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Form no : 0101110051



## SAFETY DATA SHEET

### EMS FORCE® MDF Kit Adhesive

according to Regulation (EC) No. 1907/2006(REACH) with its amendment Regulation (EC) No. 2015/830

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

##### 1.1. Product identifier

Product name : EMS FORCE® MDF Kit Adhesive  
Contains : Ethyl-2 cyanoacrylate

##### 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 : General purpose bonding of most plastics, rubbers, metals, ceramics and other common substrates.

##### 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, İstanbul 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 (available from 9:00 to 18:00 GMT+2)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

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

Skin corrosion/irritation : Category 2 (H315)  
Eye irritation : Category 2 (H319)  
Specific target organ toxicity : Category 1 (H335)  
after single exposure

##### 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 : There is no physical hazards.

Health hazards : H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.

Environmental hazards : There is no environmental hazards.

**Precautionary statement(s)**

Prevention : P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves and eye protection.

Response : P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : P405: Store locked up.

Disposal : P501: Dispose of contents/container to an approved disposal plant.

#### Supplemental information on label

EUH202: Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

#### 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

### 3.1. Substances

Not applicable for this product.

### 3.2. Mixtures

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Name	CAS No. EC No.	REACH Registration No.	wt%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethyl 2-cyanoacrylate	7085-85-0 230-391-5	01-2119527766-29	60.0 - <90.0	Skin Irrit. 2- H315 Eye Irrit. 2- H319 STOT SE 3- H335 <sup>[1]</sup>
2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate	9011-87-4 618-476-9	No REACH registration number available.	5.0 - <20.0	Skin Irrit. 2- H315 Eye Irrit. 2- H319 STOT SE 3- H335 <sup>[1]</sup>
Hydroquinone	123-31-9 204-617-8	01-2119987571-26	0.05 - <0.2	Acute Tox. 4- H332 Skin Sens. 1- H317 Eye Dam. 1- H318 Muta. 2- H341 Carc. 2- H351 Aquatic Acute 1- H400

- 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

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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.

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### SECTION 5: Firefighting measures

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#### 5.1. Extinguishing media

##### Suitable extinguishing media

Use a fire fighting agent suitable for ordinary combustible material such as dry chemicals, carbon dioxide 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

Burning of product will give heavy smoke. The original ingredients or unidentified toxic and/or irritant compounds may be present in the combustion fumes. Also, decomposition products may include carbon dioxide, carbon monoxide and metal 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

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(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. For further information on protective equipment requirements, please check Section 8.

#### Additional information

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

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### SECTION 6: Accidental release measures

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#### 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.

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#### 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. Workers should wash hands and face before eating, drinking and smoking. 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 vapors. Contaminated work clothing should not be allowed out of the workplace. See Section 8 for additional information on exposure controls and personal protection.

##### 7.2. Conditions for safe storage, including any incompatibilities

###### Requirements for storage areas and containers

Store in original containers at 10-25°C (50-77°F) dry area and do not leave top of the cartridge open as contamination from air or other environment may reduce the shelf life of the product.

###### Advice on common storage

Store separately from oxidizing agents, strongly alkaline and basic 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, sunlight and humidity. Keep away from heat sources and humid media.

##### 7.3. Specific end use(s)

No information available.

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### Community / national occupational exposure limit values

Ethyl 2-cyanoacrylate (CAS No: 7085-85-0)				
	Limit value – Eight hours		Limit value – Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Austria	2	9	-	-
Belgium	0.2	1.04	-	-

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Canada (Ontario)	0.2	-	-	-
Denmark	2	10	4	20
Finland	0.2	1	-	-
Ireland	0.2	-	-	-
Poland	-	1	-	2
Spain	0.2	-	-	-
Sweden	2	10	4	20
Switzerland	2	9	-	-
USA - NIOSH	50	215	100*	425*
USA - OSHA	100	-	200	-
United Kingdom	-	-	0.3	1.5

Hydroquinone (CAS No: 123-31-9)				
	Limit value – Eight hours		Limit value – Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Australia	-	2	-	-
Austria	-	2 (inhalable aerosol)	-	4 (inhalable aerosol)
Belgium	-	2	-	-
Canada (Ontario)	-	1	-	-
Canada (Quebec)	-	2	-	-
Denmark	-	2	-	4
Finland	-	0.5	-	2
France	-	2	-	-
Ireland	-	0.5	-	-
People's Republic of China	-	1	-	2
Poland	-	1	-	2
Singapore	-	2	-	-
South Korea	-	2	-	-
Spain	-	2	-	-
Sweden	-	0.5	-	1.5
Switzerland	-	2 (inhalable aerosol)	-	2 (inhalable aerosol)
United Kingdom	-	0.5	-	-
USA - NIOSH	-	-	-	2
USA - OSHA	-	2	-	-

- 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

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CAS No.	Chemical name	End use	Exposure routes	Frequency of exposure	Type	Value
7085-85-0	Ethyl 2-cyanoacrylate	Workers	Inhalation	Chronic	Local	9.25 mg/m <sup>3</sup>
		Workers	Inhalation	Chronic	Systemic	9.25 mg/m <sup>3</sup>
		Consumers	Inhalation	Chronic	Local	9.25 mg/m <sup>3</sup>
		Consumers	Inhalation	Chronic	Systemic	9.25 mg/m <sup>3</sup>
123-31-9	Hydroquinone	Workers	Inhalation	Chronic	Systemic	2.1 mg/m <sup>3</sup>
		Workers	Dermal	Chronic	Systemic	3.33 mg/kg bw/day
		Consumers	Inhalation	Chronic	Systemic	1.05 mg/m <sup>3</sup>
		Consumers	Dermal	Chronic	Systemic	1.66 mg/kg bw/day
		Consumers	Oral	Chronic	Systemic	0.6 mg/kg bw/day

- 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
123-31-9	Hydroquinone	Freshwater	0.57 µg/L	Assessment factor: 10
		Marine water	0.057 µg/L	Assessment factor: 100
		Intermittent releases	0.1.34 µg/L	Assessment factor: 100
		STP	0.71 mg/L	Assessment factor: 100
		Sediment (freshwater)	4.9 µg/kg sediment dw	Partition coefficient
		Sediment (marine water)	0.49 µg/kg sediment dw	Partition coefficient
		Soil	0.64 µg/kg soil dw	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



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Personal protection 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 : Colorless to very light yellow  
Odor : Sharp, irritating  
Odor threshold : No data available.

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<u>Property</u>	<u>Values</u>	<u>Method(s) and remark(s)</u>
pH	Not applicable.	
Melting point/freezing point	<0°C	
Initial boiling point and boiling range	50-60°C	at 0.2-0.5kPa
Flash point	83°C	
Evaporation rate	Negligible.	
Flammability (solid, gas)	Not applicable.	
Flammability limit in air		
Upper flammability limit	No data available.	
Lower flammability limit	1.7%	in volume
Vapor pressure	0.20-0.27kPa	at 25°C
Vapor density	4.3	
Relative density	1.07	at 20°C (Ref. water at 20°C)
Solubility(ies)		
In water	Polymerize in water	
In other solvent(s)	Soluble in acetone	
Partition coefficient: n-octanol/water	No data available.	
Auto-ignition temperature	No data available.	
Decomposition temperature	No data available.	
Viscosity	No data available.	
Explosive properties	Not classified.	
Oxidising properties	Not classified.	

#### 9.2. Other data

<u>Property</u>	<u>Values</u>	<u>Method(s) and remark(s)</u>
Softening temperature	No data available.	
VOCs content	No data available.	
Density	1.07 g/cm <sup>3</sup>	at 20°C

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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Keep away from basic materials and water. Mixture can rapidly polymerize with these materials and produce heat. Evolution of heat in closed containers causes overpressure and produces a risk of bursting.

#### 10.2. Chemical stability

This product is considered stable under normal storage and handling conditions.

#### 10.3. Possibility of hazardous reactions

Cause heating by polymerization in contact with water and basic materials, or under high temperature, high humidity and direct sunlight.

#### 10.4. Conditions to avoid

Stable under recommended storage and handling conditions (see Section 7). Avoid any contact with heat sources.

#### 10.5. Incompatible materials to avoid

Basic materials, water, acids, reducers, peroxides and oxidants. Also, please refer to reactivity in this section.

#### 10.6. Hazardous decomposition products

May emit toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides on combustion.

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## SECTION 11: Toxicological information

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### 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

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CAS No.	Chemical name	Species	Type	Exposure duration	Value	Method(s) and/or reference(s) and/or note(s)
7085-85-0	Ethyl 2-cyanoacrylate	Rat	LD50 Oral	-	>5000 mg/kg bw	OECD Guideline 401
		Rabbits	LD50 Dermal	24 h	>2000 mg/kg bw	OECD Guideline 402
123-31-9	Hydroquinone	Rat	LD50 Oral	Single treatment	>300 – 600< mg/kg bw	-
		Rat	LC0 Inhalation	8 h	>=2.8 mg/L air	-
		Rat	LD50 Dermal	24 h	>900 mg/kg bw	-

#### Skin corrosion/irritation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
7085-85-0	Ethyl 2-cyanoacrylate	Rabbit	24 h	Slightly irritating	OECD Guideline 404
123-31-9	Hydroquinone	Rabbit	24 h	Not irritating	-

#### Serious eye damage/irritation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
7085-85-0	Ethyl 2-cyanoacrylate	Rabbit	72 h	Irritating	OECD Guideline 405

#### Respiratory or skin sensitisation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
123-31-9	Hydroquinone	Mouse	-	Sensitising	OECD Guideline 429

#### Germ cell mutagenicity

CAS No.	Chemical name	Species	Type	Route	Result	Method(s) and/or reference(s) and/or note(s)
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7085-85-0	Ethyl 2-cyanoacrylate	TA 1535	Gene mutation	In vitro	Not mutagenic.	OECD Guideline 471
123-31-9	Hydroquinone	Lymphocytes from a healthy male human donor	Chromosome aberration	In vitro	Not mutagenic	OECD Guideline 473
		Mouse	Chromosome aberration	In vivo	Mutagenic	OECD Guideline 474

#### Carcinogenicity

CAS No.	Chemical name	Species	Type	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
7085-85-0	Ethyl 2-cyanoacrylate	Dog	Implantation	-	No evidence of carcinogenicity.	-
123-31-9	Hydroquinone	Rat	Oral	103 weeks	Evidence of carcinogenicity.	OECD Guideline 453

#### Reproductive toxicity

CAS No.	Chemical name	Species	Type	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
123-31-9	Hydroquinone	Rat	Oral: feed	-	NOAEL 15 mg/kg bw/day	-

#### STOT – Single exposure

No information available.

#### STOT – Repeated exposure

No information available.

#### Aspiration hazard

No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

No test data available for the product.

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#### Acute (short-term) toxicity

CAS No.	Chemical name	Species	Exposure duration	Test endpoint	Result	Method(s) and/or reference(s) and/or note(s)
123-31-9	Hydroquinone	Oncorhynchus mykiss (fish)	96 h	LC50	0.638 mg/L	OECD Guideline 203
		Daphnia magna (invertebrates)	48 h	EC50	0.134 mg/L	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
			48 h	NOEC	0.095 mg/L	
			24 h	EC50	0.148 mg/L	
			24 h	NOEC	0.095 mg/L	
			48 h	EC50	0.061 mg/L	
			48 h	EC100	0.11 mg/L	
			48 h	NOEC	0.029 mg/L	
			24 h	EC50	0.071 mg/L	
			24 h	EC100	0.11 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)
123-31-9	Hydroquinone	Pimephales promelas (fish)	32 days	NOEC	$\geq 100 \mu\text{g/L}$	-
		Daphnia magna (invertebrates)	21 days	NOEC	0.006 mg/L	OECD Guideline 211

