Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **4110020180**
Product name **RUST 4 PREMIUM**

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

Intended use **Degrippling release agent added with MOS2**

1.3. Details of the supplier of the safety data sheet

Name **Meccanocar Italia S.r.l.**
Full address **Via San Francesco, 22**
District and Country **56033 Capannoli (PI)**
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet **moreno.meini@meccanocar.it**
Supplier:

1.4. Emergency telephone number

For urgent inquiries refer to **National Poisons Information Service: +44 121 507 4123**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H222 Extremely flammable aerosol.

H229 Pressurised container: may burst if heated.

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.

P211 Do not spray on an open flame or other ignition source.

P273 Avoid release to the environment.

Statements on the aspiration toxicity classification were not included in the label elements, based on section 1.3.3. of Annex I to CLP.

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC INDEX - EC 918-481-9 CAS -	45 ≤ x < 47,5	Asp. Tox. 1 H304, EUH066

REACH Reg. 01-2119457273-39-XXXX **DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING**		
INDEX 649-468-00-3 EC 265-158-7 CAS 64742-55-8 REACH Reg. 01-2119487077-29-XXXX **REPENT**	22,5 ≤ x < 24	Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: L
INDEX - EC 203-692-4 CAS 109-66-0 REACH Reg. 01-2119459286-30-XXXX **ISOBUTANE**	15 ≤ x < 16,5	Flam. Liq. 1 H224, Asp. Tox. 1 H304, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066
INDEX 601-004-00-0 EC 200-857-2 CAS 75-28-5 REACH Reg. 01-2119485395-27-XXXX **PROPANE**	5 ≤ x < 6	Flam. Gas 1A H220, Press. Gas H280
INDEX 601-003-00-5 EC 200-827-9 CAS 74-98-6 REACH Reg. 01-2119486944-21-XXXX **BUTANE**	5 ≤ x < 6	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: U
INDEX 601-004-00-0 EC 203-448-7 CAS 106-97-8 REACH Reg. 01-2119474691-32-XXXX	5 ≤ x < 6	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: C, U

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 15,00 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
GBR	TLV-ACGIH	ACGIH 2022
	RCP TLV	ACGIH TLVs and BEIs – Appendix H

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

Predicted no-effect concentration - PNEC		
Normal value for the food chain (secondary poisoning)	9,33	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,74 mg/kg bw/d				
Inhalation							5,58 mg/m3	2,73 mg/m3
Skin								0,97 mg/kg bw/d

REPENT

Predicted no-effect concentration - PNEC		
Normal value in fresh water	23	mg/l
Normal value in marine water	23	mg/l
Normal value for fresh water sediment	1,2	mg/kg
Normal value for marine water sediment	1,2	mg/kg
Normal value of STP microorganisms	360	mg/l

Normal value for the terrestrial compartment	0,55	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				214 mg/kg bw/d				
Inhalation				643 mg/m3				3000 mg/m3
Skin				214 mg/kg bw/d				432 mg/kg bw/d

BUTANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP		1000			Gases
VLEP	FRA	1900	800			
TLV	NOR	600	250			
NDS/NDSCh	POL	1900		3000		
WEL	GBR	1450	600	1810	750	
TLV-ACGIH					1000	

PROPANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP		1000			
TLV	NOR	900	500			
NDS/NDSCh	POL	1800				
TLV-ACGIH			1000			

ISOBUTANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
RCP TLV			1000			RESP

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION
None required.

SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Recommended glove material: nitrile or neoprene.

REPENT

Respiratory protection: If technical controls do not keep concentrations of contaminants in the air at an adequate level to protect workers' health, an approved respirator may be appropriate. The selection, use and maintenance of the respirator must comply with regulatory requirements, if applicable. The types of respirators to consider for this material include:
Respirator with half-face filter AX type filter material, the EN 136, 140 and 405 standards of the European Committee for Standardization (CEN) provide respiratory masks and EN 149 and 143 provide recommendations on filters.
Hand protection: any specific glove information provided is based on published literature and glove manufacturer data. The suitability of the gloves and breakthrough time will differ according to the specific conditions of use. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for conditions of use. Inspect and replace worn or damaged gloves. The types of gloves to consider for this material include:
Chemical resistant gloves are recommended. Nitrile, CEN EN 420 and EN 374 standards provide general requirements and lists of glove types.
Eye protection: if contact is possible, we recommend wearing safety glasses with side shields.
Skin and body protection: any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to consider for this material include:
Chemical / oil resistant clothing is recommended.

