

FLUX-OFF

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

1.1 - Product identifier

Trade name/designation FLUX-OFF
Chemical name
Product-type Mixture
Product code 705.400
UFI: PR10-90K8-Q00A-25WH

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

1.3 - Details of the supplier of the safety data sheet

ECS Cleaning Solutions GmbH
Wolfener Str. 32-34
D-12681 Berlin Germany
Telephone : +49 (0)30 / 36 46 40 36
gunnar.kleinmann@ecsag.com

1.4 - Emergency telephone number

Germany: Intoxications Information Center; +49 761 19240
Switzerland: Swiss Toxicological Information Centre; +41 44 251 51 51
Austria: Intoxication information center; +43 1 406 43 43

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Skin Irrit. 2	Irritation, Category 2
Eye Irrit. 2	Eye irritation - Category 2
STOT SE 3 (H336)	STOT-single exposure - Category 3 (H336)
Asp. Tox. 1	Aspiration hazard - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Aerosol 1	Aerosol - Category 1

2.2 - Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Contains: propan-2-ol, isopropyl alcohol, isopropanol (CAS No.: 67-63-0) | n-butyl acetate (CAS No.: 123-86-4) | 1-methoxy-2-propanol, monopropylene glycol methyl ether (CAS No.: 107-98-2) | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane (CAS No.:)

Signal word : Danger

Hazard pictograms



Hazard statements

H222	Extremely flammable aerosol
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H229	Pressurised container: May burst if heated
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

Precautionary statements

P102	Keep out of reach of children.
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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313	If eye irritation persists: Get medical advice/attention.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container in an approved treatment center in accordance with regional/national regulation.

EUH-phrases : None

Regulation (EC) No. 648/2004 (Detergents regulation)

2.3 - Other hazards

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No	%	Class(es)	Specific concentration limit
propan-2-ol, isopropyl alcohol, isopropanol	CAS No. : 67-63-0 Index No. : 603-117-00-0 EC No. : 200-661-7	25	Eye Irrit. 2 - H319 Flam. Liq. 2 - H225 STOT SE 3 (H336) - H336	Not applicable
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	CAS No. : Index No. : EC No. : 921-024-6	25	Aquatic Chronic 2 - H411 Asp. Tox. 1 - H304 Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 (H336) - H336	Not applicable
n-butyl acetate	CAS No. : 123-86-4 Index No. : 607-025-00-1 EC No. : 204-658-1	15	Flam. Liq. 3 - H226 STOT SE 3 (H336) - H336	Not applicable
1-methoxy-2-propanol, monopropylene glycol methyl ether	CAS No. : 107-98-2 Index No. : 603-064-00-3 EC No. : 203-539-1	5	Flam. Liq. 3 - H226 STOT SE 3 (H336) - H336	Not applicable
carbon dioxide	CAS No. : 124-38-9 Index No. : EC No. : 204-696-9	5	Press. Gas (Comp.) - H280	Not applicable
dimethoxymethane	CAS No. : 109-87-5 Index No. : EC No. : 203-714-2	5	Flam. Liq. 2 - H225	Not applicable

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SECTION 4: First aid measures

4.1 - Description of first aid measures

<u>Following inhalation</u>	- No special measures are necessary. - Provide fresh air.
<u>Following skin contact</u>	- After contact with skin, wash immediately with plenty of water and soap. - In case of skin irritation, consult a physician.
<u>After eye contact</u>	- Rinse immediately carefully and thoroughly with eye-bath or water. - In case of eye irritation consult an ophthalmologist.
<u>After ingestion</u>	- Rinse mouth thoroughly with water. - Do NOT induce vomiting.

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

<u>Symptoms and effects - Following inhalation</u>	- No information available.
<u>Symptoms and effects - Following skin contact</u>	- Causes skin irritation.
<u>Symptoms and effects - After eye contact</u>	- Causes eye irritation.
<u>Symptoms and effects - After ingestion</u>	- No information available.

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

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

<u>Suitable extinguishing media</u>	- ABC-powder - Carbon dioxide (CO₂) - Foam - Extinguishing powder
<u>Unsuitable extinguishing media</u>	- Full water jet

5.2 - Special hazards arising from the substance or mixture

<u>Special hazards arising from the substance or mixture</u>	- No information available.
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5.3 - Advice for firefighters

- Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

<u>For non-emergency personnel</u>	- Use personal protection equipment.
<u>For emergency responders</u>	- No information available.

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6.2 - Environmental precautions

- No information available.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment - No information available.

Methods and material for cleaning up - Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
- Wash with plenty of water.

