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

1.1. Product identifier

Product name	:	EMS FORCE® Gasket Maker GM-74
Contains	:	Methacrylic acid, monoester with propane-1,2-diol and Cumene hydroperoxide

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

1.2.1. Relevant identified uses

Use of the substance/mixture	:	Anaerobic gasket maker

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier	:	**Metsan Endüstriyel Yapıştırıcılar Ticaret Anonim Şirketi** Birlik Organize Sanayi Bölgesi Batı Caddesi 1.Sokak No.1 34953 Tuzla, Istanbul TURKEY Telephone: +90 216 444 06 49 Telefax: +90 212 253 42 12 Web: www.metsan.gen.tr
Responsibility statement	:	For further information please contact with following e-mail address, sds@metsan.gen.tr

1.4. Emergency telephone number

Metsan: +90 212 235 52 55

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin sensitisation	:	Category 1 (H317)
Serious eye damage/eye irritation	:	Category 2 (H319)
Specific target organ toxicity — Single exposure	:	Category 3 (H335)

2.2. Label elements

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

Hazard pictogram(s) GHS 07

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Signal word Warning

Hazard statement(s)

Physical hazards	:	Not classified.
Health hazards	:	H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H335: May cause respiratory irritation
Environmental hazards	:	Not classified.

Precautionary statement(s)

Prevention	:	P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313: If eye irritation persists: Get medical advice/attention.
Storage	:	P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
Disposal	:	P501: Dispose of contents/container to an appropriate disposal facility.

Supplemental information on label

Not applicable.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	CAS No. EC No.	REACH Registration No.	wt%	Classification according to Regulation (EC) No. 1272/2008 [CLP]

Methacrylic acid, monoester with propane-1,2-diol	27813-02-1 248-666-3	01-2119490226-37	10.0 - <40.0	Skin Sens. 1- H317 Eye Dam. 2- H319
Cumene	98-82-8 202-704-5	01-2119473983-24	0.1 - <0.5	Flam Liq 3- H226 Asp. Tox. 1- H304 STOT SE. 3- H335 Aquatic Chr. 2- H411
Cumene hydroperoxide	80-15-9 201-254-7	01-2119475796-19	1.0 -<3.0	Org. Perox. EF- H242 Acute Tox. 4- H302 Acute Tox. 4- H312 Acute Tox. 3- H331 Skin Corr. 1B- H314 C≥10% Skin Corr 2- H315 3%≤C<10% Eye Dam. 1- H318 %3≤C<%10 Eye irrit. 2-H319 %1≤C<%3 STOT SE 3- H335 C<%10 STOT RE 2- H373 Asp. Tox. 1- H304 Aquatic Chr. 2- H411

- Up to the given revision date of this safety data sheet only the above mentioned REACH registration numbers are assigned to the chemical substances used in this mixture.

Additional information
See full text of H-phrases and classification codes in chapter 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion

If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

Skin contact

Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Eye contact

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Please see practical experience in Section 11.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

Unsuitable extinguishing media

Do not use high power water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Closed containers exposed to heat from fire may build pressure and explode. Exposure to extreme heat can give rise to thermal decomposition.

Hazardous decomposition or by-products

Carbon dioxide
Carbon monoxide
Nitrogen oxides
Sulfur oxides

5.3. Advice for firefighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. When firefighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands (around arms, waist and legs), face mask, and protective covering for exposed areas of the head.

Special protective equipment and firefighting procedures

There is no specific recommended protective equipment other than suggested above.

Additional information

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Refer to Section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems. Please avoid any emission of volatile organic compounds as possible.

6.3. Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (density: 0,880) ammonia solution (5 parts). After usage of suitable decontaminant, transfer the material to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

For appropriate self-protection equipment, please apply the suggested protection procedures given in Section 8.
For disposal of waste, please see advices in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling advice

Avoid inhalation of thermal decomposition products. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Do not handle until all safety precautions have been read and understood. Wash contaminated clothing before reuse. Avoid breathing vapours. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

Advice on common storage

Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Do not store together with explosives, gases, oxidizing solids, products which form flammable gases in contact with water, oxidizing products, infectious products and radioactive products.

Additional information on storage conditions

Protect against UV and sunlight. Keep away from heat sources and humid media.

