according to Regulation (EC) No. 1907/2006

Givaudan

MEFRANAL

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

1.1 Product identifier

Sales No. : 0010593

MEFRANAL

Substance name : 3-METHYL-5-PHENYL-1-PENTANAL

Identifier

CAS-No.: 55066-49-4 EC-No. : 433-900-0 Formula: C12-H16-O

REACH Registration Number : 01-0000018005-80

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

Intended Use Fragrances : Perfumery ingredient

1.3 Details of the supplier of the safety data sheet

Company

Givaudan Suisse SA Chemin de la Parfumerie 5 CH-1214 VERNIER

Telephone : +41227809111 Telefax : +41227809150

E-mail address : global.sds_info@givaudan.com

Responsible/issuing person

1.4 Emergency Call

Givaudan 24/7 call +33172110003

Please refer to section 16 for a full list of emergency phone numbers, from Givaudan's 24/7 provider.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed. Skin irritation, Category 2 H315: Causes skin irritation.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, H411: Toxic to aquatic life with long lasting effects.

Category 2

Administrative information:

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms





Signal word : Warning

Hazard statements : H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.

P280 Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P391 Collect spillage.

Hazardous components which must be listed on the label:

• 3-methyl-5-phenylpentan-1-al 55066-49-4

2.3 Other hazards

Hazards not Otherwise : None

Classified.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 3. Composition/information on ingredients

3.1 Substances

Chemical name	CAS-No. EC-No. REACH Registration Number	Concentration [Percent by weight]	M-Factor, SCL, ATE
3-methyl-5-phenylpentan- 1-al	55066-49-4 433-900-0 01-0000018005-80	>= 90 - <= 100	Acute toxicity estimate Acute oral toxicity:1 900,00 mg/kg

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.

Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Remove contact lenses.

Immediately flush eyes for at least 15 minutes. Get medical

attention.

If swallowed : Induce vomiting immediately and call a physician.

Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : no data available
Risks : Harmful if swallowed.
Causes skin irritation.

May cause an allergic skin reaction.

iviay cause an allergic skill reaction.

4.3 Indication of any immediate medical attention and special treatment needed

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Treatment : no data available

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical

Alcohol-resistant foam Carbon dioxide (CO2)

Water spray

Unsuitable extinguishing

media

: no data available

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: Do not allow run-off from fire fighting to enter drains or water

courses.

5.3 Advice for firefighters

Special protective equipment

for firefighters

: Wear self-contained breathing apparatus for firefighting if

necessary.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

: no data available

6.2 Environmental precautions

Environmental precautions

: Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform

respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Not applicable

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SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against

fire and explosion

: Normal measures for preventive fire protection.

Temperature class : no data available Fire-fighting class : no data available Dust explosion class : no data available

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Keep container tightly closed in a dry and well-ventilated

place.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Electrical installations / working materials must comply with

the technological safety standards.

Further information on

Store Ambient 10-30℃ (50-85℃) storage conditions

Dry, well ventilated, preferably full, hermetically sealed

Advice on common storage

: Protect against light.Store under nitrogen : 10 Combustible liquids

Storage class (TRGS 510) Other data

: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : no data available

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Exposure assessment: Exposures are dependent on the product being handled, the potential for chemical release, and any resulting airborne concentrations or dermal contact. Since product handling and release scenarios vary, and no two workplaces are exactly alike, it is recommended that the potential for exposure be assessed prior to the

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prod-uct's use or introduction. Exposure assessments should be performed by an occupational hygienist, industrial hygienist, or other qualified occupational or environmental health professional. An exposure assessment should be conducted to determine the efficacy of any ventilation and the need for additional PPE. The PPE indicated below are recommendations for worst-case scenario exposures. An exposure assessment will identify more applicable measures to be implemented. EN and ANSI standards are mentioned in the following recommendations, consult equivalent local standards when required.

PPE is always the last resort to avoid exposure. In any case technical and organisational measures have to be explored and used prior to the selection of PPE. The PPE selection is for operators trained to work with chemicals according to good industrial hygiene and safety practice. Operators have to be trained on the use of PPE.

8.2.1 Engineering measures

Use engineering controls to maintain airborne levels below exposure limit requirements or quidelines. If there are no applicable exposure limit requirements or quidelines, use the product only with adequate ventilation.

