

SAFEWING MP I 1938 ECO_19093310284_Bulk

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Substance key: 000000130378

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Version : 5 - 2 / USA

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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 Safety 1-704-331-7710
Emergency tel. number:	+1 800-424-9300 CHEMTREC

Trade name:	SAFEWING MP I 1938 ECO_19093310284_Bulk
Material number:	190933
Synonyms:	Product Has No Synonyms
Primary product use:	Aircraft de-icing
Chemical family:	Aqueous solution of corrosion inhibitors and surface active agents in propylene glycol

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	: Mixture
Substance name	: Aqueous solution of corrosion inhibitors and surface active agents in propylene glycol

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Propylene Glycol	57-55-6	60 - 100

SECTION 4. FIRST AID MEASURES

General advice	: Remove/Take off immediately all contaminated clothing.
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.

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- In case of skin contact : Immediately flush skin under running water for at least fifteen minutes. Seek medical attention if irritation or chemical burn is present.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if irritation develops and persists.
- 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
Carbon dioxide (CO₂)
Alcohol-resistant foam
Dry powder
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : In case of fires, hazardous combustion gases are formed:
Carbon monoxide (CO)

Burning produces noxious and toxic fumes.
- Further information : Wear positive pressure self-contained breathing apparatus (SCBA) and full protective equipment.
- Special protective equipment for firefighters : Self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.
Wearing appropriate personal protective equipment, contain spill, collect onto inert absorbent, and place in a suitable container.
- Environmental precautions : Do not allow to enter drains or waterways
- Methods and materials for : Soak up with inert absorbent material (e.g. sand, silica gel,

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containment and cleaning up

acid binder, universal binder, sawdust).

Can be landfilled or incinerated, when in compliance with local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Observe the general rules of industrial fire protection

Advice on safe handling : Avoid contact with skin and eyes.

Technical measures/Precautions : Keep container closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propylene Glycol	57-55-6	TWA	10 mg/m3	US WEEL

Engineering measures : Local ventilation recommended - mechanical ventilation may be used.

Personal protective equipment

Hand protection

Remarks : Butyl Rubber, PVC Or Neoprene.

Eye protection : Safety glasses or chemical splash 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.

Hygiene measures : Keep away from food and drink.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : orange

Odour : almost odourless

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Odour Threshold	:	not tested.
pH	:	8 - 9.5 (20 °C) Method: DIN 19268 Determined in the undiluted form
Solidification point	:	< -40 °C Method: ASTM D 1177
Boiling point	:	125 °C Method: DIN 53171
Flash point	:	> 100 °C Method: DIN 51376
Evaporation rate	:	not tested.
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	not tested.
Lower explosion limit	:	not tested.
Combustion number :		Not applicable
Vapour pressure	:	not tested.
Relative vapour density	:	not tested.
Relative density	:	1.0452 (20 °C)
Density	:	1.043 g/cm ³ (20 °C) Method: DIN 51757
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	completely miscible (20 °C)
Solubility in other solvents	:	not tested. Solvent: fat
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	> 400 °C Method: DIN 51794
Decomposition temperature	:	Heating rate : 3 K/min Method: DSC No decomposition up to 300 °C.

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Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	29 - 31 mm ² /s (20 °C) Method: DIN 51562
Explosive properties	:	Not explosive Method: Expert judgement
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Method: Expert judgement
Metal corrosion rate	:	< 6.25 mm/a
Minimum ignition energy	:	not tested.
Particle size	:	Not applicable

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	:	No dangerous reaction known under conditions of normal use. Stable
Conditions to avoid	:	None 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**

None known.

Acute toxicity**Product:**

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Remarks: not tested.
Acute dermal toxicity	:	Remarks: not tested.

Components:**Propylene Glycol:**

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Acute oral toxicity	:	LD50 (Rat, male and female): 22,000 mg/kg Method: Other GLP: no
Acute inhalation toxicity	:	LC50 (Rabbit): > 317.042 mg/l Exposure time: 2 h Method: Other GLP: no
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: Other GLP: no

Skin corrosion/irritation**Product:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Components:**Propylene Glycol:**

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: No information available.

