SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : COOLING SYSTEM CLEAN
Product code : 90111

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

Additive

1.3. Details of the supplier of the safety data sheet

Registered company name : MOTUL
Address : 119, Boulevard Felix Faure. 93300 AUBERVILLIERS CEDEX FRANCE
Telephone : 33.1.48.11.70.00. Fax: 33.1.48.33.28.79. Telex: .
Email : motul_hse@motul.fr

1.4. Emergency telephone number : +44 (0) 1235 239 670.

Association/Organisation : CARECHEM 24/7 NCEC..

Other emergency numbers

UNITED STATES: 001 866 928 0789 / CANADA: 001 800 579 7421 / MEXICO : +52 55 5004 8763 / MIDDLE EAST - AFRICA : +44 1235 239671
BRAZIL : +55 11 3197 5891 / COLOMBIA : +57 601 508 7337 / ARGENTINA : +54 11 5984 3690 / CHILE : +562 2582 9336
Ireland : +353 1 8092566
24 hours a day, 7 days a week

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin irritation, Category 2 (Skin Irrit. 2, H315).
Eye irritation, Category 2 (Eye Irrit. 2, H319).
This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.
This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :

GHS07

Signal Word :
WARNING
Hazard statements :

H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statements - Prevention :

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response :

P302 + P352	IF ON SKIN: Wash with plenty of water
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Precautionary statements - Disposal :

P501	Dispose of contents / container in accordance with local / regional / national / international regulations

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 59 of REACH: http://echa.europa.eu/fr/candidate-list-table
The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.
The mixture does not contain substances> = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	Classification (EC) 1272/2008	Note	%
CAS: 111-76-2 EC: 203-905-0 2-BUTOXYETHANOL	GHS06 Dgr Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 3, H331	[i]	2.5 <= x % < 10
CAS: 110-91-8 EC: 203-815-1 MORPHOLINE	GHS07, GHS05, GHS02 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Acute Tox. 4, H332	[i]	0 <= x % < 2.5

Specific concentration limits:

Identification	Specific concentration limits	ATE
CAS: 111-76-2 EC: 203-905-0 2-BUTOXYETHANOL		oral: ATE = 1200 mg/kg BW

Information on ingredients :

(Full text of H-phrases: see section 16)
[i] Substance for which maximum workplace exposure limits are available.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.
NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

Remove the victim to fresh air. If the symptoms persist, call a physician.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.
If there is any redness, pain or visual impairment, consult an ophthalmologist.
Wash immediately and abundantly with water, including under the eyelids.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.
Watch out for any remaining product between skin and clothing, watches, shoes, etc.
If the contaminated aera is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.
Immediately remove all soiled clothing.
Wash immediately and abundantly with soap and water.

In the event of swallowing :

Do not give the patient anything orally.
In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.
Seek medical attention immediately, showing the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

Dry agent, foam, carbon dioxide.

Unsuitable methods of extinction

High volume water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
Do not breathe in smoke.
In the event of a fire, the following may be formed :
- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.
Spilled product may make surfaces slippery.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.
Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.
Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
Do not swallow
Do not get in eyes, on skin, or on clothing.

Fire prevention :

Prevent access by unauthorised personnel.
Take precautionary measures against static discharges by bonding and grounding equipment.
No smoking.

Recommended equipment and procedures :

For personal protection, see section 8.
Observe precautions stated on label and also industrial safety regulations.
Avoid skin and eye contact with this mixture.
Ensure good ventilation at the workplace

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.
Do not breathe fumes, vapour, spray.

7.2. Conditions for safe storage, including any incompatibilities

Store between 5°C and 40°C in a dry, well ventilated place.
Only use hydrocarbon-resistant containers, joints and pipes.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- European Union :

CAS	VME-mg/m3 :	VME-ppm :	VLE-mg/m3 :	VLE-ppm :	Notes :
111-76-2	98	20	246	50	Peau
110-91-8	36	10	72	20	-

- UK :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
111-76-2	25 ppm 123 mg/m3	50 ppm 246 mg/m3	-	Sk. BMGV	-
110-91-8	10 ppm 36 mg/m3	20 ppm 72 mg/m3	-	Sk	-

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, if possible with extractor fans at work posts and appropriate general extraction.
Personnel shall wear regularly laundered overalls.

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.
Store personal protective equipment in a clean place, away from the work area.
Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.
Use eye protectors designed to protect against liquid splashes
Before handling, wear safety goggles with protective sides accordance with standard ISO 16321.
In the event of high danger, protect the face with a face shield.
Prescription glasses are not considered as protection.
Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.
Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.
Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.
Gloves must be selected according to the application and duration of use at the workstation.
Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.
Type of gloves recommended :
- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

Glove thickness:	0.38 mm	-	-	-	-
Break-through time:	> 480 mn	-	-	-	-

- Body protection

Avoid skin contact.
Wear suitable protective clothing.
Suitable type of protective clothing :
In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.
In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.
Work clothing worn by personnel shall be laundered regularly.
After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Breathing apparatus only when aerosol or spray are formed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid.