7.3. Specific end use(s)
Fixing and sealing of metallic pipes and fittings.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Community / national occupational exposure limit values

Cumene hydroperoxide (CAS No: 80-15-9)				
	Limit value – Eight hours		Limit value – Short term	
	ppm	mg/m³	ppm	mg/m³
Latvia	-	1	-	-

Cumene (CAS No: 98-82-8)				
	Limit value – Eight hours		Limit value – Short term	
	ppm	mg/m³	ppm	mg/m³
Australia	25	125	75	375
Austria	20	100	50	250
Belgium	20	100	50	250
Canada - Ontario	50			
Canada - Québec	50	246		
Denmark	20	100	40	200
European Union	20	100	50	250
Finland	20	100	50	250
France	20	100	50	250
Germany (AGS)	10	50	40	200
Germany (DFG)	10	50	40	200
Hungary		100		250
Ireland	20	100	50	250
Italy	20	100	50	250
Latvia	20	100	50	250
New Zealand	25	125	75	375

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Poland		100		250
Singapore	50	246		
South Korea	50	245		
Spain	20	100	50	250
Sweden	25	120	35	170
Switzerland	20	100	80	400
The Netherlands		100		250
Turkey	20	100	50	250
USA - NIOSH	50	245		
USA - OSHA	50	245		
United Kingdom	25	125	75	375

- OEL values that are given in this subsection are taken from GESTIS International Limit Values database.
- If a component is disclosed in Section 3 but does not appear in the table given above, an occupational exposure limit value is not available for the corresponding component.

Information on monitoring procedures

DN(M)ELs

CAS No.	Chemical name	End use	Exposure routes	Frequency of exposure	Type	Value
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Workers	Inhalation	Chronic	Not specified.	14.7 mg/m³
		Workers	Dermal	Chronic	Not specified.	4.2 mg/kg
		Consumers	Dermal	Chronic	Not specified.	2.5 mg/kg
		Consumers	Inhalation	Chronic	Not specified.	8.8 mg/m³
		Consumers	Oral	Chronic	Not specified.	2.5 mg/kg
80-15-9	Cumene hydroperoxide	Workers	All routes	-	-	WARNING: Some DNEL/PNEC values exist in the REACH disseminated dossier(s), but we are not confident in these data
		Consumers	All routes	-	-	WARNING: Some DNEL/PNEC values exist in the REACH disseminated dossier(s), but we are not confident in these data
98-82-8	Cumene	Consumers	Inhalation	Chronic	Systemic	16.6 mg/m³ Repeated dose toxicity
		Consumers	Oral	Chronic	Systemic	5 mg/kg bw/day Repeated dose toxicity

- If a component is disclosed in Section 3 but does not appear in the table given above, a DN(M)EL is not available for the corresponding component.

PNECs

CAS No.	Chemical name	Environmental protection target	Value	Extrapolation method
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Freshwater	0.904 mg/L	Assessment factor: 50
		Marine water	0.904 mg/L	Assessment factor: 50
		Intermittent releases	0.972 mg/L	Assessment factor: 100
		STP	10 mg/L	Assessment factor: 10
		Sediment (freshwater)	6.28 mg/kg sediment dw	Partition coefficient
		Sediment (marine water)	6.28 mg/kg sediment dw	Partition coefficient
		Soil	0.727 mg/kg soil dw	Partition coefficient
80-15-9	Cumene hydroperoxide	Freshwater	0.003 mg/L	Assessment factor: 1000
		Marine water	0 mg/L	Assessment factor: 10000
		Intermittent releases	0.031 mg/L	Assessment factor: 100
		STP	0.35 mg/L	Assessment factor: 1
		Sediment (freshwater)	0.023 mg/kg sediment dw	Partition coefficient
		Sediment (marine water)	0.002 mg/kg sediment dw	Partition coefficient
		Soil	0.003 mg/kg soil dw	Partition coefficient
98-82-8	Cumene	Freshwater	35 µg/L	Assessment factor: 10
		Marine water	3.5 µg/L	Assessment factor: 100
		Intermittent releases	12 µg/L	Assessment factor: 100
		STP	200 mg/L	Assessment factor: 10
		Sediment (freshwater)	3.22 mg/kg çökelti dw	Partition coefficient
		Sediment (marine water)	322 µg/kg sediment dw (1)	Partition coefficient
		Soil	624 µg/kg soil dw (1	Partition coefficient

- If a component is disclosed in Section 3 but does not appear in the table given above, a PNEC is not available for the corresponding component.

