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

Product name **Fusion Fix GP2 Universal Clear**

UFI : **2MHM-EQ41-H10X-EU5S**

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

Intended use **Strong spray adhesive for composite materials**

Identified Uses	Industrial	Professional	Consumer
Use of spray adhesives for bonding composite materials	✓	✓	-
Uses Advised Against			
Do not use for uses other than those indicated			

1.3. Details of the supplier of the safety data sheet

Name **Easy Composites Ltd**
Full address **Unit 39, Park Hall Business Village**
District and Country **Stoke-on-Trent ST3 5XA**
United Kingdom

Tel. +44 (0)1782 454499 (Office Hours)

e-mail address of the competent person responsible for the Safety Data Sheet **sales@easycomposites.com**

1.4. Emergency telephone number

+44 (0)1782 454499 (Office Hours)

For urgent inquiries refer to

NHS111 in England: 111
NHS24 in Scotland: 111
NHS Direct in Wales: 111 or 0845 4647
In an emergency, if the patient has collapsed or is not breathing properly, call 999

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.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

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.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing gases / mist / vapors / aerosols.
P273	Avoid release to the environment.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.

Contains:
Hydrocarbons, C6, isoalkanes, <5% n-hexane
Acetone
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Methyl acetate

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)
Propane			
INDEX	*601-003-00-5*	9 ≤ x < 24	**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-XXXX*		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics			
INDEX		10 ≤ x < 20	**Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411**
EC	*927-510-4*		
CAS	*64742-49-0*		
REACH Reg.	*01-2119475515-33-XXXX*		

SECTION 3. Composition/information on ingredients ... / >>

Hydrocarbons, C6, isoalkanes, <5% n-hexane			
INDEX		10 ≤ x < 20	**Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411**
EC	*931-254-9*		
CAS	*64742-49-0*		
REACH Reg.	*01-2119484651-34-XXXX*		
Acetone			
INDEX	*606-001-00-8*	10 ≤ x < 20	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*200-662-2*		
CAS	*67-64-1*		
REACH Reg.	*01-2119471330-49-XXXX*		
Butane			
INDEX		9 ≤ x < 24	**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-XXXX*		
Ethanol			
INDEX	*603-002-00-5*	1 ≤ x < 5	**Flam. Liq. 2 H225, Eye Irrit. 2 H319**
EC	*200-578-6*		
CAS	*64-17-5*		
REACH Reg.	*01-2120768140-61-XXXX*		
Methyl acetate			
INDEX	*607-021-00-X*	1 ≤ x < 5	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*201-185-2*		
CAS	*79-20-9*		
Methanol			
INDEX	*603-001-00-X*	0 < x < 0,5	**Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370**
EC	*200-659-6*		**STOT SE 2 H371: ≥ 3% - < 10%**
CAS	*67-56-1*		**ATE Oral: 100 mg/kg, ATE Dermal: 300 mg/kg, ATE Inhalation mists/powders: 0,501 mg/l**

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.

SECTION 4. First aid measures

4.1. Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.
In case of more severe symptoms, ask for immediate medical aid.
EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.
INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

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

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

SECTION 4. First aid measures ... / >>

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

If symptoms occur, whether acute or delayed, consult a doctor.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

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
Direct jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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
In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.
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.

SECTION 7. Handling and storage ... / >>

Storage class TRGS 510 (Germany): 2B

7.3. Specific end use(s)

Refer to the product data sheet. Also refer to the information on safe use when attached to this safety data sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

BGR	България	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.)
CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 10. května 2021, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	Forschungsgemeinschaft MAK- und BAT-Werte-Liste 2022 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe Mitteilung 58
ESP	España	Límites de exposición profesional para agentes químicos en España 2023
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötervishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 21.12.2022, 14]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 décembre 2021
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÅRDSMINISTERIETS PUBLIKATIONER 2020:25
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	Jsakymas dėl lietuvos 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. §)
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)
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)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733; 20.10.2023 / 32345.
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2023

SECTION 8. Exposure controls/personal protection ... / >>

Propane

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	1800				
AGW	DEU	1800	1000	7200	4000	
MAK	DEU	1800	1000	7200	4000	
VLA	ESP		1000			
TLV	EST	1800	1000			
HTP	FIN	1500	800	2000	1100	
RV	LVA	1800	100			
NDS/NDSCh	POL	1800				
TLV	ROU	1400	778	1800	1000	
MV	SVN	1800	1000	7200	4000	
TLV-ACGIH			1000			

