

Safety Data Sheet

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

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

1.1. Product identifierCode: **U051050004**
Product name **MULTIFUNCTION A300****1.2. Relevant identified uses of the substance or mixture and uses advised against**Intended use **Protective all in one.**
Uses advised against: **Different uses than those intended.****1.3. Details of the supplier of the safety data sheet**Name **CENTRO DISTRIBUZIONE UTENSILI SCPA**
Full address **Via delle Gerole, 19**
District and Country **20867 CAPONAGO (MB)**
ITALY
tel. +39 02 95746081
fax. + 39 02 95745182e-mail address of the competent person
responsible for the Safety Data Sheet
Supplier:**info@cdu.net**
CENTRO DISTRIBUZIONE UTENSILI SCPA**1.4. Emergency telephone number**For urgent inquiries refer to **CENTRO DISTRIBUZIONE UTENSILI SCPA +39 02 95746081**
(Technical support - Office hour 8.30-13.00 - 14.00-17.30)

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.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
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.



MULTIFUNCTION A300

H229	Pressurised container: may burst if heated.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains: (R)-P-MENTHA-1,8-DIENE May produce an allergic reaction.

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 not expose to temperatures exceeding 50°C / 122°F.
P501	Dispose of contents / container to in accordance with local and national regulations.
P102	Keep out of reach of children.
P211	Do not spray on an open flame or other ignition source.
P271	Use only outdoors or in a well-ventilated area.

Contains: HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS;
ETHYL ACETATE.

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 \geq than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

SECTION 3. Composition/information on ingredients**3.2. Mixtures**

Contains:

Identification	X = Conc. %	Classification (EC) 1272/2008 (CLP)
HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS		
INDEX -	36,28 \leq x \leq 46,28	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066
EC 919-857-5		
CAS -		
REACH Reg. 01-2119463258-33		
PROPANE		
INDEX 601-003-00-5	20,45 \leq x < 24,45	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: U
EC 200-827-9		
CAS 74-98-6		
REACH Reg. 01-2119486944-21		
BUTANE		
INDEX 601-004-00-0	7 \leq x < 11	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: C, U
EC 203-448-7		
CAS 106-97-8		
REACH Reg. 01-2119474691-32		
WHITE MINERAL OIL (PETROLEUM)		
INDEX -	5,71 \leq x \leq 8,71	--
EC 232-455-8		
CAS 8042-47-5		
REACH Reg. 01-2119487078-27		
ISOBUTANE		



MULTIFUNCTION A300

INDEX 601-004-00-0 2,30 ≤ x ≤ 5,30 Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: C, U

EC 200-857-2

CAS 75-28-5

REACH Reg. 01-2119485395-27

ETHYL ACETATE

INDEX 607-022-00-5 0,82 ≤ x < 1,82 Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066

EC 205-500-4

CAS 141-78-6

REACH Reg. 01-2119475103-46

ETHYL 4-OXOVALERATE

INDEX - 0,72 ≤ x < 1,72 Eye Irrit. 2 H319, Skin Irrit. 2 H315

EC 208-728-2

CAS 539-88-8

REACH Reg. 01-2120765759-33

(R)-P-MENTHA-1,8-DIENE

INDEX 601-029-00-7 0,25 ≤ x ≤ 0,505 Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: C

EC 227-813-5

CAS 5989-27-5

REACH Reg. 01-2119529223-47

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 max: 40,74 %

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.

HYDROCARBONS, C9 - C11, N-ALKANS, ISOALKANS, CYCLICS, <2% AROMATICS

EYES: vapors or aerosols can cause irritation and burning.

SKIN: the effect of the product on the skin is a loss of skin fat. Repeated exposure can cause skin dryness and cracking. Prolonged or repeated contact can cause irritation, redness and dermatitis.

INHALATION: may cause drowsiness or dizziness. Gases or vapors in high concentrations can irritate the respiratory tract. Vapors in high concentrations are anesthetic. Symptoms following overexposure may include headache, dizziness, somnolence, nausea, vomiting, central nervous system depression.

