Toxicity to fish (Chronic toxicity)</td>
<td>ISO 8692</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</td>
<td>OECD Test Guideline 211</td>
<td>0.2 mg/l</td>
<td>Daphnia magna (Water flea)</td>
<td>21 d</td>
<td>no data available</td>
</tr>
</tbody>
</table>

**Ecotoxicology Assessment**

Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

**Persistence and degradability**

**Product:**

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Biodegradation: 89 % (CO2 formation in % of theoretical value)</th>
<th>Exposure time: 28 d</th>
<th>Remarks: Readily biodegradable, according to appropriate OECD test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical Oxygen Demand (BOD)</td>
<td>Remarks: not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Oxygen Demand (COD)</td>
<td>Remarks: not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissolved organic carbon (DOC)</td>
<td>Remarks: not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physico-chemical removability</td>
<td>Remarks: not tested.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photodegradation</td>
<td>Remarks: not tested.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Components:
Methyl paraben:
Biodegradability: Inoculum: activated sludge, domestic, non-adapted
Carbon dioxide (CO2): Result: Readily biodegradable.
Biodegradation: 89 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential
Product:
Bioaccumulation: Remarks: Due to the low logPow bioaccumulation is not expected

Components:
Methyl paraben:
Bioaccumulation: Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n-octanol/water: log Pow: 1.98 (20 °C)
Method: Other

Mobility in soil
Product:
Distribution among environmental compartments: Remarks: Based upon the calculated log Koc, adsorption to the soil phase is not expected.

Components:
Methyl paraben:
Distribution among environmental compartments: Koc: 280
Method: estimated

Other adverse effects
Product:
Environmental fate and pathways: Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Additional ecological information: The product should not be allowed to enter drains, water courses or the soil.

Components:
Methyl paraben:
Results of PBT and vPvB assessment: The substance is not identified as a PBT or as a vPvB substance.
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste Code: NONE

Waste from residues: Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Contaminated packaging: Regulations concerning reuse or disposal of used packaging materials must be observed.

SECTION 14. TRANSPORT INFORMATION

DOT not restricted
IATA not restricted
IMDG not restricted

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Combustible dust; Serious eye damage or eye irritation

SARA 313: This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

Clean Water Act
Contains no known priority pollutants at concentrations greater than 0.1%.

The components of this product are reported in the following inventories:
TSCA: All components of this product are listed on the TSCA Inventory. However, the primary use of this product is NOT subject to TSCA but rather to FDA and must comply with the FDA regulations.
Observe national and local legal requirements
Observe all necessary precautions for handling fine powders to control dust. May present dust explosion hazard. Reference exposure limit: ACGIH (TLV) for particulate matter - 10 mg/m³ inhalable particulates, 3 mg/m³ respirable particulates. OSHA Permissible Limit (PEL) for particulate matter: total dust: 15 mg/m³; respirable fraction: 5 mg/m³

Revision Date : 03/13/2018

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