Butane

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	1900				
AGW	DEU	2400	1000	9600	4000	
VLA	ESP	1935	800			Gases
TLV	EST	4				
VLEP	FRA	1900	800			
HTP	FIN	1900	800	2400	1000	
AK	HUN	2350		9400		
GVI/KGVI	HRV	1450	600	1810	750	
RV	LVA	300				
TGG	NLD	1430				
NDS/NDSCh	POL	1900		3000		
MV	SVN	2400	1000	9600	4000	
WEL	GBR	1450	600	1810	750	
TLV-ACGIH					1000	

Hydrocarbons, C6, isoalkanes, <5% n-hexane

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		1200	353			

Oral		NPI		1301 mg/kg bw/d					
Inhalation	NPI	NPI	NPI	1131 mg/m3	NPI	5306 mg/m3	LOW	5306 mg/m3	
Skin	NPI	NPI	NPI	1337 mg/kg bw/d	NPI	NPI	LOW	13964 mg/kg bw/d	

SECTION 8. Exposure controls/personal protection ... / >>

Acetone

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	600		1400		
TLV	CZE	800	331,2	1500	621	
AGW	DEU	1200	500	2400 (C)	1000 (C)	
MAK	DEU	1200	500	2400	1000	
VLA	ESP	1210	500			
TLV	EST	1210	500			
VLEP	FRA	1210	500	2420	1000	
HTP	FIN	1200	500	1500	630	
AK	HUN	1210				
GVI/KGVI	HRV	1210	500			
VLEP	ITA	1210	500			
RD	LTU	1210	500	2420	1000	
RV	LVA	1210	500			SKIN
TGG	NLD	1210	500	2420	1000	
VLE	PRT	1210	500			
NDS/NDSCh	POL	600		1800		
TLV	ROU	1210	500			
NGV/KGV	SWE	600	250	1200 (C)	500 (C)	
MV	SVN	1210	500	2420	1000	
ESD	TUR	1210	500			
WEL	GBR	1210	500	3620	1500	
OEL	EU	1210	500			
TLV-ACGIH			250		500	

Predicted no-effect concentration - PNEC

Normal value in fresh water	10,6	mg/l
Normal value in marine water	1,06	mg/l
Normal value for fresh water sediment	30,4	mg/kg
Normal value for marine water sediment	3,04	mg/kg
Normal value for water, intermittent release	21	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	29,5	mg/kg

Oral		LOW		62 mg/kg bw/d					
Inhalation	LOW	LOW	LOW	200 mg/m3	LOW	LOW	2420 mg/m3	1210 mg/m3	
Skin	LOW	LOW	LOW	62 mg/kg bw/d	LOW	LOW	LOW	186 mg/kg bw/d	

SECTION 8. Exposure controls/personal protection ... / >>

Ethanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	1000				
TLV	CZE	1000	522	3000	1566	
AGW	DEU	380	200	1520	800	
MAK	DEU	380	200	1520	800	
VLA	ESP			1910	1000	
TLV	EST	1000	500	1900	1000	
VLEP	FRA	1900	1000	9500	5000	
HTP	FIN	1900	1000	2500	1300	
AK	HUN	1900		3800		
GVI/KGVI	HRV	1900	1000			
RD	LTU	1000	500	1900	1000	
RV	LVA	1000				
TGG	NLD	260		1900		SKIN
NDS/NDSCh	POL	1900				
TLV	ROU	1900	1000	9500	5000	
NGV/KGV	SWE	1000	500	1900 (C)	1000 (C)	
MV	SVN	960	500	1920	1000	
WEL	GBR	1920	1000			
TLV-ACGIH				1884	1000	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,96	mg/l
Normal value in marine water	0,79	mg/l
Normal value for fresh water sediment	3,6	mg/kg
Normal value for marine water sediment	2,9	mg/kg
Normal value for water, intermittent release	2,75	mg/l
Normal value of STP microorganisms	580	mg/l
Normal value for the food chain (secondary poisoning)	380	mg/kg
Normal value for the terrestrial compartment	0,63	mg/kg

Oral		NPI		87 mg/kg bw/d				
Inhalation	950 mg/m3	NPI	NPI	114 mg/m3	1900 mg/m3	NPI	NPI	950 mg/m3
Skin	NPI	NPI	NPI	206 mg/kg bw/d	NPI	NPI	NPI	343 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

Methyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	600	195	800	260	
AGW	DEU	620	200	1240	400	
MAK	DEU	310	100	1240	400	
VLA	ESP	616	200	770	250	
TLV	EST	450	150	900	300	
VLEP	FRA	610	200	760	250	SKIN
HTP	FIN	610	200	770	250	
AK	HUN	310		1240		SKIN
GVI/KGVI	HRV	616	200	770	250	
RD	LTU	450	150	900	300	
RV	LVA	100				
TGG	NLD	100				
NDS/NDSCh	POL	250		600		
TLV	ROU	200	63	600	188	
NGV/KGV	SWE	450	150	900 (C)	300 (C)	
MV	SVN	610	200	1240	400	
WEL	GBR	616	200	770	250	
TLV-ACGIH		606	200	757	250	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,12	mg/l
Normal value in marine water	0,012	mg/l
Normal value for fresh water sediment	0,128	mg/kg
Normal value for marine water sediment	0,013	mg/kg
Normal value of STP microorganisms	600	mg/l
Normal value for the food chain (secondary poisoning)	20,4	mg/kg
Normal value for the terrestrial compartment	0,042	mg/kg

Oral		203 mg/kg bw/d		21,5 mg/kg bw/d				
Inhalation	NPI	3777 mg/m3	133 mg/m3	64 mg/m3	NPI	3777 mg/m3	620 mg/m3	300 mg/m3
Skin	NPI	203 mg/kg bw/d	NPI	21,5 mg/kg bw/d	NPI	NPI	NPI	43 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

Methanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	130	100	260	200	SKIN
MAK	DEU	130	100	260	200	SKIN
VLA	ESP	266	200	333	250	SKIN
VLEP	FRA	260	200			
HTP	FIN	270	200	330	250	
AK	HUN	260				SKIN
VLEP	ITA	260	200			SKIN
RD	LTU	260	200			
TGG	NLD	133	100			SKIN
NDS/NDSCh	POL	100		300		
TLV	ROU	260	200			
NGV/KGV	SWE	250	200	350	250	
ESD	TUR	260	200			
WEL	GBR	266	200	333	250	SKIN
OEL	EU	260	200			
TLV-ACGIH		262	200	328	250	SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	NPI
Normal value in marine water	NPI
Normal value for fresh water sediment	NPI
Normal value for marine water sediment	NPI
Normal value for marine water, intermittent release	NPI
Normal value of STP microorganisms	NPI
Normal value for the terrestrial compartment	NPI
Normal value for the atmosphere	NPI

Oral		4 mg/kg bw/d		4 mg/kg bw/d				
Inhalation	26 mg/m3	26 mg/m3	26 mg/m3	26 mg/m3	130 mg/m3	130 mg/m3	130 mg/m3	130 mg/m3
Skin	NPI	4 mg/kg bw/d	NPI	4 mg/kg bw/d	NPI	20 mg/kg bw/d	NPI	20 mg/kg bw/d

Normal value in fresh water	VND
Normal value in marine water	VND
Normal value for fresh water sediment	VND
Normal value for marine water sediment	VND
Normal value for water, intermittent release	VND
Normal value of STP microorganisms	VND
Normal value for the food chain (secondary poisoning)	VND
Normal value for the terrestrial compartment	VND

Oral	NPI	NPI		149 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	447 mg/m3	NPI	NPI	NPI	2085 mg/m3
Skin	NPI	NPI	NPI	149 mg/kg bw/d	NPI	NPI	NPI	300 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.

SECTION 8. Exposure controls/personal protection ... / >>

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.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374) if risk assessment requires it.
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344) if risk assessment requires it. Wash body with soap and water after removing protective clothing.
EYE PROTECTION.
Wear airtight protective goggles (ref. EN 166) if the risk assessment requires it.

RESPIRATORY PROTECTION
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. Use a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).
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 yellow	
Odour	characteristic of solvent	
Melting point / freezing point	not applicable	Reason for missing data:not applicable
Initial boiling point	-161,48 °C	Remark:ECHA website Substance:Butane
Flammability	flammable aerosol	
Lower explosive limit	1,4 % (v/v)	Remark:GESTIS website Substance:Butane
Upper explosive limit	50 % (v/v)	Remark:GESTIS website Substance:Methanol
Flash point	not applicable	Reason for missing data:not applicable
Auto-ignition temperature	200 °C	Remark:ECHA website Substance:Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Decomposition temperature	not applicable	Reason for missing data:not applicable
pH	not applicable	Reason for missing data:substance/mixture is non-soluble (in water)
Kinematic viscosity	not applicable	Reason for missing data:not applicable
Solubility	soluble in organic solvents	
Partition coefficient: n-octanol/water	not applicable	Reason for missing data:not applicable
Vapour pressure	700 kPa	Temperature: 50 °C
Density and/or relative density	0,71 g/cm3	
Relative vapour density	2,08	Remark:GESTIS website Substance:Butane
Particle characteristics	not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

SECTION 9. Physical and chemical properties ... / >>

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	68,05 %	-	483,16	g/litre
VOC (volatile carbon)	55,13 %	-	391,44	g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Acetone
Decomposes under the effect of heat.