INGESTION: danger of aspiration in case of ingestion. It can be fatal if swallowed and if it enters the respiratory tract. Entry into the lungs following ingestion or vomiting can cause chemical pneumonia. The onset of symptoms can occur with a delay of 24-48 hours. Keep the person concerned under observation.

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

Information for the doctor: symptomatically treatment.

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.

Storage class TRGS 510 (Germany): 2B

7.3. Specific end use(s)

Protective all in one.

SECTION 8. Exposure controls/personal protection**8.1. Control parameters****Regulatory References:**

AUS Österreich
BEL Belgique

BGR България

CHE Suisse / Schweiz

Gesamte Rechtsvorschrift für Grenzwerteverordnung 2021, Fassung vom 17.06.2021

Liste de valeurs limites d'exposition aux agents chimiques, livre VI du code du bien-être au travail

НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)

Valeurs limites d'exposition aux postes de travail: VME/VLE (SUVA). Grenzwerte am Arbeitsplatz: MAK (SUVA)

MULTIFUNCTION A300

CYP	Κύπρος	Οι πεπτι Αζθάλειαρ και Υγείαρ ζηην Δτπαζζα (Φημικοί Πατπάγονηερ) (Τποποποιηηκοί) Κανονιζμοί ηος 2019. Οι περὶ Ασφάλειας και Υγείας στην Εργασία (Καρκινογόνοι και Μεταλλαξιγόνοι Παράγοντες) (Τροποποιηητικοί) Κανονισμοί του 2020
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötavishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 17.10.2019, 1 - jõust. 17.01.2020]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ `` σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία ``»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelmére
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
IRL	Éire	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
LUX	Luxembourg	Règlement grand-ducal du 24 janvier 2020 modifiant le règlement grand-ducal du 14 novembre 2016 concernant la protection des salariés contre les risques liés à l'exposition à des agents cancérigènes ou mutagènes au travail
LTU	Lietuva	Jsakymas dėl lietuvis higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LVA	Latvija	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskarē ar ķīmiskajām vielām darba vietās" (prot. Nr. 32 18. §; prot. Nr. 1 22. §)
MLT	Malta	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L.424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L.424.22)
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
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
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
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v znení neskorších predpisov
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Direttiva (UE) 2022/431; Direttiva (UE) 2019/1831; Direttiva (UE) 2019/130; Direttiva (UE) 2019/983; Direttiva (UE) 2017/2398; Direttiva (UE) 2017/164; Direttiva 2009/161/UE; Direttiva 2006/15/CE; Direttiva 2004/37/CE; Direttiva 2000/39/CE; Direttiva 98/24/CE; Direttiva 91/322/CEE.



MULTIFUNCTION A300

TLV-ACGIH

ACGIH 2021

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		1200		197		Vapore

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				125 mg/kg/d				
Inhalation				185 mg/m3				871 mg/m3
Skin				125 mg/kg/d				208 mg/kg/d

PROPANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	1800	1000	3600	2000	STEL:60(Mow),Häufigkeit/Sch:3x
TRK	AUS	1800	1000	3600	2000	
VLEP	BEL		1000			
TLV	BGR	1800				
MAK	CHE	1800	1000	7200	4000	
VME/VLE	CHE	1800	1000	7200	4000	
AGW	DEU	1800	1000	7200	4000	
MAK	DEU	1800	1000	7200	4000	
TLV	DNK	1800	1000			
VLA	ESP		1000			
TLV	EST	1800	1000			
HTP	FIN	1500	800	2000	1100	
TLV	GRC	1800	1000			
RV	LVA	1800	100			
TLV	NOR	900	500			
NDS/NDSch	POL	1800				
TLV	ROU	1400	778	1800	1000	
MV	SVN	1800	1000	7200	4000	

BUTANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	1900	800	3800	1600	STEL:60(Mow),Häufigkeit/Sch:3x
TRK	AUS	1600	800	3800	1600	
VLEP	BEL			2370	980	