8.2.2 Personal protective equipment

Eye/face protection : Use safety goggles tested according to EN 166/ ANSI Z87.1

or equivalent local standard.

: Use gloves when handling substance in open systems. Hand protection

> Inspect gloves prior to use. Train operators for proper use. If only incidental exposure is expected: (work without direct contact to substance) use gloves tested according EN 16523-1/ASTM F739 or equivalent local standard breakthrough times at least 10 minutes, tested for chemicals indicated in chapter 3

of this SDS. Change gloves frequently.

If direct skin contact is expected: use gloves tested according to EN 16523-1/ASTM F739 or equivalent local standard, tested for chemicals indicated in chapter 3 of this SDS.

Permeation time must exceed contact time.

Other skin protection Wear working clothes covering arms and legs.

The type of protective equipment must be selected according to the concentration and amount of the hazardous substance at the specific workplace. Use apron and sleeve covers or

complete chemical suit if exposure is expected.

Respiratory protection : Respiratory protection should be worn when workplace

exposures exceed exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, use an approved respirator where there is a potential for adverse effects, including but not limited to respiratory irritation or odor, or where indicated by the exposure assessment. Selection of air-purifying or positive-pressure supplied-air will depend on the results of the exposure assessment which includes an

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> evaluation of the specific operations and the potential airborne concentrations. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

In case a risk analysis proved the cartridge respirator as

acceptable, use type:

ABEK-P3 (EN 14387) OR Combination Multi-gas/P100 (42CFR84.193; ANSI Z88.7 or equivalent local standard) as a

backup to engineering controls.

In absence of engineering controls, use self-contained breathing apparatus or full face supplied air respirators. Use respirators and components tested and approved under appropriate government standards such as CEN (EU) or

NIOSH 42 CFR 84(US).

Thermal hazards : Wear appropriate thermal protective clothing, when

necessary.

Hygiene measures : Remove contaminated clothing and protective equipment

before entering eating areas.

Do not eat, drink or smoke during work.

Wash hands any time after handling the product.

8.2.3 Environmental exposure controls

General advice : Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform

respective authorities.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid Form : liquid Colour : colorless Taste : not determined

Odour : Aldehydic, Orange-like, Citrus-like, Earthy

Odour Threshold : 4,8665 ng/l

Flash point : 94 °C Method: closed cup

Lower explosion limit : not determined Upper explosion limit : not determined Flammability : no data available Particle size : no data available Oxidizing properties : no data available Auto-ignition temperature : no data available Decomposition temperature : no data available Molecular weight : 176,20 g/mol рΗ

: 4,1

at 10,00 g/l

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Melting point
Boiling point

Vapour pressure

Density

Bulk density

Water solubility

Solubility/qualitative
Partition coefficient: noctanol/water

Viscosity, kinematic
Relative vapour density

Evaporation rate

Explosive properties

10,004 hPa at 20 ℃
961,26 kg/m3 at 20 ℃
Not applicable
107 mg/l at 20 ℃
108 pow: 2,8
109 pow Melting point : not determined

Method: OECD Test Guideline 117

9.2 Other information

Not applicable

SECTION 10. Stability and reactivity

10.1 Reactivity

none

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : no data available

10.5 Incompatible materials

Materials to avoid : no data available

10.6 Hazardous decomposition products

Hazardous decomposition : no data available

products

Thermal decomposition : no data available

SECTION 11. Toxicological information

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

Acute toxicity

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Acute oral toxicity : LD50 Rat

Dose: 1 900 mg/kg

: This information is not available. Acute inhalation toxicity

Acute dermal toxicity : This information is not available.

of administration)

Acute toxicity (other routes : No data is available on the product itself.

Skin corrosion/irritation

Skin irritation : Species: Rabbit

Moderately irritant

Serious eye damage/eye irritation

Eye irritation : Vapours may cause irritation to the eyes, respiratory system

and the skin.

Respiratory or skin sensitisation

Sensitisation : No data is available on the product itself.

Germ cell mutagenicity

Genotoxicity in vitro : Ames test

negative

Carcinogenicity

Carcinogenicity : No data is available on the product itself.

Reproductive toxicity

Not classified based on available information.