Inappropriate techniques - No information available.

6.4 - Reference to other sections

- Disposal: see section 13
- Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation

- Avoid: Eye contact
- It is recommended to design all work processes always so that the following is excluded: Eye contact
- Avoid: Skin contact
- It is recommended to design all work processes always so that the following is excluded: Skin contact

Advices on general occupational hygiene - No information available.

7.2 - Conditions for safe storage, including any incompatibilities

- No information available.

7.3 - Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
IOELV TWA mg/m3 (UE)	1250 mg/m3
IOELV TWA ppm (UE)	400 ppm
IOELV STEL mg/m3 (UE)	999 mg/m3
IOELV STEL ppm (UE)	400 ppm
n-butyl acetate (123-86-4)	
IOELV TWA mg/m3 (UE)	241 mg/m3
IOELV TWA ppm (UE)	50 ppm
IOELV STEL mg/m3 (UE)	723 mg/m3
IOELV STEL ppm (UE)	150 ppm
1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)	
IOELV TWA mg/m3 (UE)	375 mg/m3
IOELV TWA ppm (UE)	100 ppm
IOELV STEL mg/m3 (UE)	560 mg/m3
IOELV STEL ppm (UE)	150 ppm

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carbon dioxide (124-38-9)

IOELV TWA mg/m3 (UE)	9150 mg/m3
IOELV TWA ppm (UE)	5000 ppm
IOELV STEL mg/m3 (UE)	27400 mg/m3
IOELV STEL ppm (UE)	15000 ppm

DNEL / PNEC

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

Type	Value	User	Effect
DNEL long-term oral (repeated)	26 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	500 mg/m3	Workers	Systemic
DNEL long-term inhalative	89 mg/m3	Consumers	Systemic
DNEL long-term dermal	888 mg/kg bw/day	Workers	Systemic
DNEL long-term dermal	319 mg/kg bw/day	Consumers	Systemic
PNEC aquatic, freshwater	140.9 mg/l		
PNEC aquatic, marine water	140.9 mg/l		
PNEC aquatic, intermittent release	140.9 mg/l		
PNEC sediment, freshwater	552 mg/kg		
PNEC sediment, marine water	552 mg/kg		
PNEC Secondary Poisoning	160 mg/kg		
PNEC sewage treatment plant (STP)	2251 mg/l		

1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)

Type	Value	User	Effect
DNEL long-term oral (repeated)	33 mg/kg bw/day	Consumers	Systemic
DNEL acute inhalative	553.5 mg/m3	Workers	Systemic
DNEL acute inhalative	553.5 mg/m3	Workers	Local
DNEL long-term inhalative	369 mg/m3	Workers	Systemic
DNEL long-term inhalative	43.9 mg/m3	Consumers	Systemic
DNEL long-term dermal	183 mg/kg bw/day	Workers	Systemic
DNEL long-term dermal	78 mg/kg bw/day	Consumers	Systemic
PNEC aquatic, freshwater	10 mg/l		
PNEC aquatic, marine water	1 mg/l		
PNEC aquatic, intermittent release	100 mg/l		
PNEC sediment, freshwater	52.3 mg/kg		
PNEC sediment, marine water	5.2 mg/kg		
PNEC sewage treatment plant (STP)	100 mg/l		

dimethoxymethane (109-87-5)

Type	Value	User	Effect
DNEL long-term oral (repeated)	18.1 mg/kg bw/day	Consumers	Systemic
DNEL long-term inhalative	126.6 mg/m3	Workers	Systemic
DNEL long-term inhalative	31.5 mg/m3	Consumers	Systemic
DNEL long-term dermal	18.1 mg/kg bw/day	Consumers	Systemic
DNEL long-term dermal	17.9 mg/kg bw/day	Workers	Systemic
PNEC aquatic, freshwater	14.577 mg/l		
PNEC aquatic, marine water	1.477 mg/l		
PNEC sediment, freshwater	13.135 mg/kg		
PNEC sediment, marine water	1.313 mg/kg		
PNEC soil	4.654 mg/kg		
PNEC sewage treatment plant (STP)	10000 mg/l		

8.2 - Exposure controls

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Appropriate engineering controls

Individual protection measures, such as personal protective equipment

- No information available.

- Suitable eye protection: Eye glasses with side protection

- Tested protective gloves must be worn

- For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Barrier creams are not substitutes for body protection.



SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

<u>Physical state</u> <u>Colour</u>	Liquid colourless	<u>Appearance</u> <u>Odour</u>	Aerosol characteristic
Odour threshold		No data available	
pH		No data available	
Melting point		No data available	
Freezing point		No data available	
Boiling point		No data available	
Flash point		-18 °C	
Evaporation rate		No data available	
flammability		No data available	
Lower explosion limit		1 % Vol.	
Upper explosion limit		12 % Vol.	
Vapour pressure		< 20 Pa	
Vapour density		No data available	
Relative density		No data available	
Density		0.78 g/cm ³	
Solubility (Water)		No data available	
Solubility (Ethanol)		No data available	
Solubility (Acetone)		No data available	
Solubility (Organic solvents)		No data available	
Log KOC		No data available	
Auto-ignition temperature		> 200 °C	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	

Particle characteristics

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Particle size	No data available
9.2 - Other information	
VOC content	95.1 %
Minimum ignition energy	No data available
Conductivity	No data available

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- No information available.

10.5 - Incompatible materials

- No information available.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

SECTION 11: Toxicological information

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

Acute toxicity - Not classified

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- Based on available data, the classification criteria are not met.

Toxicity : Substances

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

LD50 oral (rat)	5840 mg/kg
LD50 dermal (rabbit)	13900 mg/kg

1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)

LD50 oral (rat)	4277 mg/kg
LD50 dermal (rat)	> 2000 mg/kg

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LC50 inhalation vapours (rat)	54.6 mg/l
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane ()	
LD50 oral (rat)	> 5840 mg/kg
LD50 dermal (rat)	> 2920 mg/kg
LC50 inhalation vapours (rat)	> 25.2 mg/l
dimethoxymethane (109-87-5)	
LD50 oral (rat)	6423 mg/kg
LD50 dermal (rat)	5000 mg/kg
LC50 inhalation (rat)	57000 ppmV

<u>Skin corrosion/irritation</u>	- Irritation, Category 2 - Causes skin irritation
	- Irritating to skin.
<u>Serious eye damage/eye irritation</u>	- Eye irritation - Category 2 - Causes serious eye irritation
	- Irritating to eyes.
<u>Respiratory or skin sensitisation</u>	- Not classified
<u>Germ cell mutagenicity</u>	- Not classified
<u>Carcinogenicity</u>	- Not classified
<u>Reproductive toxicity</u>	- Not classified
<u>STOT-single exposure</u>	- STOT-single exposure - Category 3 (H336) - May cause drowsiness or dizziness
<u>STOT-repeated exposure</u>	- Not classified
<u>Aspiration hazard</u>	- Aspiration hazard - Category 1 - May be fatal if swallowed and enters airways

11.2 - Information on other hazards

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

Toxicity : Substances

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
EC50 48 hr crustacea	9714 mg/l
LC50 96 hr fish	9640 mg/l

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ErC50 algae	> 100 mg/l
1-methoxy-2-propanol, monopropylene glycol methyl ether (107-98-2)	
EC50 48 hr crustacea	21100 mg/l < V < 25900 mg/l
LC50 96 hr fish	> 4600 mg/l
ErC50 algae	> 1000 mg/l
carbon dioxide (124-38-9)	
EC50 48 hr crustacea	3.2 mg/l
ErC50 algae	7.9 mg/l

- Toxic to aquatic life with long lasting effects.

12.2 - Persistence and degradability

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No information available.

12.3 - Bioaccumulative potential

Bioconcentration factor (BCF)	No data available
Log KOC	No data available

- No indication of bioaccumulation potential.

12.4 - Mobility in soil

- No information available.

12.5 - Results of PBT and vPvB assessment

12.6 - Endocrine disrupting properties

12.7 - Other adverse effects

- No information available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

<u>Waste treatment methods</u>	- Dispose of waste according to applicable legislation.
<u>Sewage disposal</u>	- No information available.
<u>Special precautions for waste treatment</u>	- No information available.
<u>Community or national or regional provisions</u>	- No information available.

SECTION 14: Transport information

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14.1 - UN number or ID number

<u>UN number (ADR)</u>	:	UN1950
<u>UN number (RID)</u>	:	UN1950
<u>UN number (ADN)</u>	:	UN1950
<u>UN number (IMDG)</u>	:	UN1950
<u>UN number (IATA)</u>	:	UN1950

14.2 - UN proper shipping name

<u>UN proper shipping name (ADR)</u>	:	AEROSOLS
<u>UN proper shipping name (RID)</u>	:	AEROSOLS
<u>UN proper shipping name (ADN)</u>	:	AEROSOLS
<u>UN proper shipping name (IMDG)</u>	:	AEROSOLS
<u>UN proper shipping name (IATA)</u>	:	AEROSOLS, FLAMMABLE

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14.3 - Transport hazard class(es)

ADR Transport hazard class(es) : 2

ADR Classification code: : 5F

Pictograms



Transport hazard class(es) (RID) : 2

Pictograms



Transport hazard class(es) (ADN) : 2

Pictograms



Transport hazard class(es) (IMDG) : 2

Pictograms



Transport hazard class(es) (IATA) : 2

Pictograms



14.4 - Packing group

Packing group :

Packing group (RID) :

Packing group (ADN) :

Packing group (IMDG) :

Packing group (IATA) :

14.5 - Environmental hazards

Environmental hazards : Yes.