8.2. Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Personal protective equipment :

Eye protection : Safety glasses with side shields or chemical safety goggles should be worn if there is a risk of splashing of material.

Skin protection : Hand and other skin protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Gloves made from the following material(s) are recommended:
- Butyl rubber at least 0.5 mm thickness
- Fluoroelastomer at least 0.4 mm thickness

Respiratory protection : In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Environmental exposure controls

Do not let product enter drains. For ecological information refer to Section 12. Also, check for Environmental Precautions in Section 6.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Liquid

Color : Fluorescent Orange

Odor : Acrylate, characteristic

Odor threshold : No data available.

Property	Values	Method(s) and remark(s)

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pH	Not applicable.	
Melting point/freezing point	Not applicable.	
Initial boiling point and boiling range	>149˚C	
Flash point	>100˚C	
Evaporation rate	Negligible.	
Flammability (solid, gas)	Not applicable.	
Flammability limit in air		
Upper flammability limit	Not applicable.	
Lower flammability limit	Not applicable.	
Vapor pressure	<666.6 Pa	at 26.5˚C
Vapor density	No data available.	
Relative density	1.030	at 20˚C (Ref. water at 20˚C)
Solubility(ies)		
In water	Not miscible.	at 25˚C
In other solvent(s)	No data available.	
Partition coefficient: n-octanol/water	No data available.	
Auto-ignition temperature	Not applicable.	
Decomposition temperature	No data available.	
Viscosity	14000 to 16000 cPs	at 20˚C
Explosive properties	Not classified.	
Oxidising properties	Not classified.	

9.2. Other data

Property	**Values**	**Method(s) and remark(s)**
Softening temperature	No data available.	
VOCs content	No data available.	
Density	1.030 g/cm^3	at 20˚C

SECTION 10: Stability and reactivity

10.1. Reactivity

Keep away from oxidising agents and strongly acid or alkaline materials. Mixture can rapidly react with these materials and produce CO_2.Evolution of CO_2 in closed containers causes overpressure and produces a risk of bursting.

10.2. Chemical stability
The product is chemically stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization reaction may occur in large quantities only.

10.4. Conditions to avoid
Stable under recommended storage and handling conditions (see Section 7).

10.5. Incompatible materials to avoid
Refer to reactivity in this section.

10.6. Hazardous decomposition products
Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
General observations

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Due to the absence of specific data on the mixture regarding interactions between component substances, relevant health effects of each substance are listed. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Practical experience

No information available

Acute toxicity

CAS No.	Chemical name	Species	Type	Exposure duration	Value	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Rat	LD50 Oral	-	>2000 mg/kg bw	OECD Guideline 401 (Acute Oral Toxicity)
		Rabbit	LD50 Dermal	24 h	>5000 mg/kg bw	-
		Rat	LD50 Intraperitoneal	-	500-1000 mg/kg bw	-
80-15-9	Cumene hydroperoxide	Rat	LD50 Oral	-	382 mg/kg bw	-
		Rat	LC50 Inhalation	4 h	220 ppm	-
		Rat	LD50 Dermal	-	1.20-1.52 mg/kg bw	-

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98-82-8	Cumene	Rat	LD50 Oral	-	2 910 mg/kg bw	-
		Rat	LC0 Inhalation	1 h	22.1 mg/L air	-
		Rabbit	LD50 Dermal	24 h	> 3 160 mg/kg bw	-

Skin corrosion/irritation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Rabbit	24 h	Not irritating	-
80-15-9	Cumene hydroperoxide	Rabbit	72 h	Strong skin reactions	-
98-82-8	Cumene	Rabbit	72 h	Not irritating	OECD Guideline 404

Serious eye damage/irritation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Rabbit	72 h	Not irritating	-
80-15-9	Cumene hydroperoxide	Rabbit	24 h	Severe irritation	-
98-82-8	Cumene	Rabbit	72 h	Not irritating	OECD Guideline 404

Respiratory or skin sensitisation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Human	-	Not sensitising	-
		Guinea pig	-	Not sensitising	-
98-82-8	Cumene	Guinea pig	48 h	Not sensitising	OECD Guideline 406