10.2. Chemical stability

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

Acetone
Stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

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

Acetone
Risk of explosion on contact with: bromine trifluoride,fluorine dioxide,hydrogen peroxide,nitrosyl chloride,2-methyl-1,3 butadiene,nitromethane,nitrosyl perchlorate.May react dangerously with: potassium tert-butoxide,alkaline hydroxides,bromine,bromoform,isoprene,sodium,sulphur dioxide,chromium trioxide,chromyl chloride,nitric acid,chloroform,peroxymonosulphuric acid,phosphoryl oxychloride,chromosulphuric acid,fluorine,strong oxidising agents,strong reducing agents.Develops flammable gas on contact with: nitrosyl perchlorate.
Ethanol
Risk of explosion on contact with: alkaline metals,alkaline oxides,calcium hypochlorite,sulphur monofluoride,acetic anhydride,acids,concentrated hydrogen peroxide,perchlorates,perchloric acid,perchloronitrile,mercury nitrate,nitric acid,silver,silver nitrate,ammonia,silver oxide,ammonia,strong oxidising agents,nitrogen dioxide.May react dangerously with: bromoacetylene,chlorine acetylene,bromine trifluoride,chromium trioxide,chromyl chloride,fluorine,potassium tert-butoxide,lithium hydride,phosphorus trioxide,black platinum,zirconium (IV) chloride,zirconium (IV) iodide.Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating.

Acetone
Avoid exposure to: sources of heat,naked flames.
Ethanol
Avoid exposure to: sources of heat,naked flames.

10.5. Incompatible materials

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

Acetone
Incompatible with: acids,oxidising substances.

10.6. Hazardous decomposition products

Acetone
May develop: ketenes,irritant substances.

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

SECTION 11. Toxicological information ... / >>

Methanol
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

Methanol
The minimum lethal dose for humans for ingestion is considered to be in the range from 300 to 1000 mg/kg. Ingestion of 4-10 ml of the substance can cause permanent blindness (IPCS) in adult humans.

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	> 5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Butane

LC50 (Inhalation vapours):	1237 mg/l/2h Rat

Hydrocarbons, C6, isoalkanes, <5% n-hexane

LD50 (Dermal):	3350 mg/kg Rabbit (ECHA website)
LD50 (Oral):	16750 mg/kg Rat (ECHA website)
LC50 (Inhalation vapours):	259354 mg/l/4h Rat (ECHA website)

Acetone

LD50 (Dermal):	7400 mg/kg Rabbit
LD50 (Oral):	5800 mg/kg bw Rat
LC50 (Inhalation mists/powders):	76 mg/l/4h Rat (ECHA website)

Ethanol

LD50 (Dermal):	17100 mg/kg Rabbit (ECHA dossier)
LD50 (Oral):	8300 mg/kg bw Mouse (ECHA website)
LC50 (Inhalation vapours):	115,9 mg/l/4h Rat (ECHA website)

Methyl acetate

LD50 (Dermal):	2000 mg/kg Rat (ECHA website)
LD50 (Oral):	6482 mg/kg Rat (ECHA website)
LC50 (Inhalation vapours):	> 49,2 mg/l/4h Rat (ECHA dossier)

Methanol

LD50 (Dermal):	17100 mg/kg (ECHA website)
ATE (Dermal):	300 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	1187 mg/kg Rat (ECHA website)
ATE (Oral):	100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LC50 (Inhalation vapours):	> 87,6 mg/l/4h Rat
ATE (Inhalation mists/powders):	0,501 mg/l (figure used for calculation of the acute toxicity estimate of the mixture)

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

LD50 (Dermal):	2200 mg/kg Rat (ECHA website)
LD50 (Oral):	5840 mg/kg Rat (ECHA dossier)
LC50 (Inhalation vapours):	23,3 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

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

Excluded because the aerosol does not allow the accumulation of a significant amount of product in the mouth

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 is toxic for aquatic organisms. In the long term, it has negative effects on the aquatic environment.