Colour

Unspecified

Odour

Odour threshold :	Not stated.

Melting point

Melting point/melting range :	Not relevant.

Freezing point

Freezing point / Freezing range :	Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not relevant.

Flammability

Flammability (solid, gas) :	Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) :	Not stated.
Explosive properties, upper explosivity limit (%) :	Not stated.

Flash point

Flash Point :	94.00 °C.

Auto-ignition temperature

Self-ignition temperature :	Not relevant.

Decomposition temperature

Decomposition point/decomposition range :	Not relevant.

pH

pH (aqueous solution) :	Not stated.
pH :	Not stated.
	Neutral.

Kinematic viscosity

Viscosity :	1.2 mm2/s à 40°C
Viscosity:	v < 7 mm2/s (40°C)

Solubility

Water solubility :	Partially soluble.
Fat solubility :	Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water :	Not stated.

Vapour pressure

Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).

Density and/or relative density

Density :	= 1

Relative vapour density

Vapour density :	Not stated.

Particle characteristics

The mixture does not contain nanoforms.

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid :
- frost

Keep away from heat and from sources of ignition
Take precautionary measures against static discharges.

10.5. Incompatible materials

Strong oxidants
Acids

10.6. Hazardous decomposition products

The thermal decomposition may release/form :
- carbon monoxide (CO)
- carbon dioxide (CO_2)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1. Substances

a) Acute toxicity :

2-BUTOXYETHANOL (CAS: 111-76-2)

Oral route :	LD50 = 1200 mg/kg body weight Species : Rat
Inhalation route (Vapours) :	LC50 3 Duration of exposure : 4 h

b) Skin corrosion/skin irritation :

No data available.

c) Serious damage to eyes/eye irritation :

No data available.

d) Respiratory or skin sensitisation :

No data available.

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

No data available.

11.1.2. Mixture

11.1.2.1 Information on hazard classes

a) Acute toxicity :

Oral route :	No data available. No data available.
Dermal route :	No data available.

Inhalation route (Dusts/mist) :

b) Skin corrosion/skin irritation :

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following

exposure up to four hours.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non allergic contact dermatitis and absorption through the skin.

c) Serious damage to eyes/eye irritation :

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.
Mild eye irritation

d) Respiratory or skin sensitisation :

No data available.

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

"Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons."
May cause lung damage if swallowed

11.1.2.2 Other information

11.2. Information on other hazards

Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

2-BUTOXYETHANOL (CAS: 111-76-2)

Fish toxicity :	LC50 = 1490 mg/l Species : Lepomis macrochirus Duration of exposure : 96 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

2-BUTOXYETHANOL (CAS: 111-76-2)

Biodegradability :	Rapidly degradable.

12.3. Bioaccumulative potential

12.3.1. Substances

2-BUTOXYETHANOL (CAS: 111-76-2)

Octanol/water partition coefficient :	log Koe = 0.81

12.4. Mobility in soil

Water soluble
Mobile in soil

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with environmental effects.

12.7. Other adverse effects

Do not dispose of the product in the natural environment, effluents or surface waters.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

14.1. UN number or ID number

-

14.2. UN proper shipping name

-

14.3. Transport hazard class(es)

-

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

14.7. Maritime transport in bulk according to IMO instruments

-

SECTION 15 : REGULATORY INFORMATION

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

Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2023/707.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2024/2564. (ATP 22)

Container information:

No data available.

Particular provisions :

No data available.

Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

Authorisations agreed under Title VII of Regulation (EC) No.1907/2006 (REACH):

The mixture does not contain any substance subject to authorisation according to Annex XIV of REACH Regulation (EC) No 1907/2006: https://echa.europa.eu/fr/authorisation-list.

Substances that deplete the ozone layer (EC Regulation No. 1005/2009, Montreal Protocol) :

The mixture does not contain any substance posing a risk to the ozone layer.

Persistent organic pollutants (POP) (Regulation (EU) 2019/1021):

The mixture does not contain a persistent organic pollutant.

PIC Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (Rotterdam Convention):

The mixture is not subject to the Prior Informed Consent (PIC) procedure.

Explosives precursors :

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.
It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.
LC50 : The concentration of a test substance resulting in 50% lethality in a given period.
REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.
ATE : Acute Toxicity Estimate
BW : Body Weight
STEL : Short-term exposure limit
TWA : Time Weighted Averages
TLV : Threshold Limit Value (exposure)
AEV : Average Exposure Value.
ADR : European agreement concerning the international carriage of dangerous goods by Road.
GHS07 : Exclamation mark
IATA : International Air Transport Association.
IMDG : International Maritime Dangerous Goods.
ICAO : International Civil Aviation Organisation
PBT: Persistent, bioaccumulable and toxic.
PIC: Prior Informed Consent.
POP: Persistent Organic Pollutant.
RID : Regulations concerning the International carriage of Dangerous goods by rail.
SVHC : Substances of very high concern.
vPvB : Very persistent, very bioaccumulable.
WGK : Wassergefahrdungsklasse (Water Hazard Class).

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