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

1.1. Product identifier

Product name : EMS Force® AC-11 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.

SECTION 5: Firefighting measures

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.

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



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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	Туре	Value
		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/m³ effects fertility.
	N, N-	Workers	Dermal	Acute	Local	No identified hazards
		Workers	Dermal	Acute	Systemic	No identified hazards
99-97-8		Workers	Dermal	Chronic	Local	No identified hazards
	dimethyl-p- toluidine	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/m³ effects fertility.
		Consumers	Dermal	Acute	Local	7.2 mg/m³
		Consumers	Dermal	Acute	Systemic	23.8 mg/m³



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	Consumers	Dermal	Chronic	Local	2.8 mg/m ³
	Consumers		Chronic		292.522 µg/kg
		Dermal		C	bw/day
		Dermai		Systemic	Repeated dose
					toxicity.
	Consumers	Oral	A	Systemic	No identified
		Orai	Acute		hazards
	Consumers			Systemic	173.542 µg/kg
		Oral	Chronic		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
		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
99-97-8	N, N-dimethyl-p- toluidine	STP	1.36 - 4.286 mg/L	Assessment factor: 10
77-77-0		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 : <u>Hand and other skin protection</u>

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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at 20°C (Ref. water at 20°C)

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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

Solubility(ies)

In water Not miscible.

In other solvent(s) No data available.

Partition coefficient: n-octanol/water No data available.

Auto-ignition temperature

Decomposition temperature

Viscosity

No data available.

No data available.

Viscosity

Explosive properties

Oxidising properties

No data available
Not classified.

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/cm³ at 20°C



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SECTION 10: Stability and reactivity

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.

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



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Acute toxicity

CAS No.	Chemical name	Species	Туре	Exposure duration	Value	Method(s) and/or reference(s) and/or note(s)
		Rat	LD50 Oral	-	980 mg/kg bw	-
99-97-8	N, N-dimethyl-p-	Rat	LC50 Inhalation	4 h	1.92 mg/L	-
	toluidine	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	Туре	Route	Result	Method(s) and/or reference(s) and/or note(s)
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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
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Carcinogenicity

No information available.

Reproductive toxicity

CAS No.	Chemical name	Species	Туре	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-	Pimephales promelas (fish)	96 h	LC50	46 mg/L	-
77-7/-0	p-toluidine	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)
		Fish	14 day	LC50	24.892 mg/L	-
99-97-8	N, N-dimethyl- p-toluidine	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-	Ready	BOD	14 day	% 0	
77-77-0	p-toluidine	biodegradability	TOC		% 1	

12.3. Bioaccumulative potential

	'				Method(s) and/or
CAS No.	Chemical name	Log K _{ow}	BCF	Result	reference(s)
					and/or note(s)
	N, N-dimethyl-p-			No	
99-97-8	toluidine	-	33	bioaccumulation	-
	tolulaine			potential.	

12.4. Mobility in soil



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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

 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

Transport label (ADR / ADN / RID

/ IMDG / IATA)





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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.

China (IECSC)

All ingredients are on the inventory or exempt from listing.

European Union (EINECS)



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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/

 ${\sf DN(M)EL\ and\ PNEC\ values} \qquad : \quad {\sf ECHA-http://echa.europa.eu/information-on-chemicals}$

SDS of raw materials

Inventories given in Section 15 : AICS – http://nicnas.gov.au/search



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DSL & NDSL - 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

c, to

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

ECO : Effective Concentration that

Produces a Stimulation Index of 0

EC3 : Effective Concentration that





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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_{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



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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 –

Category2

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 Lig 2 : Flammable liquid - Category 2

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

H225 : Highly flam- mable liquid and vapour.

H311 : Toxic in contact with skin.H319 : Causes serious eye irritation.

H301 : Toxic if swal- lowed. H331 : Toxic if inhaled.

H336 : May cause drow- siness 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.

Version 3.0 - 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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Additional information

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