MULTIFUNCTION A300

TLV	BGR	1900			
MAK	CHE	1900	800	7600	3200
VME/VLE	CHE	1900	800	7600	3200
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
TLV	DNK	1200	500		
VLA	ESP		1000		Gases
TLV	EST	1500	800		
VLEP	FRA	1900	800		
HTP	FIN	1900	800	2400	1000
TLV	GRC	2350	1000		
AK	HUN	2350		9400	
GVI/KGVI	HRV	1450	600	1810	750
OELV	IRL				1000 All Isomers
RV	LVA	300			
TLV	NOR	600	250		
TGG	NLD	1430			
NDS/NDSch	POL	1900		3000	
MV	SVN	2400	1000	9600	4000
WEL	GBR	1450	600	1810	750
WEL	GBR		4		RESP
TLV-ACGIH					1000

WHITE MINERAL OIL (PETROLEUM)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	CHE	5				INHAL
AGW	DEU	5		20		RESP
MAK	DEU	5		20		RESP
TLV	ROU	5		10		
TLV-ACGIH		5				

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				25 mg/kg bw/d				
Inhalation				34,78 mg/m3				164,56 mg/m3
Skin				93,02 mg/kg bw/d				217,05 mg/kg bw/d

ISOBUTANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	



MULTIFUNCTION A300

VLEP	BEL			2370	980
MAK	CHE	1900	800		
VME/VLE	CHE	1900	800		
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
HTP	FIN	1900	800	2400	1000
OELV	IRL				1000
TLV-ACGIH					1000

ETHYL ACETATE

Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	734	200	1468	400	Häufigkeit pro Schicht:4x
TRK	AUS	734	200	1460	400	
VLEP	BEL	734	200	1468	400	
TLV	BGR	734	200	1468	400	
MAK	CHE	730	200	1460	400	
VME/VLE	CHE	730	200	1460	400	
TLV	CYP	734	200	1468	400	
TLV	CZE	700	191,1	900	245,7	
AGW	DEU	730	200	1460	400	
MAK	DEU	750	200	1500	400	
TLV	DNK	540	150			E
VLA	ESP	734	200	1468	400	
TLV	EST	500	150	1100	300	
VLEP	FRA	734	200	1468	400	
HTP	FIN	730	200	1470	400	
TLV	GRC	734	200	1468	400	
AK	HUN	734		1468		
GVI/KGVI	HRV	734	200	1468	400	
VLEP	ITA	734	200	1468	400	
OELV	IRL	734	200	1468	400	
VL	LUX	734	200	1468	400	
RD	LTU	500	150	1100 (C)	300 (C)	
RV	LVA	200	54	1468	400	
TLV	MLT	734	200	1468	400	
TLV	NOR	734	200			
TGG	NLD	734		1468		
VLE	PRT	734	200	1468	400	
NDS/NDSch	POL	734		1468		
TLV	ROU	734	200	1468	400	
NGV/KGV	SWE	550	150	1100	300	



MULTIFUNCTION A300

NPEL	SVK	734	200	1468	400
MV	SVN	734	200	1468	400
WEL	GBR	734	200	1468	400
OEL	EU	734	200	1468	400
TLV-ACGIH			400		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,24	mg/l
Normal value in marine water	0,024	mg/l
Normal value for fresh water sediment	1,15	mg/kg/d
Normal value for marine water sediment	0,115	mg/kg/d
Normal value for water, intermittent release	1,65	mg/l
Normal value of STP microorganisms	650	mg/l
Normal value for the food chain (secondary poisoning)	200	mg/kg
Normal value for the terrestrial compartment	0,148	mg/kg/d

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				4,5 mg/kg bw/d				
Inhalation	734 mg/m3	734 mg/m3	367 mg/m3	367 mg/m3	1468 mg/m3	1468 mg/m3	734 mg/m3	734 mg/m3
Skin				37 mg/kg bw/d				63 mg/kg bw/d

ETHYL 4-OXOVALERATE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,002	mg/l
Normal value in marine water	0	mg/l
Normal value for fresh water sediment	0,008	mg/kg
Normal value for marine water sediment	0,001	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,848	mg/kg/d

(R)-P-MENTHA-1,8-DIENE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations		
		mg/m3	ppm			
MAK	CHE	40	7	80	14	
VME/VLE	CHE	40	7	80	14	
AGW	DEU	28	5	110	20	SKIN
MAK	DEU	28	5	112	20	SKIN
VLA	ESP	168	30	80	14	SKIN
HTP	FIN	140	25	280	50	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0014	mg/l
Normal value in marine water	0,00014	mg/l
Normal value for fresh water sediment	3,85	mg/kg/d



MULTIFUNCTION A300

Normal value for marine water sediment	0,385	mg/kg/d						
Normal value of STP microorganisms	1,8	mg/l						
Normal value for the food chain (secondary poisoning)	133	mg/kg						
Normal value for the terrestrial compartment	0,763	mg/kg/d						
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				4,8 mg/kg bw/d				
Inhalation				16,6 mg/m3				66,7 mg/m3
Skin				4,8 mg/kg bw/d				9,5 mg/kg bw/d

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

Protect hands with work gloves.

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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	aerosol	
Colour	straw-coloured	
Odour	typical	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not applicable	Reason for missing data: Does not apply to aerosols and gases.



MULTIFUNCTION A300

Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not applicable	
Kinematic viscosity	not available	
Solubility	in water: insoluble; in acetone: soluble	Note: refers to the liquid base without considering the propellant.
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	0,77 - 0,80 kg/dm ³	Temperature: 20 ° C. Note: The density refers to the liquid base without considering the propellant.
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

VOC (Directive 2010/75/EU)	98,01 %
Propellant flammability	extremely flammable
Limit of propellant flammability	1,8-9,5%

SECTION 10. Stability and reactivity**10.1. Reactivity**

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

ETHYL ACETATE

It slowly decomposes to acetic acid and ethanol by the action of light, air and water.

(R)-P-MENTHA-1,8-DIENE

Possibility of reaction with oxidizing substances. Highly exothermic reaction when mixed with approximately 50/50 sulphonic acid alkylbenzene.

10.2. Chemical stability

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

ETHYL ACETATE

Avoid exposure to: light, moisture, air.

10.3. Possibility of hazardous reactions

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

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Flammable liquid and vapor. Vapors can form explosive mixtures with air.

ETHYL ACETATE

May react violently with: strong oxidising agents, acids.

(R)-P-MENTHA-1,8-DIENE

May react with: oxidising substances.

10.4. Conditions to avoid

Avoid overheating.

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Avoid exposure to: excessive heat (prolonged period), flames, ignition sources.

WHITE MINERAL OIL (PETROLEUM)

Avoid exposure to: heat, naked flames, direct sunlight, ignition sources.

ETHYL ACETATE

Avoid exposure to: heat, naked flames, sparks, sources of ignition, electrostatic charges.



(R)-P-MENTHA-1,8-DIENE

Avoid exposure to: naked flames, direct sunlight.

10.5. Incompatible materials

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

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Incompatible with: oxidizing materials.

WHITE MINERAL OIL (PETROLEUM)

Avoid contact with: acids, strong bases, oxidising agents.

ETHYL ACETATE

Incompatible with: oxidising agents, strong acids, strong bases, peroxides.

ETHYL 4-OXOVALERATE

Incompatible with: acids, bases, oxidizing agents.

(R)-P-MENTHA-1,8-DIENE

Avoid contact with: oxidising agents, acids.

10.6. Hazardous decomposition products

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

When heated to decomposition releases: carbon oxides, toxic gases or vapors, harsh fumes.

WHITE MINERAL OIL (PETROLEUM)

When heated to decomposition releases: harmful and flammable gases or vapors.

ETHYL ACETATE

In decomposition develops: carbon oxides, vapors of acetic acid, ethanol.