ISOBUTANE

Suitable glove material Protective gloves, eg. nitrile butadiene rubber gloves (NBR), leather gloves, heat insulating
Selection of protective gloves to meet specific workplace requirements.
Suitability for specific workplaces should be clarified with the manufacturers of protective gloves.
The information is based on our tests, references from literature and information from glove manufacturers or derived by analogy with similar materials.
Remember that the useful time per day of a chemical protective glove can be much shorter than the breakthrough time determined according to EN 374 due to the many influencing factors involved.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	aerosol	
Colour	not available	
Odour	characteristic of solvent	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	0,6 % (v/v)	
Upper explosive limit	8 % (v/v)	
Flash point	not applicable	
Auto-ignition temperature	> 200 °C	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	3500 hPa	
Density and/or relative density	0,7 kg/l	
Relative vapour density	not available	
Particle characteristics	not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Total solids (250°C / 482°F)	0,40 %

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

REPENT

The material is stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

BUTANE

Vapors can form an explosive mixture with air.

ISOBUTANE

Vapors can form an explosive mixture with air.

10.4. Conditions to avoid

Avoid overheating.

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Heat, flames and sparks.

REPENT

Avoid heat, sparks, open flames and other sources of ignition.

BUTANE

Avoid heat and sources of ignition.

ISOBUTANE

Keep away from heat and other causes of fire.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Strong acids and bases, strong oxidizing agents and amines.

REPENT

Strong oxidants.

BUTANE

Strong oxidizing agents, chlorine, oxygen.

ISOBUTANE

Strong oxidizing agents, chlorine, oxygen.

10.6. Hazardous decomposition products

REPENT

The material does not decompose at room temperature.

BUTANE

In case of fire or production of thermal decomposition, for example, carbon monoxide, carbon dioxide (CO2).

ISOBUTANE

In case of fire or production of thermal decomposition, for example, carbon monoxide, carbon dioxide (CO2).

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Equivalent or similar to OECD 423
Reliability: 2
Species: Rat (Wistar; male / female)
Routes of exposure: Oral
Result: LD50> 15000 mg / kg bw
Method: Equivalent or similar to OECD 403
Reliability: 1
Species: Rat (Crj: CD (SD); male / female)
Routes of exposure: Inhalation (vapors)
Result: LC50> 4 951 mg / m³ air
Method: Equivalent or similar to OECD 402
Reliability: 1
Species: Rat (Crj: CD (SD); male / female)
Routes of exposure: Dermal
Result: LD50> 2 000 mg / kg bw

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Method: OECD 401
Reliability: 1
Species: Rat (Crl: CDBR; male / female)
Route of exposure: Oral
Results: LD50> 2000 mg / kg bw
Method: Not indicated
Reliability: 2
Species: Rat (Wistar; male), mouse (Albino; female)
Route of exposure: Inhalation (vapors)
Results: 21000 ppm (male), 23500 ppm (female)

BUTANE
Method: Not indicated
Reliability: 2
Species: Rat (Alderley Park (SPF); male / female)
Route of exposure: Inhalation
Results: LC50: 1 443 mg / L air

PROPANE
Method: To study the concentrations at which the effects of the CNS occur following exposure by inhalation to propane by measuring LC50 (15 min) and EC50 (CNS) (10 min) in rats.
Reliability: 2
Species: Rat (Alderley Park (SPF); male / female)
Route of exposure: Inhalation
Results: LC50> 800 000 ppm

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Equivalent or similar to OECD 404
Reliability: 1
Species: Rabbit (New Zealand White)
Routes of exposure: Dermal
Result: Not irritating

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Method: Equivalent or similar to OECD 404
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Not classified

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: OECD 405
Reliability: 1
Species: Rabbit (New Zealand White)
Routes of exposure: Ocular
Result: Not irritating

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Method: OECD 405
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Equivalent or similar to OECD 406
Reliability: 2
Species: guinea pig (Hartley; female)
Routes of exposure: Dermal
Result: Not sensitizing

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

Skin sensitization

REPENT
Method: Equivalent or similar to OECD 406
Reliability: 1
Species: guinea pig (Hartley; female)
Route of exposure: Dermal
Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: OECD 471 in vitro test
Reliability: 1
Species: S. typhimurium
Result: Negative with and without metabolic activation
Method: Equivalent or similar to OECD 474 in vivo test
Reliability: 1
Species: Mouse (CD-1; male / female)
Routes of exposure: Oral
Result: Negative

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Method: EU Method B.10-In vitro test
Reliability: 1
Species: Chinese hamster
Results: Negative with and without metabolic activation
Method: EU Method B.12-In vivo test
Reliability: 1
Species: Rat (Crl: CDBR; male / female)
Route of exposure: Inhalation (vapors)
Results: Negative

BUTANE
Method: OECD 471 in vitro test
Reliability: 1
Species: Salmonella strains, S. typhimurium
Results: Negative without metabolic activation
Method: OECD 474-test in vivo
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: Negative

PROPANE
Method: OECD 471 in vitro test
Reliability: 1
Species: Histidine Salmonella
Results: Negative with or without metabolic activation
Method: OECD 474-test in vivo
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Equivalent or similar to OECD 453
Reliability: 1
Species: Rat (F344 / N; male / female)
Routes of exposure: Inhalation (vapors)
Result: Based on the results, it is possible to establish that there are no carcinogenic effects on humans.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

BUTANE
Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation
Results: NOAEC 10000 ppm

