



SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

RADIATOR LIQUID

Version 1.0

Print Date 26.10.2017

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : RADIATOR LIQUID

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.

Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : IPONE SA
Chemin La Meunière
13480 Cabriès
Telephone : +33(0)4.42.94.05.65
E-mail address : info@ipone.fr

1.4. Emergency telephone number

Emergency telephone number : Emergency phone number IPONE SA
Available 24h/7d
04.42.94.05.65 from within France
+33(0)4.42. 94.05.65 international

Poison Control Centers in France
(Service ORFILA by the INRS)
Available 24h/7d
Information limited to intoxications
01 45 42 59 59 from within France
+33 1 45 42 59 59 international

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Acute toxicity (Oral)	Category 4	---	H302
Specific target organ toxicity - repeated exposure	Category 2	Kidney	H373


For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

- Human Health : See section 11 for toxicological information.
- Physical and chemical hazards : See section 9 for physicochemical information.
- Potential environmental effects : See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

- Hazard symbols : 
- Signal word : Warning
- Hazard statements : H302 Harmful if swallowed.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.
- Precautionary statements
- Prevention : P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
- Response : P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P314 Get medical advice/ attention if you feel unwell.
- Disposal : P501 Dispose of contents/ container to an approved waste disposal plant.

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Hazardous components which must be listed on the label:

- ethanediol

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
		Hazard class / Hazard category	Hazard statements
ethanediol			
Index-No. : 603-027-00-1	>= 30 - < 50	Acute Tox.4 STOT RE2	H302 H373
CAS-No. : 107-21-1			
EC-No. : 203-473-3			
EU REACH- : 01-2119456816-28-xxxx			
Reg. No.			

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

- General advice : Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air. If symptoms call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
- If swallowed : Rinse mouth with water. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms : See Section 11 for more detailed information on health effects and symptoms.

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Effects : See Section 11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Incomplete combustion may form toxic pyrolysis products.

Hazardous combustion products : Carbon monoxide, Carbon dioxide (CO₂)

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.

Further advice : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Keep away unprotected persons. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.

Further information : Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

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See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Keep container tightly closed. Avoid formation of aerosol. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Suitable materials for containers: Carbon steel; Stainless steel; polyethylene; Unsuitable materials for containers: Aluminium; natural rubber

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Further information on storage conditions : Keep tightly closed in a dry and cool place.

Advice on common storage : Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	ethanediol	CAS-No. 107-21-1
Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)		

DNEL
Workers, Long-term - local effects, Inhalation : 35 mg/m3

DNEL
Workers, Long-term - systemic effects, Skin contact : 106 mg/kg bw/day

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DNEL
Consumers, Long-term - local effects, Inhalation : 7 mg/m³

DNEL
Consumers, Long-term - systemic effects, Skin contact : 53 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh water	: 10 mg/l
Marine water	: 1 mg/l
Intermittent releases	: 10 mg/l
Sewage treatment plant (STP)	: 199,5 mg/l
Fresh water sediment	: 20,9 mg/kg
Soil	: 1,53 mg/kg

Other Occupational Exposure Limit Values

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, Time Weighted Average (TWA):
20 ppm, 52 mg/m³
Indicative

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, Short Term Exposure Limit (STEL):
40 ppm, 104 mg/m³
Indicative

France. Threshold Limit Values (VLEP) for Occupational Exposure, French Short Term Limit (VLCT);, Vapor.
40 ppm, 104 mg/m³
Regulatory indicative (VRI)

France. Threshold Limit Values (VLEP) for Occupational Exposure, French Time Weighted Average (VME);, Vapor.
20 ppm, 52 mg/m³
Regulatory indicative (VRI)

France. Threshold Limit Values (VLEP) for Occupational Exposure, Skin designation:, Vapor.
Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

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Respiratory protection

Advice : Required, if exposure limit is exceeded (e.g. OEL).
Respiratory protection complying with EN 141.
Recommended Filter type:A

Hand protection

Advice : Protective gloves complying with EN 374.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Protective gloves should be replaced at first signs of wear.
The following materials are suitable:
butyl-rubber
Nitrile rubber

Eye protection

Advice : Safety glasses with side-shields conforming to EN166

Skin and body protection

Advice : Wear personal protective equipment.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form : liquid
Colour : Turquoise
Odour : odourless
Odour Threshold : not determined
pH : not determined
Freezing point : not determined
Boiling point/boiling range : 100 - 197 °C
Flash point : > 111 °C
Evaporation rate : not determined

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Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	28 %(V)
Lower explosion limit	:	3,2 %(V)
Vapour pressure	:	not determined
Relative vapour density	:	not determined
Density	:	1,07 - 1,08 g/cm ³ (20 °C)
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	> 398 °C
Thermal decomposition	:	> 200 °C
Viscosity, dynamic	:	not determined
Explosivity	:	Product is not explosive.
Oxidizing properties	:	not oxidising

9.2. Other information

No further information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice : No decomposition if stored and applied as directed.