Germ cell mutagenicity

CAS No.	Chemical name	Species	Type	Route	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Chinese hamster Ovary	Gene mutation	In vitro	Not mutagenic	OECD Guideline 476
		Escherichia coli WP2 uvrA	Gene mutation	In vitro	Not mutagenic	OECD Guideline 472

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		Mouse	Oral	In vivo	Not mutagenic	OECD Guideline 474
80-15-9	Cumene hydroperoxide	MX100	Gene mutation	In vitro	Mutagenic	-
		PQ300, PQ37	Gene mutation	In vitro	Mutagenic	-
		Mouse	Dermal	In vivo	Not mutagenic	-
		Mouse	Intraperitoneal	In vivo	Not mutagenic	-
98-82-8	Cumene	Chinese hamster Overy	Gene mutation	In vitro	Not mutagenic	OECD Guideline 476
		Mouse	Chromosom aberration	In vivo	Not mutagenic	OECD Guideline 474

Carcinogenicity

CAS No.	Chemical name	Species	Type	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Mouse	Inhalation	-	No evidence of carcinogenicity.	OECD Guideline 451
		Rat	Inhalation	-	No evidence of carcinogenicity.	OECD Guideline 451
		Rat	Oral	-	No evidence of carcinogenicity.	-
80-15-9	Cumene hydroperoxide	Mouse	Subcutaneous	-	Inconclusive result	-
98-82-8	Cumene	Mouse	Inhalation	-	Inconclusive result	OECD Guideline 451

Reproductive toxicity

CAS No.	Chemical name	Species	Type	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Rat	Oral	49 days	NOAEL 1630 mg/kg bw/day	-
98-82-8	Cumene	Rat	Inhalation	90 days	NOAEL >= 1 200 ppm	OECD Guideline 413

STOT – Single exposure
No information available.

STOT – Repeated exposure
No information available.

Aspiration hazard
No information available.

SECTION 12: Ecological information

12.1. Toxicity

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No test data available for the product.

Acute (short-term) toxicity

CAS No.	Chemical name	Species	Exposure duration	Test endpoint	Result	Method(s) and/or reference(s) and/or note(s)
			48 h	LC95	1001.3 mg/L	
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Scophthalmus maximus (fish)	96 h	LC50	833 mg/L	-
		Copepoda (invertebrates)	48 h	EC50	210 mg/L	-
80-15-9	Cumene hydroperoxide	Oncorhynchus mykiss (fish)	96 h	NOEC	1.5 mg/L	OECD Guideline 203
				LC50	3.9 mg/L	
				LC100	6.0 mg/L	
		Daphnia magna (invertebrates)	24 h	EC0	2.2 mg/L	-
				EC50	7.0 mg/L	
				EC100	25 mg/L	
98-82-8	Cumene	Cyprinodon variegatus (fish)	96 h	NOEC	< 2.9 mg/L	-
			96 h	LC50	4.7 mg/L	-
			72 h	LC50	4.8 mg/L	-
			48 h	LC50	5.7mg/L	-
			24 h	LC50	8.1 mg/L	-
		Daphnia magna (invertebrates)	48 h	EC50	2.14 mg/L	-
			48 h	EC10	1.3 mg/L	-
			48 h	NOEC	1.6 mg/L	-
			24 h	EC50	2.45 mg/L	-
			24 h	EC10	1.4 mg/L	-
			24 h	NOEC	1.6 mg/L	-

Chronic (long-term) toxicity

CAS No.	Chemical name	Species	Exposure duration	Test endpoint	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Daphnia magna (invertebrates)	21 days	NOEC	45.2 mg/L	OECD Guideline 211
98-82-8	Cumene	P.promelas (fish)	28 day	NOEC	0.38 mg/L	
		Daphnia magna (invertebrates)	21 day	NOEC	0.35 mg/L	OECD Guideline 211
				NOEC	0.68 mg/L	

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Toxicity to aquatic algae and cyanobacteria