Serious eye damage/eye irritation**Product:**

Species: rabbit eye
Result: No eye irritation
Method: OECD Test Guideline 405

Components:**Propylene Glycol:**

Species: rabbit eye
Result: non-irritant
Method: OECD Test Guideline 405
GLP: No information available.

Respiratory or skin sensitisation**Product:**

Remarks: not tested.

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Components:**Propylene Glycol:**

Test Type: Guinea pig maximization test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: No information available.

Test Type: Mouse local lymphnode assay
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.
GLP: No information available.

Germ cell mutagenicity**Product:**

Germ cell mutagenicity - Assessment : No information available.

Components:**Propylene Glycol:**

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Concentration: <= 10 mg/plate
Metabolic activation: with
Method: Ames test
Result: negative
GLP: No information available.

: Test Type: Chromosome aberration test in vitro
Species: Cultured peripheral human lymphocytes
Concentration: 7,4 - 3810 µg/ml
Metabolic activation: with and without
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Rat (male)
Strain: Sprague-Dawley
Cell type: Bone marrow
Application Route: oral (gavage)
Exposure time: 6 - 24 - 48 h
Dose: 30 - 2500 - 5000 mg/kg
Method: Other
Result: negative
GLP: no

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Test Type: Chromosome Aberration Test
Species: Mouse (male)
Cell type: Erythrocyten
Application Route: Intraperitoneal injection
Exposure time: 18 h
Dose: 2500-5000-10000-15000 mg/kg
Method: Other
Result: negative
GLP: No information available.

Germ cell mutagenicity - Assessment : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

Carcinogenicity**Product:**

Carcinogenicity - Assessment : No information available.

Components:**Propylene Glycol:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

IARC Not listed

OSHA Not listed

NTP Not listed

Reproductive toxicity**Product:**

Reproductive toxicity - Assessment : No information available.

No information available.

Components:**Propylene Glycol:**

Effects on fertility :
Test Type: Two generation study
Species: Mouse
Sex: male and female
Dose: 1820 - 4800 - 10100 mg/kg
Exposure time: 126 d
CD1
Application Route: oral (gavage)
NOAEL: 10,100 mg/kg,
F1: 10,100 mg/kg,

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F2: 10,100 mg/kg,
Method: Other
GLP: No information available.

Effects on foetal development : Species: Mouse
Application Route: oral (gavage)
Exposure time: gestation day 6-15
Dose: 52 - 520 - 10400 mg/kg
Group: yes
10,400 mg/kg
52 mg/kg
Number of exposures: daily
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

STOT - single exposure**Product:**

Remarks: not tested.

Components:**Propylene Glycol:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure**Product:**

Remarks: not tested.

Components:**Propylene Glycol:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity**Product:**

Remarks: not tested.

Components:**Propylene Glycol:**

Species: Rat, male and female
NOAEL: 1,700 - 2,100 mg/kg
Application Route: oral (feed)
Exposure time: 2 a

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Number of exposures: daily
Dose: 200-2100 mg/kg
Group: yes
Method: Other
GLP: no

Species: Cat, male
NOAEL: 443 mg/kg
Application Route: oral (feed)
Exposure time: 69 - 94 d
Number of exposures: daily
Dose: 80 - 4239 mg/kg
Group: yes
Method: Other
GLP: no

Species: Rat, male and female
NOAEL: 1 - 2.2 mg/l
Application Route: Inhalation
Exposure time: 90 d
Number of exposures: 6 hours/day, 5 days/week
Dose: 0,16 - 1,01 - 2,18 mg/l
Group: yes
Method: Other
GLP: No information available.