Adverse effects on sexual function and fertility

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Equivalent or similar to OECD 413
Reliability: 1
Species: Rat (Fischer 344; male / female)
Routes of exposure: Inhalation (vapors)
Result: Negative. NOAEC (fertility) ≥400 ppm

REPENT
Method: OECD 415-Read across
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: NOAEL (fertility) = 300 mg / kg bw / day

PROPANE
Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation
Results: NOAEC (fertility) 10 000 ppm

Adverse effects on development of the offspring

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: Guidelines for Reproduction Studies for Safety and Evaluation of Drugs for Human Use, Segment II (Teratology Study)
Reliability: 1
Species: Rat (Sprague-Dawley)
Routes of exposure: Inhalation (vapors)
Result: Negative. NOAEC (development) ≥1575 mg / m3

REPENT
Method: OECD 414
Reliability: 1
Species: Rat (Crl: CD BR VAF / Plus)
Route of exposure: Oral
Results: NOAEL (development) = 1000 mg / kg bw / day

PROPANE
Method: EPA OPPTS 870.3700
Reliability: 1
Species: Rat (VAF / Plus®, Sprague-Dawley Derived (CD®) Crl: CD® IGS BR)
Route of exposure: Inhalation (gas)
Results: NOAEC (development) 10 426 ppm

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Based on available data and through expert judgment, the substance is not classified in the specific target organ toxicity class for single exposure.

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

BUTANE
Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

PROPANE
Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ISOBUTANE
Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

Target organs

REPENT
Narcosis

Route of exposure

REPENT
Inhalation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Method: equivalent or similar to OECD 422
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Routes of exposure: Oral
Result: negative. NOAEL≥1000 mg / kg / day
Method: equivalent or similar to OECD 413

Reliability: 1
Species: Rat (albino; male / female)
Routes of exposure: Inhalation (vapors)
Result: negative. NOAEC≥10400 mg / m3

DISTILLATES (PETROLEUM), LIGHT PARAFFINIC BY + HYDROTREATING

REPENT
Method: OECD 413
Reliability: 1
Species: Rat (Crl: CDBR; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC = 20000 mg / m3 air

BUTANE
Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC = 10000 ppm

PROPANE
Method: OECD 422
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC 16 000 ppm

ISOBUTANE
Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

ASPIRATION HAZARD

Toxic for aspiration

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Based on available data and through expert judgment the substance can be lethal in the event of ingestion and penetration into the respiratory tract.

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
Fish toxicity
Oncorhynchus mykiss species
OECD method 203
Results: 96-hour LL50> 1000 mg / L and LL0 = 1000 mg / L
Crustacean toxicity
Daphnia magna species
OECD 202 method
Results: 48-hour LL50> 1000 mg / L and LL0 = 1000 mg / L
Algae and aquatic plants toxicity
Pseudokirchneriella subcapitata species
OECD 201 method
Results: 72-hour EL50> 1000 mg / L and NOELR = 1000 mg / L

REPENT

EC50 - for Crustacea	2,7 mg/l/48h

12.2. Persistence and degradability

REPENT
Easily degradable in water, 87% in 28 days.
BUTANE
Quickly degradable in water.

BUTANE

Solubility in water	0,1 - 100 mg/l

Rapidly degradable

PROPANE

Solubility in water	0,1 - 100 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

BUTANE

Partition coefficient: n-octanol/water	1,09

PROPANE

Partition coefficient: n-octanol/water	1,09

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

HYDROCARBONS, C10-C13, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
The substance is suitable for combustion in a closed controlled burner for the value or disposal of the fuel by controlled incineration at very high temperatures to prevent the formation of undesirable combustion products.

REPENT
The product is suitable for combustion in a closed controlled burner for the value or disposal of the fuel by supervised incineration at very high temperatures to prevent the formation of undesirable combustion products.

BUTANE
No waste key number according to the European list of waste types can be assigned to this product, since this classification is based on the use (not yet determined) for which the product is intended for the consumer.
The key number for the waste must be determined according to the European waste type list (decision on the EU waste type list 2000/532 / EC) in collaboration with the disposal company / producer / authority Official.

ISOBUTANE
Compliance with local regulations, e.g. incineration through flaring system.
No waste key number according to the European list of waste types can be assigned to this product, since this classification is based on the use (not yet determined) for which the product is intended for the consumer.
The key number for the waste must be determined according to the European waste type list (decision on the EU waste type list 2000/532 / EC) in collaboration with the disposal company / producer / authority Official.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA:	1950

14.2. UN proper shipping name

ADR / RID:	AEROSOLS
IMDG:	AEROSOLS
IATA:	AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1

14.4. Packing group

ADR / RID, IMDG, IATA: -

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special provision: 190, 327, 344, 625		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Passengers:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special provision:	A145, A167, A802	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 40

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 1	Flammable liquid, category 1
Press. Gas	Pressurised gas
Press. Gas (Liq.)	Liquefied gas
Asp. Tox. 1	Aspiration hazard, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H224	Extremely flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
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22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.