

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)



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

1.1. Product identifier

Product name : ENGINE FLUSH

Product code : 29304

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 : ORFILA.

Other emergency numbers

BRAZIL : +55 11 3197 5891 / COLOMBIA : +57 1 508 7337 / ARGENTINA : +54 11 5984 3690 / CHILE : +562 2582 9336

Ireland : +353 1 8092566

UNITED STATES: 001 866 928 0789 / CANADA: 001 800 579 7421 / MEXICO : +52 55 5004 8763 / MIDDLE EAST - AFRICA : +44 1235 239671

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.

Repeated exposure may cause skin dryness or cracking (EUH066).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Aspiration hazard, Category 1 (Asp. Tox. 1, H304).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

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

Hazard pictograms :



GHS07



GHS08

Signal Word :

DANGER

Product identifiers :

EC 918-481-9

EC 276-159-7

HYDROCARBONS, C10-C13, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

AMINES, C12-14-TERT-ALKYL, REACTION PRODUCTS WITH O,O-DI-C1-14-ALKYL HYDROGEN
PHOSPHORODITHIOATE

Hazard statements :

H304

May be fatal if swallowed and enters airways.

H317

May cause an allergic skin reaction.

H412

Harmful to aquatic life with long lasting effects.

EUH066

Repeated exposure may cause skin dryness or cracking.

Precautionary statements - General :

P101

If medical advice is needed, have product container or label at hand.

P102

Keep out of reach of children.

Precautionary statements - Prevention :

P261

Avoid breathing vapours.

P273

Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statements - Response :
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P302 + P352 IF ON SKIN: Wash with plenty of water
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
Precautionary statements - Storage :
P405 Store locked up.
Precautionary statements - Disposal :
P501 Dispose of contents / container according to prefectural ordinances.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 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.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
CAS: 64742-48-9 EC: 918-481-9 REACH: 01-2119457273-39 HYDROCARBONS, C10-C13, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS	GHS08 Dgr Asp. Tox. 1, H304 EUH:066		50 $\leq$ x % < 100
CAS: 71888-91-0 EC: 276-159-7 AMINES, C12-14-TERT-ALKYL, REACTION PRODUCTS WITH O,O-DI-C1-14-ALKYL HYDROGEN PHOSPHORODITHIOATE	GHS09, GHS07, GHS02 Wng Flam. Liq. 3, H226 Skin Sens. 1, H317 Aquatic Chronic 2, H411		2.5 $\leq$ x % < 10

(Full text of H-phrases: see section 16)

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 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.

In the event of an allergic reaction, seek medical attention.

If the contaminated area 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.

If swallowed accidentally, do not allow to drink, do not induce vomiting and transfer to hospital immediately by ambulance. Show the label to the doctor.

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

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.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

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 :

Never inhale this mixture.

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.

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.

Storage

Keep out of reach of children.

Keep away from food and drink, including those for animals.

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**

No data available.

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

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



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 in accordance with standard EN166.

- Hand protection

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 :

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

Recommended properties :

- Impervious gloves in accordance with standard EN ISO 374-2

- 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****General information :**

Physical state :	Fluid liquid.
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Color:	Amber
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Important health, safety and environmental information

pH :	Not relevant.
Flash Point :	68.00 °C.
Explosive properties, lower explosivity limit (%) :	0.6 vol %
Explosive properties, upper explosivity limit (%) :	7 vol %
Vapour pressure (50°C) :	Not relevant.
Density :	< 1
Water solubility :	Insoluble.
Viscosity :	14 mm2/s < v <= 20,5 mm2/s (40°C)

9.2. Other information

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

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 (CO₂)**SECTION 11 : TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

May cause an allergic reaction by skin contact.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

11.1.1. Substances**Acute toxicity :**

AMINES, C12-14-TERT-ALKYL, REACTION PRODUCTS WITH O,O-DI-C1-14-ALKYL HYDROGEN PHOSPHORODITHIOATE (CAS: 71888-91-0)

Oral route : LD50 > 2000 mg/kg

Species : Rat

HYDROCARBONS, C10-C13, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS (CAS: 64742-48-9)

Oral route : LD50 > 5000 mg/kg

Species : Rat

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route : 2,000 < LD50 <= 5000 mg/kg

Species : Rat

OCDE Ligne directrice 402 (Toxicité aiguë par voie cutanée)

Inhalation route (Vapours) : LC50 5000

11.1.2. Mixture**Skin corrosion/skin irritation :**

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.

Serious damage to eyes/eye irritation :

Mild eye irritation

Aspiration hazard :

May be fatal if swallowed and enters airways.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

"Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons."

May cause lung damage if swallowed

SECTION 12 : ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

AMINES, C12-14-TERT-ALKYL, REACTION PRODUCTS WITH O,O-DI-C1-14-ALKYL HYDROGEN PHOSPHORODITHIOATE (CAS: 71888-91-0)

Fish toxicity : LC50 = 2.5 mg/l
Species : Brachydanio rerio
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 4.9 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OCDE Ligne directrice 202 (Daphnia sp., essai d'immobilisation immédiate)

HYDROCARBONS, C10-C13, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS (CAS: 64742-48-9)

Fish toxicity : LC50 > 1000 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h
OCDE Ligne directrice 203 (Poisson, essai de toxicité aiguë)

NOEC = 0.10 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 28 jours

Crustacean toxicity : EC50 > 1000 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OCDE Ligne directrice 202 (Daphnia sp., essai d'immobilisation immédiate)

NOEC = 0.18 mg/l
Species : Daphnia magna
Duration of exposure : 21 jours

Algae toxicity : ECr50 > 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

NOEC = 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

AMINES, C12-14-TERT-ALKYL, REACTION PRODUCTS WITH O,O-DI-C1-14-ALKYL HYDROGEN PHOSPHORODITHIOATE (CAS: 71888-91-0)

Biodegradability : Non-rapidly degradable.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Not very mobile in soil.

The product is insoluble in water and will spread on the surface

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

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

German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 2 : Hazardous for water.

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, preferably 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

-

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

-

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. 2020/1182 (ATP 15)

- Container information:

Packaging to be fitted with child-resistant fastenings (see EC Regulation No. 1272/2008, Annex II, Part 3).

Containers to be fitted with a tactile warning of danger (see EC Regulation No. 1272/2008, Annex II, Part 3).

- Particular provisions :

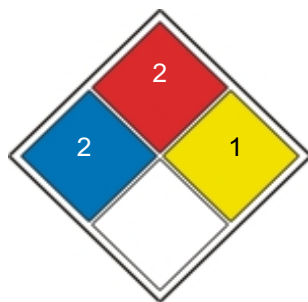
No data available.

- German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 2 : Hazardous for water.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=2 Inflammability=2 Instability/Reactivity=1 Specific Risk=none

**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.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS07 : Exclamation mark

GHS08 : Health hazard

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.