Marine pollutant : Hazardous to the aquatic environment - Aquatic Chronic 2

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14.6 - Special precautions for user

ADR

<u>ADR Classification code:</u>	:	5F
<u>ADR Special provisions</u>	:	190+327+344+625
<u>ADR Limited quantity (LQ)</u>	:	1L
<u>ADR Excepted quantities</u>	:	E0
<u>ADR Packing instructions</u>	:	P207 LP200
<u>ADR Special packing provisions</u>	:	PP87 RR6 L2
<u>ADR Mixed packing provisions</u>	:	MP9
<u>Instructions for portable tanks and bulk containers</u>	:	
<u>Special provisions for portable tanks and bulk containers</u>	:	
<u>ADR tank code</u>	:	
<u>ADR tanks special provisions</u>	:	
<u>Vehicle for tank carriage</u>	:	
<u>ADR Transport category</u>	:	2
<u>ADR Tunnel restriction code</u>	:	D
<u>ADR Special provisions loading, unloading and handling</u>	:	CV9 CV12
<u>Special provisions - Packages</u>	:	V14
<u>Special provisions - Bulk</u>	:	
<u>Special provisions - Operation</u>	:	S2
<u>ADR Hazard identification number (Kemler No.)</u>	:	

RID

<u>Special provisions</u>	:	
<u>Limited quantity (LQ)</u>	:	
<u>Excepted quantities</u>	:	

ADN

<u>Special provisions</u>	:	
<u>Limited quantity (LQ)</u>	:	
<u>Excepted quantities</u>	:	

IMDG

<u>Special provisions</u>	:	63 190 277 327 344 381 959
<u>Limited quantity (LQ)</u>	:	
<u>Excepted quantities</u>	:	E0
<u>Packing instructions</u>	:	P207 LP200
<u>Special packing provisions</u>	:	PP87 L2
<u>IBC instruction(s)</u>	:	
<u>IBC provisions</u>	:	
<u>Instructions for portable tanks and bulk containers</u>	:	
<u>Special provisions for portable tanks and bulk containers</u>	:	
<u>EmS codes</u>	:	F-D, S-U
<u>Stowage and handling</u>	:	Category None SW1 SW22
<u>Segregation</u>	:	SG69

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<u>Properties and observations</u>	:	
IATA		
<u>PCA - Excepted quantities</u>	:	E0
<u>PCA - Limited Quantity - Packing Instructions</u>	:	Y203
<u>PCA - Limited Quantity - Maximum Net Quantity per Package</u>	:	30kg
<u>PCA - Packing Instructions</u>	:	203
<u>PCA - Maximum Net Quantity per Package</u>	:	75kg
<u>CAO - Packing Instructions</u>	:	203
<u>CAO - Maximum Net Quantity per Package</u>	:	150kg
<u>Special Provisions</u>	:	A145 A167 A802
<u>ERG Code</u>	:	10L

14.7 - Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

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

<u>Substances REACH candidates</u>	None
<u>Substances Annex XIV</u>	None
<u>Substances Annex XVII</u>	None
<u>VOC content</u>	95.1 %

Regulation (EC) No. 648/2004 (Detergents regulation)

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - No information available.

SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
1	11/16/2022		

Texts of the regulatory sentences

Aerosol 1	Aerosol - Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Aquatic Chronic 2
Asp. Tox. 1	Aspiration hazard - Category 1
Eye Irrit. 2	Eye irritation - Category 2
Eye Irrit. 2A	Eye irritation - Category 2A
Flam. Liq. 2	Flammable liquid and vapour. - Category 2
Flam. Liq. 3	Flammable liquid and vapour. - Category 3
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H229	Pressurised container: May burst if heated



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H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects
Press. Gas (Comp.)	Compressed gas
Skin Irrit. 2	Irritation, Category 2
STOT SE 3 (H336)	STOT-single exposure - Category 3 (H336)

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