10.2. Chemical stability

Advice : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid : Heat, flames and sparks. Exposure to moisture
Temperatures above 40°C. Exposure to light.
Thermal decomposition : >200 °C

10.5. Incompatible materials

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Materials to avoid : Strong oxidizing agents, Acids, Bases, Combustible material

10.6. Hazardous decomposition products

Hazardous decomposition products : Carbon oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Data for the product

Acute toxicity

Oral

Please find this information in the listing of the component/components below in this section.

Inhalation

Please find this information in the listing of the component/components below in this section.

Dermal

Please find this information in the listing of the component/components below in this section.

Irritation

Skin

Result : Please find this information in the listing of the component/components below in this section.

Eyes

Result : Please find this information in the listing of the component/components below in this section.

Sensitisation

Result : Please find this information in the listing of the component/components below in this section.

CMR effects

CMR Properties

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Carcinogenicity	:	Contains no ingredient listed as a carcinogen
Mutagenicity	:	Contains no ingredient listed as a mutagen
Teratogenicity	:	It is not considered teratogenic.
Reproductive toxicity	:	Contains no ingredient listed as toxic to reproduction

Specific Target Organ Toxicity

Single exposure

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

Remark	:	May cause damage to organs through prolonged or repeated exposure.
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Other toxic properties

Repeated dose toxicity

no data available

Aspiration hazard

No aspiration toxicity classification,

Component:	ethanediol	CAS-No. 107-21-1
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Acute toxicity

Oral

No valid data available.

Inhalation

LC50	:	> 2,5 mg/l (Rat; 6 h; dust/mist)
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Dermal

LD50	:	> 3500 mg/kg (Mouse, male and female)
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Irritation

Skin

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Result : No skin irritation (Rabbit)

Eyes

Result : No eye irritation (Rabbit)

Sensitisation

Result : not sensitizing (Maximisation Test; Dermal; Guinea pig) (OECD Test Guideline 406)

SECTION 12: Ecological information

12.1. Toxicity

Component:	ethanediol	CAS-No. 107-21-1
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Acute toxicity

Fish

LC50 : 72860 mg/l (Pimephales promelas; 96 h) (static test; EPA OPP 72-1)

Toxicity to daphnia and other aquatic invertebrates

EC50 : > 100 mg/l (Daphnia magna; 48 h) (OECD Test Guideline 202)

algae

EC50 : 6500 - 13000 mg/l (Selenastrum capricornutum; 96 h) (End point: Growth rate)

12.2. Persistence and degradability

Component:	ethanediol	CAS-No. 107-21-1
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Persistence and degradability

Biodegradability

Result : 90 - 100 % (aerobic; activated sludge; 53 mg/l; Related to: Dissolved organic carbon (DOC); Exposure Time: 10 d)(OECD Test Guideline 301A)
Readily biodegradable

12.3. Bioaccumulative potential

Component:	ethanediol	CAS-No. 107-21-1
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Bioaccumulation

Result : log Kow ca. -1,36 (23 °C) ((calculated))

Bioaccumulation is not expected.

12.4. Mobility in soil

Component:	ethanediol	CAS-No. 107-21-1
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Mobility

Water : The product is water soluble.

Air : The substance will not evaporate into the atmosphere from the water surface.

Soil : Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

Data for the product

Results of PBT and vPvB assessment

Result : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)., This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects

Data for the product

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. If recycling is not practicable, dispose of in compliance with local regulations.

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European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

Not dangerous goods for ADR, RID, IMDG and IATA.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

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

IMDG : Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Data for the product

Nomenclature of classified installations (ICPE) - Directive Seveso II : 1510 Storage of combustible products, substances and matters above 500 tons in closed warehouse.

Nomenclature of classified installations (ICPE) - Directive : NC Not classified

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Seveso III

Component:	ethanediol	CAS-No. 107-21-1
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Notification status

ethanediol:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
EINECS	YES	203-473-3
ENCS (JP)	YES	(2)-230
IECSC	YES	
ISHL (JP)	YES	(2)-230
JEX (JP)	YES	(2)-230
KECI (KR)	YES	KE-13169
NZIOC	YES	HSR001534
PICCS (PH)	YES	
TSCA	YES	

15.2. Chemical safety assessment

no data available

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level

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LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
PBT	persistent, bioaccumulative and toxic
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Further information

- Key literature references and sources for data : Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.
- Methods used for product classification : The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
- Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
- Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.