CAS No.	Chemical name	Species	Exposure duration	Test endpoint	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Pseudokirchnerella subcapitata	72 h	EC50	>97.2 mg/L	OECD Guideline 201
80-15-9	Cumene hydroperoxide	Scenedesmus quadricauda	8 days	EC3 (TT)	7.4 mg/L	-
		Desmodesmus subspicatus	72 h	EC50	3.1 mg/L	OECD Guideline 201
				NOEC	1.0 mg/L	
98-82-8	Cumene	Desmodesmus subspicatus	72 h	EC50	2.01 mg/L	-
			72 h	EC10	1.35 mg/L	
			72 h	NOEC	1.49 mg/L	
			72 h	EC50	1.29 mg/L	
			72 h	EC10	0.697 mg/L	
			72 h	NOEC	0.73 mg/L	

12.2. Persistence and degradability

The product can be biodegradable as its ingredients are all classified as biodegradable.

CAS No.	Chemical name	Test type	Study type	Duration	Degradation %	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	Ready biodegradability	BOD	28 days	81%	OECD Guideline 301 C
			TOC		93%	
			GC		100%	
80-15-9	Cumene hydroperoxide	Ready biodegradability	CO_2 evolution	5 days	64%	OECD Guideline 301 B
				28 days	99%	
98-82-8	Cumene	Ready biodegradability	O_2 consumption	20 day	%0	-

12.3. Bioaccumulative potential

CAS No.	Chemical name	Log K_{ow}	BCF	Result	Method(s) and/or reference(s) and/or note(s)
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	0.97	3.2	No bioaccumulation potential.	-

80-15-9	Cumene hydroperoxide	2.16	9	No bioaccumulation potential.	-
98-82-8	Cumene	3.5	94.69	No bioaccumulation potential	-

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment
Based on available data no ingredient is classified for this hazard property (please see section 3).

12.6. Other adverse effects
The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 2 and 3 for details.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Dispose of in accordance with local regulations.

Product disposal : Contribution of this product to waste is very insignificant in comparison to article in which it is used.

Packaging disposal : After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste disposal number of waste from residues/unused products

08 04 09 : WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances Classified as hazardous waste.

Waste disposal number of used product

08 04 09 : WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances Classified as hazardous waste.

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Waste disposal number of used product

15 01 10 : WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste.

SECTION 14: Transport information

14.1. UN number
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.2. UN proper shipping name
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.3. Transport hazard class(es)
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.4. Packaging group
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.5. Environmental hazards
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.6. Special precautions for user
Not hazardous according to ADR, ADN, RID, IMDG and IATA.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

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

Australia (AICS)
All ingredients are on the inventory or exempt from listing.

Canada (DSL)
All ingredients are on the inventory or exempt from listing.

Canada (NDSL)
None of the ingredients are on the inventory of NDSL.

China (IECSC)
All ingredients are on the inventory or exempt from listing.

European Union (EINECS)
All ingredients are on the inventory or exempt from listing.

European Union (ELINCS)
None of the ingredients are on the inventory of ELINCS.

Japan (ENCS)
All ingredients are on the inventory or exempt from listing.

Philippines (PICCS)
All ingredients are on the inventory or exempt from listing.

South Korea (KECI)
All ingredients are on the inventory or exempt from listing.

Taiwan (TCSI)
All ingredients are on the inventory or exempt from listing.

United States of America (TSCA)
All ingredients are on the inventory or exempt from listing.

15.2. Chemical Safety Assessment
No safety checks were carried out on the mixture.

SECTION 16: Other information

Information taken from reference works and the literature
This SDS is prepared via using latest available SDS of ingredients that are provided from the manufacturers. Also, to confirm the validity of data and to give all necessary information, several databases are used. This references are listed below.

Substance number	:	CAS No. – https://scifinder.cas.org
OEL values	:	GESTIS – http://limitvalue.ifa.dguv.de/
DN(M)EL and PNEC values	:	ECHA – http://echa.europa.eu/information-on-chemicals
Inventories given in Section 15	:	AICS – http://nicnas.gov.au/search DSL & NDSL – http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals_polymers.cfm

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IECSC – http://cciss.cirs-group.com/
EINECS & ELINCS– http://echa.europa.eu/information-on-chemicals/ec-inventory
ENCS – http://safe.nite.go.jp/english/db.html
KECI – http://ncis.nier.go.kr/totinfo/TotInfoList.jsp
PICCS – http://119.92.161.5/internal/public/searchprojects.aspx
TCSI - http://csnn.osha.gov.tw/content/home/index.aspx
TSCA - http://www.epa.gov/tsca-inventory