#### 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)
123-31-9	Hydroquinone	Pseudokirchnerella subcapitata	72 h	EC50	0.33 mg/L	OECD Guideline 201
		Pseudokirchnerella subcapitata	72 h	EC10	0.034 mg/L	OECD Guideline 201

#### 12.2. Persistence and degradability

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

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CAS No.	Chemical name	Test type	Study type	Duration	Degradation %	Method(s) and/or reference(s) and/or note(s)
123-31-9	Hydroquinone	Ready biodegradability	O <sub>2</sub> consumption	14 days	70%	OECD Guideline 301 C

#### 12.3. Bioaccumulative potential

CAS No.	Chemical name	Log K <sub>ow</sub>	BCF	Result	Method(s) and/or reference(s) and/or note(s)
123-31-9	Hydroquinone	0.59	3.162	No evidence of carcinogenicity.	-

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

#### Waste disposal number of waste (acc. to European Waste Catalogue)

20 01 27 : MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL

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08 04 09 : WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; Paint, inks, adhesives and resins containing dangerous substances  
: WASTES FORM 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

#### 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)



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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

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#### 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>  
SDS of raw materials  
Inventories given in Section 15 : AICS – <http://nicnas.gov.au/search>  
DSL & NDSL – [http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals\\_polymers.cfm](http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals_polymers.cfm)  
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

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CLP	: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DFG	: German Research Foundation
DN(M)EL	: Derived No (Minimal) Effect Level
DOT	: Department of Transportation (USA)
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
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 <sub>ow</sub>	: 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

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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

Acute Tox. 4	: Acute toxicity – Category 4
Aquatic Acute 1	: Aquatic environment – Category 1
Carc. 2	: Carcinogenicity – Category 2
Eye Dam. 1	: Eye damage/eye irritation – Category 1
Eye Irrit. 2	: Eye damage/eye irritation – Category 2
Muta. 2	: Germ cell mutagenicity – Category 2
Skin Irrit. 2	: Skin corrosion/irritation – Category 2
Skin Sens. 1	: Skin sensitization – Category 1
STOT SE 3	: Specific target organ toxicity – Single exposure – Category 3

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

H315	: Causes skin irritation
H317	: May cause an allergic skin reaction.

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H318	: Causes serious eye damage.
H319	: Causes serious eye irritation
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H341	: Suspected of causing genetic defects.
H351	: Suspected of causing cancer.
H400	: Very toxic to aquatic life.

#### Revision changes

Version 4.1 – Section 2, Section 3 and Section 9 are revised.

Version 4.0 – 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

Şeyma ÇABUK / Metsan R&D Department

sds@metsan.gen.tr, +90 212 235 52 55

Certification program/company: TSE

Certificate number: GBF-A-0-2398

#### 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.

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

##### 1.1. Product identifier

Product name : EMS Force® MDF Kit Activator  
Contains : Isopropyl alcohol

##### 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 : In-depth bonding of MDF, wood, rubber, and most plastics

##### 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, İstanbul TÜRKİYE  
Telefon: +90 444 06 49  
Faks: +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: +90 444 0 649 (available from 9:00 to 18:00 GMT+2)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

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

Flammable liquid : Category 2 (H225)  
Eye irritation : Category 2 (H319)  
Specific target organ toxicity : Category 3 (H336)  
after single exposure

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#### 2.2. Label elements

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

Hazard pictogram(s)

GHS 02



GHS 07



Signal word : Danger

Hazard statement(s)

Physical hazards : H225: Highly flammable liquid and vapour.

Health hazards : H319: Causes serious eye irritation.  
H336: May cause drowsiness or dizziness

Environmental hazards : There is no environmental hazards.

Precautionary statement(s)

Prevention : P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233: Keep container tightly closed.

P271: Use only outdoors or in a well-ventilated area.

Response : P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501: Dispose of contents/container to an approved disposal plant.

#### Supplemental hazard information (EU)

No supplemental hazard information.

#### Supplemental information on the label

No supplemental information on the label.

#### 2.3. Other hazards

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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

### 3.1. Substances

Not applicable for this product.

### 3.2. Mixtures

Name	CAS No. EC No.	REACH Registration No.	wt%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isopropyl Alcohol	67-63-0 200-661-7	-	80.0 - <100.0	Flam. Liq. 2- H225 Eye Irrit. 2- H319 STOT SE 3- H336
N,N-dimethyl-p- toluidine	99-97-8 202-805-4	01-2119937766-23	1.0 - <5.0	Acute Tox. 3 -H331 Acute Tox. 3 -H311 Acute Tox. 3 -H301 STOT RE 2 -H373 Aquatic Chronic 3 - H412

- 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 in chapter 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation



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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.

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## SECTION 5: Firefighting measures

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#### 5.1. Extinguishing media

##### Suitable extinguishing media

Use a fire fighting agent suitable for ordinary combustible material such as dry chemicals, carbon dioxide 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

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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

Burning of product will give heavy smoke. The original ingredients or unidentified toxic and/or irritant compounds may be present in the combustion fumes. Also, decomposition products may include carbon dioxide, carbon monoxide and metal 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 fire fighting 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 fire fighting procedures

There is no specific recommended protective equipment other than suggested above. For further information on protective equipment requirements, please check Section 8.

#### Additional information

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

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## SECTION 6: Accidental release measures

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#### 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

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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. Workers should wash hands and face before eating, drinking and smoking. 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 vapors. Contaminated work clothing should not be allowed out of the workplace. See Section 8 for additional information on exposure controls and personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage areas and containers

Store in original containers at 10-25°C (50-77°F) dry area and do not leave top of the cartridge open as contamination from air or other environment may reduce the shelf life of the product.

#### Advice on common storage

Store separately from oxidizing agents, strongly alkaline and basic 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

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

#### 7.3. Specific end use(s)

No information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Community / national occupational exposure limit values

Limit values are not available for this product.

#### Information on monitoring procedures

DN(M)ELs

CAS No.	Chemical name	End use	Exposure routes	Frequency of exposure	Type	Value
99-97-8	N, N-dimethyl-p-toluidine	Workers	Inhalation	Acute	Local	No identified hazards
		Workers	Inhalation	Acute	Systemic	No identified hazards
		Workers	Inhalation	Chronic	Local	No identified hazards
		Workers	Inhalation	Chronic	Systemic	1.224 mg/m <sup>3</sup> effects fertility.
		Workers	Dermal	Acute	Local	No identified hazards
		Workers	Dermal	Acute	Systemic	No identified hazards
		Workers	Dermal	Chronic	Local	No identified hazards
		Workers	Dermal	Chronic	Systemic	694.167 µg/kg bw/day effects fertility.
		Consumers	Inhalation	Acute	Local	No identified hazards
		Consumers	Inhalation	Acute	Systemic	No identified hazards
		Consumers	Inhalation	Chronic	Local	No identified hazards
		Consumers	Inhalation	Chronic	Systemic	301.812 µg/m <sup>3</sup> effects fertility.
		Consumers	Dermal	Acute	Local	7.2 mg/m <sup>3</sup>
		Consumers	Dermal	Acute	Systemic	23.8 mg/m <sup>3</sup>

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		Consumers	Dermal	Chronic	Local	2.8 mg/m <sup>3</sup>
		Consumers	Dermal	Chronic	Systemic	292.522 µg/kg bw/day Repeated dose toxicity.
		Consumers	Oral	Acute	Systemic	No identified hazards
		Consumers	Oral	Chronic	Systemic	173.542 µg/kg bw/day effects fertility.

- 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
99-97-8	N, N-dimethyl-p-toluidine	Freshwater	13.7 - 152.59 µg/L	Assessment factor: 100
		Marine water	1.37 - 15.259 µg/L	Assessment factor 1000
		Intermittent releases	137 - 152.59 µg/L	Assessment factor: 100
		STP	1.36 - 4.286 mg/L	Assessment factor: 10
		Sediment (freshwater)	45.378 - 48.245 mg/kg sediment dw	Partition coefficient
		Sediment (marine water)	45.378 - 48.245 mg/kg sediment dw	Partition coefficient
		Soil	18.677 - 20.365 mg/kg soil dw	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.