12.1. Toxicity

Propane	
LC50 - for Fish	49,9 mg/l/96h
EC50 - for Crustacea	27,1 mg/l/48h
EC50 - for Algae / Aquatic Plants	11,9 mg/l/72h
Butane	
LC50 - for Fish	24,11 mg/l/96h
EC50 - for Crustacea	14,22 mg/l/48h
Hydrocarbons, C6, isoalkanes, <5% n-hexane	
LC50 - for Fish	18,27 mg/l/96h Onocorhynchus mykiss
EC50 - for Crustacea	31,9 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	13,6 mg/l/72h Pseudokirchneriella subcapitata
EC10 for Crustacea	3,87 mg/l/48h
Chronic NOEC for Fish	4,09 mg/l/28d Oncorhynchus mykiss
Chronic NOEC for Crustacea	7,14 mg/l/21d Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	3 mg/l/72h Pseudokirchneriella subcapitata
Acetone	
LC50 - for Fish	5540 mg/l/96h (ECHA website)
Chronic NOEC for Crustacea	2212 mg/l/28d Daphnia magna (ECHA dossier)
Chronic NOEC for Algae / Aquatic Plants	430 mg/l Prorocentrum minimum (ECHA website)
Ethanol	
LC50 - for Fish	14,2 g/l/96h Pimephales promelas
EC50 - for Crustacea	10 g/l/48h (ECHA website)
EC50 - for Algae / Aquatic Plants	275 mg/l/72h Chlorella vulgaris
Chronic NOEC for Fish	250 mg/l/5d (ECHA website)
Chronic NOEC for Crustacea	9,6 mg/l Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	11,5 mg/l (ECHA website)

SECTION 12. Ecological information ... / >>

Methyl acetate

LC50 - for Fish	250 mg/l/96h Brachydanio rerio
EC50 - for Crustacea	1026,7 mg/l/48h Daphnia magna (ECHA dossier)
EC50 - for Algae / Aquatic Plants	> 120 mg/l/72h Scenedesmus subspicatus (ECHA dossier)

Methanol

LC50 - for Fish	15,4 g/l/96h (ECHA website)
EC50 - for Crustacea	18,26 g/l/96h (ECHA website)
EC50 - for Algae / Aquatic Plants	22 g/l/96h (ECHA website)
Chronic NOEC for Fish	446,7 mg/l/28d (ECHA website)
Chronic NOEC for Crustacea	208 mg/l/21d (ECHA website)

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

LC50 - for Fish	110 µg/l/96h (ECHA website)
Chronic NOEC for Crustacea	0,17 mg/l/21d Daphnia magna (ECHA website)

12.2. Persistence and degradability

Propane
Rapidly degradable

Butane
Rapidly degradable

Hydrocarbons, C6, isoalkanes, <5% n-hexane
Rapidly degradable

Acetone
Rapidly degradable

Ethanol
Solubility in water 1000-10000 mg/l
Rapidly degradable

Methyl acetate
Solubility in water 243500 mg/l
Rapidly degradable

Methanol
Solubility in water 1000-10000 mg/l
Rapidly degradable

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Rapidly degradable

12.3. Bioaccumulative potential

Propane

Partition coefficient: n-octanol/water	2,36
BCF	1,56

Butane

Partition coefficient: n-octanol/water	< 3

Acetone

Partition coefficient: n-octanol/water	-0,24 (ECHA website)
BCF	3

Ethanol

Partition coefficient: n-octanol/water	-0,35

Methyl acetate

Partition coefficient: n-octanol/water	0,18

Methanol

Partition coefficient: n-octanol/water	-0,77
BCF	0,2

SECTION 12. Ecological information ... / >>

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.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: UN 1950

14.2. UN proper shipping name

ADR / RID: AEROSOLS, FLAMMABLE
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: not marine pollutant
IATA: NO

SECTION 14. Transport information ... / >>

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: 18

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

Product
- Point 40

Contained substance
- Point 75
- Point 69 Methanol

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Regulated explosives precursor
The acquisition, introduction, possession or use of that regulated explosives precursor by members of the general public is subject to reporting obligations as set out in Article 9.
All suspicious transactions and significant disappearances and thefts must be reported to the relevant national contact point.

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.

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 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

SECTION 16. Other information ... / >>

Flam. Liq. 2	Flammable liquid, category 2
Press. Gas (Liq.)	Liquefied gas
Acute Tox. 3	Acute toxicity, category 3
STOT SE 1	Specific target organ toxicity - single exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
STOT SE 2	Specific target organ toxicity - single exposure, category 2
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H371	May cause damage to organs.
H411	Toxic 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
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- 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
- vPvM: Very persistent and very mobile
- 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

SECTION 16. Other information ... / >>

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
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
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)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
24. Delegated Regulation (UE) 2023/1435 (XX 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:
01 / 03 / 04 / 08 / 09 / 11 / 12 / 14 / 16.