Abbreviations and acronyms

ADN	:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS	:	The German Committee on Hazardous Substances
AICS	:	Australian Inventory of Chemical Substances
ATE	:	Acute Toxicity Estimate
BCF	:	Bioconcentration factor
BOD	:	Biological Oxygen Demand
CAS	:	Chemical Abstracts Service
CLP	:	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DFG	:	German Research Foundation
DN(M)EL	:	Derived No (Minimal) Effect Level
DSD	:	Dangerous Substances Directive 67/548/EEC
DSL	:	Domestic Substances List
EC	:	European Community
EC0	:	Effective Concentration that Produces a Stimulation Index of 0
EC3	:	Effective Concentration that Produces a Stimulation Index of 3
EC50	:	Half Maximal Effective Concentration
EINECS	:	European Inventory of Existing Commercial Substances
ELINCS	:	European List of notified Chemical Substances
EN	:	European Standard
ENCS	:	Japanese Existing and New Chemical Substances Inventory

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GHS	:	Globally Harmonized System
IATA	:	International Air Transport Association
ICAO-TI	:	Technical Instructions for the Safe Transport of Dangerous Goods by Air
IECSC	:	Inventory of Existing Chemical Substances in China
IMDG	:	International Maritime Dangerous Goods
KECI	:	Korea Existing Chemicals Inventory
LC50	:	Lethal Concentration to 50 % of a test population
LD50	:	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOEC	:	Lowest Observable Effect Concentration
Log K_{ow}	:	Log10 of octanol-water partition coefficient
NDSL	:	Non-Domestic Substances List
NIOSH	:	The National Institute for Occupational Safety and Health
NOEC	:	No Observed Effect Concentration
OECD	:	Organization for Economic Co-operation and Development
OEL	:	Occupational Exposure Limit
OSHA	:	Occupational Safety & Health Administration
OSHA	:	European Agency for Safety and Health at work
PBT	:	Persistent, Bioaccumulative and Toxic substance
PICCS	:	Philippine Inventory of Chemicals and Chemical Substances
PNEC	:	Predicted No Effect Concentration
REACH	:	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	:	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	:	Safety data sheet
STOT	:	Specific Target Organ Toxicity
TCSI	:	Taiwan Chemical Substance Inventory
TOC	:	Total Organic Carbon
TSCA	:	Toxic Substances Control Act
VOC	:	Volatile Organic Compound
vPvB	:	Very Persistent and Very Bioaccumulative

Full text of classification codes

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Acute Tox. 3	:	Acute toxicity – Category 3
Acute Tox. 4	:	Acute toxicity – Category 4
Aquatic Acute. 1	:	Aquatic acute – Category 1
Aquatic Chr. 2	:	Aquatic chronic – Category 2
Asp. Tox. 1	:	Aspiration toxicity – Category 1
Eye Dam. 1	:	Eye damage – Category 1
Eye Dam. 2	:	Eye damage – Category 2
Flam Liq 3		Flammable liquid - Category 3
Org. Perox. EF	:	Organic peroxide – Type E & F
Skin Corr 2	:	Skin corrosion/irritation, - Category 2
Skin Corr. 1B	:	Skin corrosion – Category 1B
Skin Sens. 1	:	Skin sensitization – Category 1
STOT RE 2	:	Specific target organ toxicity – Repeated exposure – Category2
STOT RE 3	:	Specific target organ toxicity – Repeated exposure – Category3

Full text of H phrases with no. appearing in Section 3

H242	:	Heating may cause a fire.
H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H331	:	Toxic if inhaled.
H335	:	May cause respiratory irritation.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H411	:	Toxic to aquatic life with long-lasting effects.

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Revision changes

Version 1.1 – All sections and data are modified to comply with Regulation (EC) No. 1907/2006(REACH) with its amendment Regulation (EC) No. 2015/830.

Composer of Safety Data Sheet

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Additional information

EMS FORCE® is a registered trademark of Metsan Endüstriyel Yapıştırıcılar Ticaret A.Ş.

Disclaimer

This company shall not be held liable for any damage resulting from handling or from contact with the above product. The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed on how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.