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#### Personal protection

Personal protection 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 : Colorless to very light yellow

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Odor : Alcohol  
Odor threshold : No data available.

<u>Property</u>	<u>Values</u>	<u>Method(s) and remark(s)</u>
pH	Not applicable.	
Melting point/freezing point	Not applicable.	
Initial boiling point and boiling range	80°C	
Flash point	11°C	
Evaporation rate	Negligible.	
Flammability (solid, gas)	Not applicable.	
Flammability limit in air		
Upper flammability limit	No data available.	
Lower flammability limit	No data available.	
Vapor pressure		
Vapor density	No data available.	
Relative density	0.79	at 20°C (Ref. water at 20°C)
Solubility(ies)		
In water	Not miscible.	
In other solvent(s)	No data available.	
Partition coefficient: n-octanol/water	No data available.	
Auto-ignition temperature	No data available.	
Decomposition temperature	No data available.	
Viscosity	No data available.	
Explosive properties	Not classified.	
Oxidising properties	Not classified.	

#### 9.2. Other data

<u>Property</u>	<u>Values</u>	<u>Method(s) and remark(s)</u>
Softening temperature	No data available.	
VOCs content	No data available.	
Density	0.79 g/cm <sup>3</sup>	at 20°C

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#### SECTION 10: Stability and reactivity

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##### 10.1. Reactivity

Keep away from basic materials and water. Mixture can rapidly polymerize with these materials and produce heat. Evolution of heat in closed containers causes overpressure and produces a risk of bursting.

##### 10.2. Chemical stability

This product is considered stable under normal storage and handling conditions.

##### 10.3. Possibility of hazardous reactions

Cause heating by polymerization in contact with water and basic materials, or under high temperature, high humidity and direct sunlight.

##### 10.4. Conditions to avoid

Stable under recommended storage and handling conditions (see Section 7). Avoid any contact with heat sources.

##### 10.5. Incompatible materials to avoid

Basic materials, water, acids, reducers, peroxides and oxidants. Also, please refer to reactivity in this section.

##### 10.6. Hazardous decomposition products

May emit toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides on combustion.

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#### SECTION 11: Toxicological information

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##### 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



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#### Acute toxicity

CAS No.	Chemical name	Species	Type	Exposure duration	Value	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	Rat	LD50 Oral	-	980 mg/kg bw	-
		Rat	LC50 Inhalation	4 h	1.92 mg/L	-
		Rabbit	LD50 Dermal	-	> 2 000 mg/kg bw	OECD Guideline 402

#### Skin corrosion/irritation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	Rabbit	24 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)
99-97-8	N, N-dimethyl-p-toluidine	Rabbit	1 h	Not irritating.	OECD Guideline 405

#### Respiratory or skin sensitisation

CAS No.	Chemical name	Species	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	Guinea pig	-	Not sensitising	-

#### Germ cell mutagenicity

CAS No.	Chemical name	Species	Type	Route	Result	Method(s) and/or
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						reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	TA 98, TA 1537, TA 1538, TA 100	Gene mutation	In vitro	Not mutagenic	OECD Guideline 471

#### Carcinogenicity

No information available.

#### Reproductive toxicity

CAS No.	Chemical name	Species	Type	Exposure duration	Result	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	Rat	Oral	-	LOAEL 125 mg/kg bw/day	-

#### STOT – Single exposure

No information available.

#### STOT – Repeated exposure

No information available.