Target Organ Systemic Toxicant - Single exposure

Target Organ Systemic : No data is available on the product itself.

Toxicant - Single exposure

Target Organ Systemic Toxicant - Repeated exposure

Target Organ Systemic : No data is available on the product itself.

Toxicant - Repeated

exposure

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Target Organ Systemic Toxicant - Repeated exposure

Aspiration hazard

Aspiration toxicity : No data is available on the product itself.

Phototoxicity

Phototoxicity : Phototoxicity Rabbit

Result:negative

Further information : no data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

Further information

Product:

Remarks : no data available

SECTION 12. Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 78 % Exposure time: 28 d

Method: OECD Test Guideline 301 F

GLP: yes

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

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12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological

information

Toxic to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

Dispose of in accordance with local regulations.

SECTION 14. Transport information

14.1 UN number

ADR : UN 3082
RID : UN 3082
IMDG : UN 3082

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IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(3-Methyl-5-phenylpentanal)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(3-Methyl-5-phenylpentanal)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(3-Methyl-5-phenylpentanal)

IATA : Environmentally hazardous substance, liquid, n.o.s.

(3-Methyl-5-phenylpentanal)

14.3 Transport hazard class(es)

 ADR
 : 9

 RID
 : 9

 IMDG
 : 9

 IATA
 : 9

14.4 Packing group

ADR : ||||
RID : ||||
IMDG : ||||
IATA : ||||

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

ADR

Tunnel restriction code : (-)

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IMDG

IMDG Code Segregation : None

Group

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15. Regulatory information

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

REACH - Candidate List of Substances of Very High : Neither banned nor restricted

Concern for Authorisation (Article 59).

Major Accident Hazard : ENVIRONMENTAL HAZARDS

Legislation E2

Quantity 1: 200 t Quantity 2: 500 t

Water hazard class : WGK 3 highly hazardous to water

(Germany) Classification according to AwSV, Annex 1 (4)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. Other information

Full list of Emergency response numbers worldwide.

	Country	Phone nr		Country	Phone nr
Europe	All Europe	+44 1235 239670	APAC	All East/South East Asia	+65 3158 1074
	France	+33 1 72 11 00 03		Sri Lanka	+65 3158 1195
	Germany	+49 89 220 61012		Taiwan	+886 2 8793 3212
	Spain	+34 91 114 2520		Japan	0120 015 230
	Italy	800 699 792		Indonesia	007 803 011 0293
	Netherlands	+31 10 713 8195		Malaysia	+60 3 6207 4347
	Turkey	0800 621 2139 +44 1235 239670		Thailand	001 800 120 666 751
	Norway	+47 2103 4452		India	+65 3158 1198 000 800 100 7479
	Greece	+30 21 1198 3182		Pakistan	+65 3158 1329

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	Portugal	+351 30880 4750		Bangladesh	+65 3158 1200		
	Denmark	+45 8988 2286		Philippines	+63 2 8231 2149		
	Sweden	+46 8 566 42573		Vietnam	+84 28 4458 2388		
	Poland	+48 22 307 3690		Korea	+65 3158 1285		
	Czech replublic	+420 228 882 830		South Korea	+82 2 3479 8401		
	Finland	+358 9 7479 0199		Australia	+61 2 8014 4558		
Middle East/Africa	All Middle East/Africa	+44 1235 239671		New Zealand	+64 9 929 1483		
	Bahrain and Middle East	+44 1235 239671		China	+86 532 8388 9090		
	Africa/South Africa	+27 21 300 2732	LATAM	Mexico	+52 55 5004 8763		
NOAM	USA and Canada	+1 866 928 0789		Brazil	+55 11 3197 5891		
	USA and Canada	+1 215 207 0061		Chile	+56 2 2582 9336		
	USA and Canada	+1 202 464 2554		Colombia	+57 1 508 7337		
Global	Global	+44 1865 407333		Argentina	+54 11 5984 3690		

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Key or legend to abbreviations and acronyms used in the safety data sheet

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways: ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; 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: REACH -Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Information displayed in section 3 (Composition/information on ingredients) is additional information to understand the hazards of the product and ensure safe handling, storage and transportation. This information, including CAS numbers, is not meant to be used for registration, notification or any other purposes. Any additional information and documentation needed may be provided by Givaudan.

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