(R)-P-MENTHA-1,8-DIENE

In decomposition develops: carbon oxides.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

LD50 (Dermal): > 5000 mg/kg Rabbit (OECD 402)

LD50 (Oral): > 5000 mg/kg Rat (OECD 401)

LC50 (Inhalation vapours): > 5 mg/l/4h Rat (OECD 403)

WHITE MINERAL OIL (PETROLEUM)

LD50 (Dermal): > 5000 mg/m³ Rabbit (OECD 402)



MULTIFUNCTION A300

LD50 (Oral): > 5000 mg/kg Rat (OECD 401)
LC50 (Inhalation vapours): > 5000 mg/m³ Rat (OECD 403)

ETHYL ACETATE

LD50 (Dermal): > 20000 mg/kg bw Male rabbit
LD50 (Oral): 4934 mg/kg bw Rabbit (OECD 401)
LC50 (Inhalation vapours): > 22,5 mg/l/6h Rat

ETHYL 4-OXOVALERATE

LD50 (Oral): > 2000 mg/kg Rat

(R)-P-MENTHA-1,8-DIENE

LD50 (Dermal): > 5000 mg/kg dw Rabbit
LD50 (Oral): > 2000 mg/kg dw Female rat (OECD 423)

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class.

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction. Contains: (R)-P-MENTHA-1,8-DIENE.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class.

ASPIRATION HAZARD

Toxic for aspiration.

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

WHITE MINERAL OIL (PETROLEUM)

LC50 - for Fish > 100 mg/l/96h
EC50 - for Crustacea 100 mg/l/48h
EC50 - for Algae / Aquatic Plants 100 mg/l/72h

ETHYL ACETATE

LC50 - for Fish	230 mg/l/96h Pimephales promelas
EC50 - for Crustacea	165 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	2,4 mg/l 21d - Daphnia magna

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

LC50 - for Fish	> 1000 mg/l/96h Onchorhynchus mykiss
EC50 - for Crustacea	1000 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l 72h - Pseudokirchneriella subcapitata

(R)-P-MENTHA-1,8-DIENE

LC50 - for Fish	0,72 mg/l Pimephales promelas (OECD 203)
EC50 - for Algae / Aquatic Plants	0,32 mg/l/72h Pseudokirchnella subcapitata

ETHYL 4-OXOVALERATE

LC50 - for Fish	1,614 mg/l/96h
EC50 - for Crustacea	982 mg/l/48h
EC50 - for Algae / Aquatic Plants	932,1 mg/l/72h

12.2. Persistence and degradability
WHITE MINERAL OIL (PETROLEUM)

Rapidly degradable

BUTANE

Rapidly degradable

PROPANE

Rapidly degradable

ETHYL ACETATE

Solubility in water	> 10000 mg/l
Rapidly degradable	69% - 20d in water

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Solubility in water	Insoluble
Rapidly degradable	80% - 28d in water

(R)-P-MENTHA-1,8-DIENE

Solubility in water	Insoluble
Rapidly degradable	80% - 28d (OECD 301D)

ETHYL 4-OXOVALERATE

Rapidly degradable	72% - 28d
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12.3. Bioaccumulative potential



MULTIFUNCTION A300

WHITE MINERAL OIL (PETROLEUM)

Partition coefficient: n-octanol/water > 3,5

ETHYL ACETATE

Partition coefficient: n-octanol/water 0,68 Log Kow 25° C

BCF 30 - 3d - Leuciscus idus

HYDROCARBONS, C9-C11, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Partition coefficient: n-octanol/water > 4 Log Kow

ETHYL 4-OXOVALERATE

Partition coefficient: n-octanol/water 0,324 Log Kow (20°C)

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessmentOn the basis of available data, the product does not contain any PBT or vPvB in percentage \geq 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.

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: -		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	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

<u>Product</u>	
Point	40

<u>Contained substance</u>	
Point	75

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 \geq 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.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 2: hazard to waters.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the mixture.

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. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Press. Gas (Liq.)	Liquefied gas
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
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.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.



MULTIFUNCTION A300

- H410** Very 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).

Classification and procedure used to derive it in accordance with Regulation (EC) 1272/2008 (CLP) in relation to mixtures:

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Aerosol 1 H222+H229	Calculation method and on the basis of experimental data
Asp. Tox. 1 H304	Calculation method
Eye Irrit. 2 H319	Calculation method
STOT SE 3 H336	Calculation method
Aquatic Chronic 3 H412	Calculation method

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17. Regulation (EU) 2019/1148



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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 / 15 / 16.