#### Aspiration hazard

No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

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)
99-97-8	N, N-dimethyl-p-toluidine	Pimephales promelas (fish)	96 h	LC50	46 mg/L	-

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		Daphnia magna (invertebrates)	48 h	EC50	13.7 mg/L	-
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#### Chronic (long-term) toxicity

CAS No.	Chemical name	Species	Exposure duration	Test endpoint	Result	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	Fish	14 day	LC50	24.892 mg/L	-
		Daphnia magna (invertebrates)	48 h	LC50	15.259 mg/L	-

#### 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)
99-97-8	N, N-dimethyl-p-toluidine	Chlorella pyrenoidosa	72 h	EC50	22 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)
99-97-8	N, N-dimethyl-p-toluidine	Ready biodegradability	BOD	14 day	% 0	-
			TOC		% 1	

#### 12.3. Bioaccumulative potential

CAS No.	Chemical name	Log K <sub>ow</sub>	BCF	Result	Method(s) and/or reference(s) and/or note(s)
99-97-8	N, N-dimethyl-p-toluidine	-	33	No bioaccumulation potential.	-

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#### 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.

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## SECTION 13: Disposal considerations

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#### 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 |
|----------|--|

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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

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

UN No.(ADR) : 1950  
UN No.(ADN) : 1950  
UN No.(RID) : 1950  
UN No.(IMDG) : 1950  
UN No.(IATA) : 1950

##### 14.2. UN proper shipping name

Proper shipping name (ADR) : AEROSOLS, flammable  
Proper shipping name (ADN) : AEROSOLS, flammable  
Proper shipping name (RID) : AEROSOLS, flammable  
Proper shipping name (IMDG) : AEROSOLS, flammable  
Proper shipping name (IATA) : AEROSOLS, flammable

##### 14.3. Transport hazard class(es)

Class(es) (ADR) : 2.1  
Class(es) (ADN) : 2.1  
Class(es) (RID) : 2.1  
Class(es) (IMDG) : 2.1  
Class(es) (IATA) : 2.1

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Transport label (ADR / ADN / RID  
/ IMDG / IATA)



#### 14.4. Packaging group

Packing group (ADR) : Not applicable  
Packing group (ADN) : Not applicable  
Packing group (RID) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable

#### 14.5. Environmental hazards

Marine pollutant : Yes

#### 14.6. Special precautions for user

Transport the package in a proper way that cap of the package is at the top. Make sure that person who is transporting has enough information about instructions applied in case of an accident or any relevant hazard incident.

#### 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.

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#### 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.

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### SECTION 16: Other information

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#### 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/>

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DN(M)EL and PNEC values : ECHA – <http://echa.europa.eu/information-on-chemicals>  
SDS of raw materials

Inventories given in Section 15 : AICS – <http://nicnas.gov.au/search>  
DSL & NDSL – [http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals\\_polymers.cfm](http://ec.gc.ca/lcpe-cepa/eng/substance/chemicals_polymers.cfm)  
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

DOT : Department of Transportation (USA)

DSD : Dangerous Substances Directive 67/548/EEC

DSL : Domestic Substances List

EC : European Community



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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
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 <sub>ow</sub>	: 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

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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

Acute Tox. 3 : Acute toxicity – Category 3  
STOT RE 2 : Specific target organ toxicity – Repeated exposure – Category 2  
STOT SE 3 : Specific target organ toxicity – Single exposure – Category 3  
Eye Irrit. 2 : Eye Irritation – Category 2  
Aquatic Chr. 3 : Aquatic chronic – Category 3  
Flam Liq 2 : Flammable liquid - Category 2

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

H225 : Highly flammable liquid and vapour.  
H311 : Toxic in contact with skin.  
H319 : Causes serious eye irritation.  
H301 : Toxic if swallowed.  
H331 : Toxic if inhaled.  
H336 : May cause drowsiness or dizziness.  
H373 : May cause damage to organs through prolonged or repeated exposure.  
H412 : Harmful to aquatic life with long lasting effects.

#### Revision changes

Version 3.1 - All sections and data are modified to comply with Regulation (EC) No. 1907/2006(REACH) with its amendment Regulation (EC) No. 2015/830.

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#### Composer of Safety Data Sheet

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Certification program/company: TSE

Certificate number: GBF-A-0-2398

#### Additional information

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

#### Disclaimer

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