Species: Mouse, female
NOAEL: 0.02
Application Route: Skin contact
Exposure time: Lifespan
Number of exposures: 2x / w
Dose: 10-50-100% / 0.02 ml acetone
Group: yes
Method: Other
GLP: no
Remarks: No pathological findings

Aspiration toxicity**Components:****Propylene Glycol:**

No aspiration toxicity classification

Experience with human exposure**Product:**

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

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 7,071 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae : EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 10,000 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
- NOEC (Desmodesmus subspicatus (Scenedesmus subspicatus)): 10,000 mg/l
End point: Growth rate
Method: OECD Test Guideline 201
- Toxicity to bacteria : EC50 (Vibrio fischerii (Bacteria)): > 10,000 mg/l
Exposure time: 30 min
Method: ISO 11348-2

Components:**Propylene Glycol:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: no
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201

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GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)):

15,000 mg/l

End point: Growth rate

Exposure time: 14 d

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 201

GLP: yes

Toxicity to fish (Chronic toxicity) : Chronic Toxicity Value (Fish): 2,500 mg/l
Exposure time: 30 d
End point: Other
Method: Other
GLP: no

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia spec.): 13,020 mg/l
Exposure time: 7 d
End point: Reproduction rate
Test Type: semi-static test
Analytical monitoring: yes
Method: Other
GLP: No information available.

Toxicity to bacteria : NOEC (Pseudomonas putida): > 20,000 mg/l
End point: Growth rate
Exposure time: 18 h
Test Type: aquatic
Analytical monitoring: no
Method: Other
GLP: no
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms : Remarks: The study is not necessary from a scientific perspective.

Plant toxicity : Remarks: The study is not necessary from a scientific perspective.

Sediment toxicity : Remarks: The study is not necessary from a scientific perspective.

Toxicity to terrestrial organisms : Remarks: The study is not necessary from a scientific perspective.

Persistence and degradability**Product:**

Biodegradability : Result: Readily biodegradable
Biodegradation: 98 %
Exposure time: 10 d

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Method: OECD Test Guideline 301E

Chemical Oxygen Demand (COD) : 1.4 kg/kg
Method: DIN 38409-H-41

Components:**Propylene Glycol:**

Biodegradability : aerobic
Inoculum: activated sludge, domestic
Concentration: 100 mg/l ThOD
BOD in % of theoretical OD
Result: Readily biodegradable
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

aerobic
Inoculum: activated sludge, domestic
Concentration: 50.3 mg/l
CO2 formation in % of theoretical value
Result: Readily biodegradable
Biodegradation: 90.6 %
Exposure time: 64 d
Method: OECD Test Guideline 306
GLP: yes

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: not tested.

Components:**Propylene Glycol:**

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: calculated
GLP: no

Mobility in soil**Product:**

Distribution among environmental compartments : Remarks: not tested.

Components:**Propylene Glycol:**

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
log Koc: 0.46

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Method: other (calculated)

Other adverse effects**Product:**

Environmental fate and pathways : Remarks: no data available

Additional ecological information : Biologically degradable, when diluted may be degraded in biological purification plants
Harmful effects to fish and bacteria: not harmful**Components:****Propylene Glycol:**

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**RCRA - Resource Conservation and Recovery Act Waste Code : No -- Not as sold.
: NONE

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

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14. TRANSPORT INFORMATION

DOT not restricted

IATA not restricted

IMDG not restricted

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

A characteristic waste RQ of 100 lbs applies to this product in a waste form: NONE

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 : No SARA Hazards**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**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 On TSCA Inventory

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals;

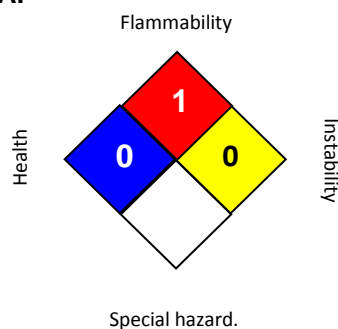
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OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information**NFPA:**

Observe national and local legal requirements
None known.

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This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.

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