

1: Identification

1.1. Product identifier

Product form : Mixture
Product name : TRS HARDENER 1000 E

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Hardener (Crosslinker)
Function or use category : Absorbents and adsorbents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Comercial Química Massó, S.A. (Česká Republika)
Baarova 1542/48
140 00 Praha 4 - CESHÁ REPUBLIKA
T +420 241 006 571 - F +420 241 481 798
msds.support@cqmasso.com

1.4. Emergency telephone number

Emergency number : 704 100 087 (España)

2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification of the mixture

Flammable liquids Category 2	H225
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 2	H319
Respiratory sensitization, Category 1	H334
Skin sensitization, Category 1	H317
Carcinogenicity Category 2	H351
Specific target organ toxicity (single exposure) Category 3	H335
Specific target organ toxicity (single exposure) Category 3	H336
Specific target organ toxicity (repeated exposure) Category 2	H373

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Hazard pictograms (CLP) :



GHS02



GHS07



GHS08

Signal word (CLP) :

Danger

Hazardous ingredients	: Ethyl acetate; 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate; p-Toluenesulphonyl isocyanate
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapour H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H332 - Harmful if inhaled H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled H335 - May cause respiratory irritation H336 - May cause drowsiness or dizziness H351 - Suspected of causing cancer H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (CLP)	: P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. P405 - Store locked up. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P241 - Use explosion-proof equipment. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
PPP safety precautions	:

2.3. Other hazards

No additional information available

3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS Classification
Ethyl acetate	(CAS-No.) 141-78-6 (EC-No.) 205-500-4 ()	50 - 100	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	25 - 50	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
p-Toluenesulphonyl isocyanate	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8	0.1 - 1	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334

Specific concentration limits:

Name	Product identifier	Specific concentration limits
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	(C >= 0.1) Resp. Sens. 1, H334 (C >= 5) Eye Irrit. 2, H319 (C >= 5) Skin Irrit. 2, H315 (C >= 5) STOT SE 3, H335
p-Toluenesulphonyl isocyanate	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8	(C >= 5) Skin Irrit. 2, H315 (C >= 5) STOT SE 3, H335 (C >= 5) Eye Irrit. 2, H319

Full text of H-phrases: see section 16

4: First-Aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs:
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/effects : Causes damage to organs.
- Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.
- Symptoms/effects after skin contact : Causes skin irritation.
- Symptoms/effects after eye contact : Causes serious eye irritation.

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

No additional information available

5: Fire-Fighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
- 6.1.1. For non-emergency personnel
- Emergency procedures : Evacuate unnecessary personnel.
- 6.1.2. For emergency responders
- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

See Heading 1.

8: Exposure controls/personal protection

8.1. Control parameters

Ethyl acetate (141-78-6)		
PELs 8 hour	400 ppm	1400 mg/m ³
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)		
PELs 8 hour	0.02 ppm	0.2 mg/m ³

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Chemical resistant gloves according to EN 374. The gloves are recommended with a protection factor 6; corresponding > 480 minutes of permeation time. For example nitrile rubber (0.4 mm), neoprene rubber (0,5 mm), chloruro de polivinilo (0.7 mm). The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemical which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the gloves supplier.

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Combined filter for organic, inorganic gases, inorganic acids and alkaline / steam type ABEK (according to EN 14387)

Other information : Do not eat, drink or smoke during use.

9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : brown.
Odor : characteristic.
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : > 70 °C
Flash point : ≈ -4 °C ethyl acetate
Auto-ignition temperature : ≈ 460 °C

Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Highly flammable liquid and vapour
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Specific gravity / density	:	≈ 0.987 g/ml
Solubility	:	No data available
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	≈ 14 Pa.s
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosion limits	:	No data available

9.2. Other information

No additional information available

10: Stability and reactivity**10.1. Reactivity**

No additional information available

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity : Inhalation:dust,mist: Harmful if inhaled.

ATE CLP (dust, mist)	3 mg/l/4h
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Ethyl acetate (141-78-6)

LC50 inhalation rat (ppm)	2750 ppmV/4h
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p-Toluenesulphonyl isocyanate (4083-64-1)

LD50 oral rat	≈ 2234 mg/kg
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Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

TRS HARDENER 1000 E

Viscosity, kinematic	≈ 14184.397 mm ² /s
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Potential Adverse human health effects and symptoms : Harmful if inhaled.

12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

TRS HARDENER 1000 E	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

TRS HARDENER 1000 E	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment.

13: Disposal considerations

13.1. Waste treatment methods




Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

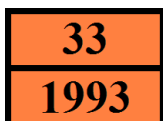
ADR	IMDG	IATA
14.1. UN number		
1993	1993	1993
14.2. UN proper shipping name		
FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	Flammable liquid, n.o.s.
Transport document description		
UN 1993 FLAMMABLE LIQUID, N.O.S. (), 3, II, (D/E)	UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II	UN 1993 Flammable liquid, n.o.s., 3, II
14.3. Transport hazard class(es)		
3	3	3
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1

Special provision (ADR)	: 274, 601, 640D
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP8, TP28
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	:



Tunnel restriction code (ADR) : D/E

- Transport by sea

Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP8, TP28
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: B

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3
ERG code (IATA)	: 3H

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15: Regulatory information

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

15.1.1. Federal/National

EINECS: Listed

Ethyl acetate	(CAS-No.) 141-78-6 (EC-No.) 205-500-4 (EC Index-No.) 607-022-00-5 (REACH-no) 01-2119475103-46
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4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index-No.) 615-005-00-9 (REACH-no) 01-2119457014-47
p-Toluenesulphonyl isocyanate	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8 (EC Index-No.) 615-012-00-7 (REACH-no) 01-2119980050-47

15.1.2. State/Local

Ensure all national/local regulations are observed.

New Jersey Hardous Substances:

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8) - Listed
Ethyl acetate (141-78-6) - Listed

California Proposition 65:

Not Listed

16: Other information

Training advice : workers must have risk-specific training.

Other information : None.

Full text of H- and EUH-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Resp. Sens. 1	Respiratory sensitization, Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure

REVISED: 04/10/2018

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product