



SAFETY DATA SHEET

This safety data sheet complies with the requirements of: (CLP) Regulation (EC 1272/2008)

Revision Date 08-Jun-2018

Version 4

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code 47709PL
Product Name VERSACHEM STEEL WELD EPOXY (RESIN)

Contains BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN, ALKYL GLYCIDYL ETHER

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

Recommended Use (Epoxy resin)
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer ITW Permatex 6875 Parkland Blvd. Solon, OH 44139 USA	Supplier KRAFFT S.L.U Carreters de Urnieta s/n 14 Andoain, ES 20140
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E-mail address:
mail@permatex.com

1.4. Emergency telephone number

24-hour emergency phone number - 800-255-3924 (00+ 1+ 813-248-0585) ChemTel

SECTION 2: HAZARDS IDENTIFICATION:

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2A - (H319)
Skin sensitization	Category 1 - (H317)
Chronic aquatic toxicity	Category 2 - (H411)

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

Full text of R-phrases: see section 16

2.2. Label elements

Contains BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN, ALKYL GLYCIDYL ETHER



Signal word
Warning

Statements of hazard

H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H317 - May cause an allergic skin reaction
 H411 - Toxic to aquatic life with long lasting effects
 EUH205 - Contains epoxy constituents. May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P280 - Wear protective gloves and eye/face protection
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P273 - Avoid release to the environment
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/attention
 P391 - Collect spillage

Other Information

- Contains epoxy constituents with an average molecular weight of <= 700

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN	-	25068-38-6	>60	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	01-2119456619-26-XXXX
ALKYL GLYCIDYL ETHER	271-846-8	68609-97-2	<5	Skin Irrit. 2 (H315) Skin Sens. 1 (H317)	Exempt - Volume

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Get medical advice/attention if you feel unwell.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Skin contact	IF ON SKIN: Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	IF IN EYES: 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.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

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

Symptoms See section 2 for more information

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Foam. Dry chemical.

Unsuitable extinguishing media

No information available

5.2. Special hazards arising from the substance or mixture

None in particular.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Wash thoroughly after handling.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid breathing vapors or mists.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials

Strong oxidizing agents, Acids, Bases, Amines

7.3. Specific end use(s)

Specific use(s)

Automotive Care Product.

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Use exhaust ventilation to keep airborne concentrations below exposure limits.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Suitable protective clothing. Gloves made of plastic or rubber.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Viscous liquid
Appearance	Black
Odor	Slight
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 204 °C / >400 °F	
Flash point	> 93 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	1.1-1.3	
Water solubility	Negligible	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
 <u>9.2. Other information</u>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	0	
Density	No information available	
Bulk density	No information available	

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not applicable

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Excessive heat.

10.5. Incompatible materials

Strong oxidizing agents

Acids

Bases

Amines

10.6. Hazardous decomposition products

Carbon oxides

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Irritating to eyes. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.
Ingestion	Ingestion may cause irritation to mucous membranes.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 11,619.00 mg/kg

Unknown acute toxicity

- 100 % of the mixture consists of ingredient(s) of unknown toxicity.
- 36.3 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Eyes, Respiratory system, Skin.
Aspiration hazard:	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
Waste codes / waste designations according to EWC / AVV	No Data Available
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	No information available
14.7 EmS-No	Not applicable

RID

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable

14.6 Special Provisions No information available
14.7 Classification code No information available

ADR

14.1 UN/ID no Not regulated
14.2 Proper shipping name: Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group None
14.5 Environmental hazard Not applicable
14.6 Special Provisions No information available
14.7 Classification code No information available

IATA

14.1 UN/ID no Not regulated
14.2 Proper shipping name: Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group None
14.5 Environmental hazard Not applicable
14.6 Special Provisions No information available
14.7 ERG Code Not applicable

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Complies
DSL/NDL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision Date 08-Jun-2018

Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet complies with the requirements of: (CLP) Regulation (EC 1272/2008)

Revision Date 08-Jun-2018

Version 4

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code 47709V
Product Name VERSACHEM STEEL WELD EPOXY (HARDENER)

Contains 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, TRIETHYLENETETRAMINE, TETRAETHYLENEPENTAMINE

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

Recommended Use Epoxy curing agent
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

Supplier
KRAFFT S.L.U
Carreters de Urnieta s/n
14 Andoain, ES 20140

E-mail address:
mail@permatex.com

1.4. Emergency telephone number

24-hour emergency phone number - 800-255-3924 (00+ 1+ 813-248-0585) ChemTel

SECTION 2: HAZARDS IDENTIFICATION:

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitization	Category 1 - (H317)
Chronic aquatic toxicity	Category 3 - (H412)

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

Full text of R-phrases: see section 16

2.2. Label elements

Contains 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, TRIETHYLENETETRAMINE, TETRAETHYLENEPENTAMINE



Signal word
Danger

Statements of hazard

H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P330 - Rinse mouth
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/physician
 P391 - Collect spillage
 P405 - Store locked up

Other Information

- Not applicable

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL	202-013-9	90-72-2	<10	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	Exempt - Volume
TRIETHYLENETETRAMINE	203-950-6	112-24-3	<10	Acute Tox. 4 (H312) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Chronic 3 (H412)	Exempt - Volume
TETRAETHYLENEPENTAMINE	203-986-2	112-57-2	<5	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	Exempt - Volume

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	If symptoms persist, call a physician.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with soap and water. Call a physician immediately. Wash contaminated clothing before reuse.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion	IF SWALLOWED: Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required.

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

Symptoms See section 2 for more information

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Foam. Dry chemical.

Unsuitable extinguishing media

No information available

5.2. Special hazards arising from the substance or mixture

None in particular.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Wash thoroughly after handling.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use personal protective equipment as required.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid breathing vapors or mists.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Store locked up.

Incompatible materials

Strong oxidizing agents, Acids, Peroxides, Sodium hypochlorite, Calcium hypochlorite

7.3. Specific end use(s)

Specific use(s)

Automotive Care Product.

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
TRIETHYLENETETRAMINE 112-24-3	-	-	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 ppm TWA: 6 mg/m ³ STEL: 3 ppm STEL: 12 mg/m ³	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Use exhaust ventilation to keep airborne concentrations below exposure limits.

Personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Suitable protective clothing. Gloves made of plastic or rubber. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate. Antistatic footwear.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Off-white
Odor	Ammonia
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 171 °C / 340 °F	
Flash point	> 93 °C / > 199 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<1 mmHg @ 68°F	
Vapor density	>1	Air = 1
Relative density	1.03	
Water solubility	Partially soluble	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0
Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not applicable

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Excessive heat.

10.5. Incompatible materials

Strong oxidizing agents
Acids
Peroxides
Sodium hypochlorite
Calcium hypochlorite

10.6. Hazardous decomposition products

Carbon oxides
Nitrogen oxides (NOx)
Ammonia
Amines

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

Inhalation	Causes burns.
Eye contact	Risk of serious damage to eyes. May cause burns.
Skin contact	May cause sensitization by skin contact. Contact causes severe skin irritation and possible burns.
Ingestion	Harmful if swallowed. Can burn mouth, throat, and stomach.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,066.00 mg/kg

ATEmix (dermal) 1,207.00 mg/kg

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity.

90 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

90 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Eyes, Respiratory system, Skin.
Aspiration hazard:	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
TRIETHYLENETETRAMINE	2.5: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 20: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 3.7: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	495: 96 h <i>Pimephales promelas</i> mg/L LC50 570: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static	31.1: 48 h <i>Daphnia magna</i> mg/L EC50
TETRAETHYLENEPENTAMINE	2.1: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	420: 96 h <i>Poecilia reticulata</i> mg/L LC50 static	24.1: 48 h <i>Daphnia magna</i> mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
TRIETHYLENETETRAMINE	-1.4
TETRAETHYLENEPENTAMINE	<1

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
TRIETHYLENETETRAMINE	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
Waste codes / waste designations according to EWC / AVV	No Data Available
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	No information available
14.7 EmS-No	Not applicable

RID

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	No information available
14.7 Classification code	No information available

ADR

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	No information available
14.7 Classification code	No information available

IATA

14.1 UN/ID no	Not regulated
14.2 Proper shipping name:	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	None
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	No information available
14.7 ERG Code	Not applicable

Section 15: REGULATORY INFORMATION

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

Chemical Name	French RG number	Title
TRIETHYLENETETRAMINE 112-24-3	RG 49, RG 49bis	-
TETRAETHYLENEPENTAMINE 112-57-2	RG 49, RG 49bis	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H412 - Harmful to aquatic life with long lasting effects
H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects
H315 - Causes skin irritation

H319 - Causes serious eye irritation

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Revision Date 08-Jun-2018

Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet