POLYMER NATION

Safety Data Sheet
F-10 Part A

SECTION 1: Identification

1.1 GHS Product identifier

Product name	F-10 Part A
Product number	E1W
Brand	Polymer Nation

1.2 Other means of identification
Epoxy Resin

1.3 Recommended use of the chemical and restrictions on use
100% solids pigmented epoxy resin for use in aggregate filled resinous flooring applications

1.4 Supplier's details

Name	Polymer Nation
Address	405 Oakwood Ave Waukegan IL 60085
Telephone	847-774-5038

1.5 Emergency phone number
800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2
- Eye damage/irritation, Cat. 2A
- Toxic to reproduction, Cat. 1B
- Skin corrosion/irritation, Cat. 2
- Carcinogenicity, Cat. 2
- Sensitization, skin, Cat. 1

2.2 GHS label elements, including precautionary statements
Pictograms

Signal word **Danger**

Hazard statement(s)

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H351	Suspected of causing cancer [route]
H360	May damage fertility or the unborn child [effect, route]
H411	Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash … thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see … on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei

Concentration	75 - 85 % (weight)
EC no.	500-033-5
CAS no.	25068-38-6
Index no.	603-074-00-8

- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs	Eye Irrit. 2; H319: C ≥ 5% Skin Irrit. 2; H315: C ≥ 5%

2. Titanium(IV) oxide

Concentration	10 - 20 % (weight)
EC no.	236-675-5
CAS no.	13463-67-7
Index no.	022-006-00-2

- Carcinogenicity, Cat. 2

H351	Suspected of causing cancer [route]

3. Alkyl epoxy resin

Concentration	1 - 10 % (weight)
EC no.	271-846-8
CAS no.	68609-97-2
Index no.	603-103-00-4

- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

H315	Causes skin irritation
H317	May cause an allergic skin reaction

4. Component 4 (trade secret)*

Concentration	1 - 10 % (weight)

- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

H315	Causes skin irritation
H317	May cause an allergic skin reaction

5. TETRAHYDROFURFURYL ALCOHOL

Concentration	1 - 5 % (weight)
EC no.	202-625-6
CAS no.	97-99-4
Index no.	603-061-00-7

- Toxic to reproduction, Cat. 1B
- Eye damage/irritation, Cat. 2A

H319	Causes serious eye irritation
H360Df	May damage the unborn child. Suspected of damaging fertility.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give

mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

In case of skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

In case of eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

If swallowed: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Personal protective equipment for first-aid responders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use dry chemical, CO2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media: Do not use water jet

5.2 Specific hazards arising from the chemical
Carbon oxides
carbon dioxide
carbon monoxide
halogenated compounds

In a fire or if heated, a pressure increase will occur and the container may burst.

5.3 Special protective actions for fire-fighters
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or
diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei (CAS: 25068-38-6 EC: 500-033-5)

2. Alkyl epoxy resin (CAS: 68609-97-2 EC: 271-846-8)

3. TETRAHYDROFURFURYL ALCOHOL (CAS: 97-99-4 EC: 202-625-6)

4. Titanium(IV) oxide

PEL [Titanium dioxide] (Inhalation): 5 mg/m3 (Resp), 15 mg/m3 (Total); US (US/OSHA)
Lower Respiratory Tract irritation

TWA [Titanium dioxide] (Inhalation): 10 mg/m3; AU (AU/SWA)
Notes: (a)

PEL [Titanium dioxide - Total dust] (Inhalation): 15 mg/m3; US (US/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

PEL [Titanium dioxide - Total dust] (Inhalation): See PNOR; US (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

REL [Titanium dioxide - Total dust] (Inhalation): Ca, (ultrafine particles), 2.4 mg/m3 (fine), 0.3 mg/m3 (ultrafine), See Appendix A, See NIOSH Intelligence Bulletin 63; US (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory protection
Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards
No data available

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	white or opaque
Odor	mild
Odor threshold	ND
Melting point/freezing point	ND
Boiling point or initial boiling point and boiling range	395.6 F/202 C
Flammability	ND
Lower and upper explosion limit/flammability limit	ND
Flash point	485 F/251.6 C
Auto-ignition temperature	ND
Decomposition temperature	ND
pH	ND
Kinematic viscosity	<1000 cP
Solubility	ND
Partition coefficient n-octanol/water (log value)	ND

Vapor pressure	ND
Evaporation rate	ND
Density and/or relative density	1.31
Relative vapor density	ND

SECTION 10: Stability and reactivity

10.1 Reactivity
None under normal use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None under normal use conditions.

10.4 Conditions to avoid
Strong oxidizer

10.5 Incompatible materials
No specific data.

Titanium(IV) oxide : Strong acids

10.6 Hazardous decomposition products
Carbon dioxide, carbon monoxide, oxides of nitrogen, other undetermined compounds

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Alkyl epoxy resin
LD50 Oral - Rat - 1163 mg/kg
LD50 Skin - Rabbit - 1130 mg/kg
LC50 Inhalation - Rat - >11.3 mg/l
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN)
LD50 Skin - Rat - 2,000 mg/kg
LD50 Oral - Rat - 11,400 mg/kg
TETRAHYDROFURFURYL ALCOHOL
LD50 Oral - Rat - >2000 mg/kg

Titanium(IV) oxide
LD50 Oral - Rat - > 10,000 mg/kg
LD50 Skin - Rabbit - > 10,000 mg/kg

Skin corrosion/irritation
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN)
Rabbit
Result: Score 1.5 - 2
Remarks: Skin -Erythema/Eschar 404
Acute Dermal Irritation/Corrosion
Rabbit

Result: Score 1.0 - 1.5
Remarks: Skin - Edema 404
Acute Dermal Irritation/Corrosion
Rabbit - 24 hrs
Remarks: Skin -Moderate irritant

Titanium(IV) oxide
Human - 3 h
Result: Mild skin irritant

Serious eye damage/irritation
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN)
Rabbit
Remarks: eyes - Mild irritant

Respiratory or skin sensitization
Skin sensitizer

In an OECD No. 429 mouse LLNA study the estimated EC3 was a concentration of 5.7% suggesting that BADGE is a moderate skin sensitizer in this test system. In an OECD No. 406 guinea pig Maximization study BADGE induced positive dermal reaction in 100% of the test animals at a 50% concentration challenge dose. Therefore, BADGE is an "Extreme" skin sensitizer under the conditions of this study. BADGE was also positive for skin sensitization in an OECD No. 406 guinea pig Buehler method study.

Germ cell mutagenicity
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN),

Remarks: Did not induce evidence of chromosome damage in a mouse dominant lethal oral gavage study conducted up to a high dose level of 10 grams/kg and in a mouse micronucleus test conducted up to a high dose of 5000 mg/kg. Negative in a male mouse spermatocyte cytogenetic assay with treatment for 5 days by oral gavage up to a high dose of 3000 mg/kg. Did not induce an increase in the frequency of chromosome damage in a Chinese hamster bone marrow cytogenetic test by oral gavage up to a high dose of 3300 mg/kg. Failed to induce an increase of DNA strand breaks in rat liver cells following oral gavage treatment with 500 mg/kg as measured by alkaline elution.

Carcinogenicity
Titanium(IV) oxide

Remarks: IARC
2B-Possibly carcinogenic to humans

Reproductive toxicity
Based on available data, classification data are not met

Specific target organ toxicity (STOT) - single exposure
No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

SECTION 12: Ecological information

Toxicity
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
LC50 - Fish - 1.3 mg/l - 96 h
EC50 - Daphnia magna (water flea) - 2.1 mg/l - 48 h
LC50 - Algae - >11 mg/l - 72 h

Titanium(IV) oxide
EC50 - Daphnia magna (water flea) - > 1,000 mg/l - 48 h
LC50 - Other fish - > 1,000 mg/l - 96 h

Persistence and degradability
No data available on product

Bioaccumulative potential
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN),

Remarks: LogPow 2.64 3.78
BCF 3-31 31.00
Potential - low

Mobility in soil
No data available on product.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Packaging disposal
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: Transport information

DOT (US)
UN Number: UN3082
Class: 9
Packing Group: III
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)
Reportable quantity (RQ):
Marine pollutant: Yes
Poison inhalation hazard:

IMDG
UN Number: UN3082
Class: 9
Packing Group: III
EMS Number:
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)

IATA
UN Number: UN3082
Class: 9
Packing Group: III
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Canadian Domestic Substances List (DSL)
Chemical name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
CAS number: 25068-38-6

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
CAS number: 25068-38-6

US EPA TSCA public inventory
Chemical name: EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
CAS number: 25068-38-6

Canadian Domestic Substances List (DSL)
Chemical name: Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.
CAS number: 68609-97-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Alkyl epoxy resin
CAS number: 68609-97-2

US EPA TSCA public inventory
Chemical name: Alkyl epoxy resin
CAS number: 68609-97-2

Canadian Domestic Substances List (DSL)
Chemical name: Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-
CAS number: 17557-23-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Component 4
CAS number: 17557-23-2

US EPA TSCA public inventory
Chemical name: Component 4
CAS number: 17557-23-2

Pennsylvania Right To Know Components
Chemical name: 2-FURANMETHANOL, TETRAHYDRO-
CAS number: 97-99-4

Canadian Domestic Substances List (DSL)
Chemical name: 2-Furanmethanol, tetrahydro-
CAS number: 97-99-4

EU Cosmetics Prohibited Substances List, (EC) 2009/1223 Annex II
Chemical name/INN: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

US EPA TSCA public inventory
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

New Jersey Right To Know Components
Common name: TITANIUM DIOXIDE
CAS number: 13463-67-7

Pennsylvania Right To Know Components
Chemical name: TITANIUM OXIDE (TIO2)
CAS number: 13463-67-7

Canadian Non-Domestic Substances List (NDSL)
Chemical name: Anatase (TiO2)
CAS number: 1317-70-0

Canadian Domestic Substances List (DSL)
Chemical name: Titanium oxide (TiO2)
CAS number: 13463-67-7

Canadian Domestic Substances List (DSL)

Chemical name: Titanium oxide
CAS number: 51745-87-0

Canadian Domestic Substances List (DSL)
Chemical name: Rutile (TiO2)
CAS number: 1317-80-2

EU Cosmetics Allowed Colorants List, (EC) 2009/1223 Annex IV
Chemical name: Titanium(IV) oxide
CAS number: 13463-67-7

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Titanium(IV) oxide
CAS number: 13463-67-7

US EPA TSCA public inventory
Chemical name: Titanium(IV) oxide
CAS number: 13463-67-7

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

POLYMER NATION

Safety Data Sheet
F-10, -11 Standard Set Part B

SECTION 1: Identification

1.1 GHS Product identifier

Product name	F-10, -11 Standard Set Part B
Product number	H1
Brand	Polymer Nation

1.2 Other means of identification

Epoxy Hardener

1.3 Recommended use of the chemical and restrictions on use

100% solids clear epoxy hardener for use in resinous flooring applications

1.4 Supplier's details

Name	Polymer Nation
Address	405 Oakwood Ave Waukegan IL 60085
Telephone	847-774-5038

1.5 Emergency phone number

800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)

- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Acute toxicity, dermal, Cat. 4
- Eye damage/irritation, Cat. 1
- Sensitization, respiratory, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Sensitization, skin, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3
- Specific target organ toxicity (repeated exposure), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **Danger**

Hazard statement(s)

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
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H372	Causes damage to organs [organs] through prolonged or repeated exposure [route]

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER /doctor/...if you feel unwell,
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor/...
P312	Call a POISON CENTER/doctor/.../ if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Concentration	25 - 50 % (weight)
EC no.	220-666-8
CAS no.	2855-13-2

Index no.	612-067-00-9

- Acute toxicity, oral, Cat. 4
- Skin corrosion/irritation, Cat. 1B
- Eye damage/irritation, Cat. 1
- Sensitization, skin, Cat. 1A

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
SCLs/M-factors/ATEs	Oral: ATE = 1030 mg/kg bw Skin Sens. 1A; H317: C ≥ 0,001 %

2. Benzyl alcohol

Concentration	25 - 50 % (weight)
EC no.	202-859-9
CAS no.	100-51-6
Index no.	603-057-00-5

- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1B

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
SCLs/M-factors/ATEs	oral: ATE = 1200 mg/kg bw

3. Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer

Concentration	1 - 10 % (weight)
CAS no.	68609-08-5

4. Triethanolamine

Concentration	1 - 5 % (weight)
EC no.	203-049-8
CAS no.	102-71-6

5. 4-TERT-BUTYL PHENOL

Concentration	1 - 5 % (weight)
EC no.	202-679-0
CAS no.	98-54-4
Index no.	604-090-00-8

- Toxic to reproduction, Cat. 2
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 1

H315	Causes skin irritation
H318	Causes serious eye damage
H361f	

H410	Very toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs	M=1

6. Xylylenediamine

Concentration	1 - 5 % (weight)
EC no.	216-032-5
CAS no.	1477-55-0

7. 1,3-Cyclohexanedimethanamine

Concentration	1 - 5 % (weight)
EC no.	219-941-5
CAS no.	2579-20-6

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If inhaled, remove to fresh air.
In case of skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Take victim immediately to hospital.
In case of eye contact	In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. If easy to do, remove contact lens, if worn. Continue rinsing eyes during transport to hospital. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	Rinse mouth with water. If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Personal protective equipment for first-aid responders	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical
Burning produces irritant fumes.
Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Unsuitable extinguishing media: Do NOT use water jet.

In the event of fire and/or explosion do not breathe fumes.
Prevent fire extinguishing water from contaminating surface water or the ground water system.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep people away from and upwind of spill/leak.

6.2 Environmental precautions
Local authorities should be advised if significant spillages cannot be contained.
Do not allow contact with soil, surface or ground water.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Wear personal protective equipment.
Avoid inhalation, ingestion and contact with skin and eyes.
Use only with adequate ventilation.
Do not breathe vapours/dust.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not
be employed in any process in which this mixture is being used.

7.2 Conditions for safe storage, including any incompatibilities
Store in original container.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Triethanolamine (CAS: 102-71-6 EC: 203-049-8)
PEL (Inhalation): 5 mg/m3; US (Cal/OSHA)
California permissible exposure limits for chemical contaminants (Title 8, Article 107)

TWA (Inhalation): 5 mg/m3; AU (AU/SWA)
Other advisory: Sen

2. Xylylenediamine (CAS: 1477-55-0)
TWA [m-Xylene-alpha,alpha'-diamine] (Inhalation): 0.1 Peak limitation mg/m3; AU (AU/SWA)
Other advisory: Sk

3. Benzyl alcohol (CAS: 100-51-6 EC: 202-859-9)
TWA: 10 ppm
US WEEL

8.2 Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection
Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection
Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards
No data available

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	clear
Color	straw; yellow
Odor	amine
Odor threshold	ND
Melting point/freezing point	ND
Boiling point or initial boiling point and boiling range	ND
Flammability	ND
Lower and upper explosion limit/flammability limit	ND
Flash point	> 201 F/> 94 C
Auto-ignition temperature	ND
Decomposition temperature	ND
pH	ND
Kinematic viscosity	< 200 cP @ 72 F
Solubility	water - negligible
Partition coefficient n-octanol/water (log value)	ND
Vapor pressure	ND
Evaporation rate	ND
Density and/or relative density	1.02 g/cm3
Relative vapor density	ND

SECTION 10: Stability and reactivity

10.1 Reactivity
None under normal use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None under normal use conditions.

10.4 Conditions to avoid
Strong oxidizer

10.5 Incompatible materials
No specific data.

Benzyl alcohol: Strong oxidizing agents

Triethanolamine: Acids, Oxidizing agents

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide, oxides of nitrogen, other undetermined compounds

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Benzyl alcohol: Other decomposition products - No data available
In the event of fire: see section 5

Triethanolamine: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Benzyl alcohol: LD50 Oral - Rat - 1,230 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Excitement. Behavioral:Coma.
LD50 Oral - Rat - male - 1,620 mg/kg
Dermal: No data available
No data available

Triethanolamine
LD50 Oral - Mouse - 5,846 mg/kg
Remarks: Behavioral:Convulsions or effect on seizure threshold. Diarrhoea Kidney, Ureter, Bladder:Other changes.
LD50 Oral - Rat - 5,530 mg/kg
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Diarrhoea Skin and Appendages: Other: Hair.
LD50 Oral - Rabbit - 2,200 mg/kg
LD50 Oral - Guinea pig - 2,200 mg/kg
LD50 Skin - Rabbit - >22.5 g/kg

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
LD50 Oral - Rat - 1030 mg/kg
LD50 Skin - Rat - >2000 mg/kg
LC50 Inhalation - Rat - 5.01 mg/l - 4 h

Skin corrosion/irritation
Causes severe burns

Benzyl alcohol: Benzyl alcohol
OECD Test Guideline 404 Skin - Rabbit - 24 h
Result: No skin irritation

Serious eye damage/irritation
Causes serious eye damage.

Benzyl alcohol: Benzyl alcohol
OECD Test Guideline 405 Eyes - Rabbit - 24 h
Result: Eye irritation

Respiratory or skin sensitization
Skin sensitisation-May cause an allergic skin reaction.

Respiratory sensitisation-Not classified based on available information.

Benzyl alcohol: No data available.

Germ cell mutagenicity
Not classified based on available information.

Benzyl alcohol: No data available.

Carcinogenicity
Not classified based on available information.

Benzyl alcohol: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Suspected of damaging fertility or the unborn child.

Benzyl alcohol: No data available.

Summary of evaluation of the CMR properties

Benzyl alcohol: No data available.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Benzyl alcohol: No data available.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Benzyl alcohol: No data available.

Aspiration hazard
Not classified based on available information.

Benzyl alcohol: No data available.

SECTION 12: Ecological information

Toxicity
Benzyl Alcohol:
Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 460 mg/l

End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
GLP: no

Toxicity to fish (Chronic toxicity): NOEC: 48.897 mg/l
Exposure time: 30 d
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test

Persistence and degradability
benzyl alcohol:
Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Biochemical oxygen demand
Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 14 d
Method: OECD Test Guideline 301C
Stability in water : Degradation half life: 9 yr

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 6.9 mg/l
Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: Tested according to Directive 92/69/EEC.
Stability in water : Degradation half life (DT50): > 1 yr (25 °C) pH: 4 - 9
Hydrolysis: < 10 % at 50 °C(5 d)

Bioaccumulative potential
benzyl alcohol:
Bioaccumulation : Bioconcentration factor (BCF): 1.37
Remarks: Bioaccumulation is unlikely.
Partition coefficient: noctanol/water: log Pow: 1.05 (68 °F / 20 °C)

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 76.22
Remarks: Bioaccumulation is unlikely.
Partition coefficient: noctanol/water: log Pow: 0.99 (73 °F / 23 °C)
pH: 6.34

Mobility in soil
3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Mobility : Medium: Air
Content: 0.02 %
Method: Calculation, Mackay Level I Fugacity Model
Medium: Water
Content: 99.83 %
Medium: Soil
Content: 0.08 %
Medium: Sediment
Content: 0.08 %
Distribution among environmental compartments: Koc: 928, log Koc: 2.97

SECTION 13: Disposal considerations

Disposal methods

Product disposal
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Packaging disposal
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: Transport information

DOT (US)
UN Number: UN2735
Class: 8
Packing Group: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
Reportable quantity (RQ):
Marine pollutant: no
Poison inhalation hazard:

IMDG
UN Number: UN2735
Class: 8
Packing Group: II
EMS Number:
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

IATA
UN Number: UN2735
Class: 8
Packing Group: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

New Jersey Right To Know Components
Common name: ISOPHORONEDIAMINE
CAS number: 2855-13-2

Canadian Domestic Substances List (DSL)
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-
CAS number: 2855-13-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
CAS number: 2855-13-2

US EPA TSCA public inventory
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
CAS number: 2855-13-2

Water hazard class (WGK, Germany)
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE, CAS number: 2855-13-2
WGK hazard class: WGK 1 - Slightly hazardous to water

Pennsylvania Right To Know Components
Chemical name: BENZENEMETHANOL
CAS number: 100-51-6

SARA 302 Components
No chemicals in this material [Benzyl alcohol] are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material [Benzyl alcohol] does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard for: Benzyl alcohol.

Canadian Domestic Substances List (DSL)
Chemical name: Benzenemethanol
CAS number: 100-51-6

Water hazard class (WGK, Germany)
Chemical name: Benzyl alcohol, CAS number: 100-51-6
WGK hazard class: WGK 1 - Slightly hazardous to water

EU Cosmetics Allowed preservatives List, (EC) 2009/1223 Annex V
Chemical name: Benzyl alcohol
CAS number: 100-51-6

EU Cosmetics Restricted Substances List, (EC) 2009/1223 Annex III
Chemical name/INN: Benzyl alcohol
CAS number: 100-51-6

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Benzyl alcohol
CAS number: 100-51-6

US EPA TSCA public inventory
Chemical name: Benzyl alcohol
CAS number: 100-51-6

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: BENZYL ALCOHOL
CAS number: (none)

Canadian Domestic Substances List (DSL)
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer
CAS number: 68609-08-5

US EPA TSCA public inventory
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer
CAS number: 68609-08-5

Pennsylvania Right To Know Components
Chemical name: ETHANOL, 2,2',2''-NITRILOTRIS-
CAS number: 102-71-6

SARA 302 Components
No chemicals in this material [Triethanolamine] are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material [Triethanolamine] does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard for: Triethanolamine.

Canadian Domestic Substances List (DSL)
Chemical name: Ethanol, 2,2',2''-nitrilotris-
CAS number: 102-71-6

Water hazard class (WGK, Germany)
Chemical name: Triethanolamine, CAS number: 102-71-6
WGK hazard class: WGK 1 - Slightly hazardous to water

US EPA TSCA public inventory
Chemical name: Triethanolamine
CAS number: 102-71-6

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: TRIETHANOLAMINE
CAS number: 102-71-6

Canadian Domestic Substances List (DSL)
Chemical name: Phenol, 4-(1,1-dimethylethyl)-
CAS number: 98-54-4

EU Cosmetics Prohibited Substances List, (EC) 2009/1223 Annex II
Chemical name/INN: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

EU SVHC Candidate List for Authorisation
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

US EPA TSCA public inventory
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

Water hazard class (WGK, Germany)
Chemical name: 4-TERT-BUTYL PHENOL, CAS number: 98-54-4
WGK hazard class: WGK 3 - Extremely hazardous to water

New Jersey Right To Know Components
Common name: m-XYLENE alpha, alpha'-DIAMINE
CAS number: 1477-55-0

Pennsylvania Right To Know Components
Chemical name: 1,3-BENZENEDIMETHANAMINE
CAS number: 1477-55-0

Canadian Domestic Substances List (DSL)

Chemical name: 1,3-Benzenedimethanamine
CAS number: 1477-55-0

US EPA TSCA public inventory
Chemical name: Xylylenediamine
CAS number: 1477-55-0

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: MXDA
CAS number: 1477-55-0

Water hazard class (WGK, Germany)
Chemical name: Xylylenediamine, CAS number: 1477-55-0
WGK hazard class: WGK 2 - Hazardous to water

Canadian Domestic Substances List (DSL)
Chemical name: 1,3-Cyclohexanedimethanamine
CAS number: 2579-20-6

US EPA TSCA public inventory
Chemical name: 1,3-Cyclohexanedimethanamine
CAS number: 2579-20-6

Water hazard class (WGK, Germany)
Chemical name: 1,3-Cyclohexanedimethanamine, CAS number: 2579-20-6
WGK hazard class: WGK 2 - Hazardous to water

SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

POLYMER NATION

Safety Data Sheet
F-01 Part A

SECTION 1: Identification

1.1 GHS Product identifier

Product name	F-01 Part A
Product number	E1
Brand	Polymer Nation

1.2 Other means of identification
Epoxy Resin

1.3 Recommended use of the chemical and restrictions on use
100% solids clear epoxy resin for use in resinous flooring applications

1.4 Supplier's details

Name	Polymer Nation
Address	405 Oakwood Ave Waukegan IL 60085
Telephone	847-774-5038

1.5 Emergency phone number
800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2
- Eye damage/irritation, Cat. 2A
- Toxic to reproduction, Cat. 1B
- Skin corrosion/irritation, Cat. 2

2.2 GHS label elements, including precautionary statements
Pictograms

Signal word **Danger**

Hazard statement(s)

H315	Causes skin irritation
H319	Causes serious eye irritation
H360	May damage fertility or the unborn child [effect, route]
H411	Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash … thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see … on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei

Concentration	80 - 90 % (weight)
EC no.	500-033-5
CAS no.	25068-38-6
Index no.	603-074-00-8

- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs	Eye Irrit. 2; H319: C ≥ 5% Skin Irrit. 2; H315: C ≥ 5%

2. Alkyl epoxy resin

Concentration	1 - 10 % (weight)
EC no.	271-846-8
CAS no.	68609-97-2
Index no.	603-103-00-4

- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

H315	Causes skin irritation
H317	May cause an allergic skin reaction

3. Component 3 (trade secret)*

Concentration	1 - 10 % (weight)

- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

H315	Causes skin irritation
H317	May cause an allergic skin reaction

4. TETRAHYDROFURFURYL ALCOHOL

Concentration	1 - 5 % (weight)
EC no.	202-625-6
CAS no.	97-99-4
Index no.	603-061-00-7

- Toxic to reproduction, Cat. 1B
- Eye damage/irritation, Cat. 2A

H319	Causes serious eye irritation
H360Df	May damage the unborn child. Suspected of damaging fertility.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
In case of skin contact	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
In case of eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

If swallowed	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Personal protective equipment for first-aid responders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use dry chemical, CO2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media: Do not use water jet

5.2 Specific hazards arising from the chemical

Carbon oxides
carbon dioxide
carbon monoxide
halogenated compounds

In a fire or if heated, a pressure increase will occur and the container may burst.

5.3 Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is

inadequate. Put on appropriate personal protective equipment.

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or
diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed

until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei (CAS: 25068-38-6 EC: 500-033-5)

2. Alkyl epoxy resin (CAS: 68609-97-2 EC: 271-846-8)

3. TETRAHYDROFURFURYL ALCOHOL (CAS: 97-99-4 EC: 202-625-6)

8.2 Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards

No data available

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental

protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	clear
Odor	mild
Odor threshold	ND
Melting point/freezing point	ND
Boiling point or initial boiling point and boiling range	395.6 F/202 C
Flammability	ND
Lower and upper explosion limit/flammability limit	ND
Flash point	485 F/251.6 C
Auto-ignition temperature	ND
Decomposition temperature	ND
pH	ND
Kinematic viscosity	<1000 cP
Solubility	ND
Partition coefficient n-octanol/water (log value)	ND
Vapor pressure	ND
Evaporation rate	ND
Density and/or relative density	1.12
Relative vapor density	ND

SECTION 10: Stability and reactivity

10.1 Reactivity
None under normal use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None under normal use conditions.

10.4 Conditions to avoid
Strong oxidizer

10.5 Incompatible materials
No specific data.

10.6 Hazardous decomposition products
Carbon dioxide, carbon monoxide, oxides of nitrogen, other undetermined compounds

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Alkyl epoxy resin
LD50 Oral - Rat - 1163 mg/kg

LD50 Skin - Rabbit - 1130 mg/kg
LC50 Inhalation - Rat - >11.3 mg/l
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
LD50 Skin - Rat - 2,000 mg/kg
LD50 Oral - Rat - 11,400 mg/kg
TETRAHYDROFURFURYL ALCOHOL
LD50 Oral - Rat - >2000 mg/kg

Skin corrosion/irritation
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN)
Rabbit
Result: Score 1.5 - 2
Remarks: Skin -Erythema/Eschar 404
Acute Dermal Irritation/Corrosion
Rabbit
Result: Score 1.0 - 1.5
Remarks: Skin -Edema 404
Acute Dermal Irritation/Corrosion
Rabbit - 24 hrs
Remarks: Skin -Moderate irritant

Serious eye damage/irritation
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN)
Rabbit
Remarks: eyes - Mild irritant

Respiratory or skin sensitization
Skin sensitizer

In an OECD No. 429 mouse LLNA study the estimated EC3 was a concentration of 5.7% suggesting that BADGE is a moderate skin sensitizer in this test system. In an OECD No. 406 guinea pig Maximization study BADGE induced positive dermal reaction in 100% of the test animals at a 50% concentration challenge dose. Therefore, BADGE is an "Extreme" skin sensitizer under the conditions of this study. BADGE was also positive for skin sensitization in an OECD No. 406 guinea pig Buehler method study.

Germ cell mutagenicity
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN),

Remarks: Did not induce evidence of chromosome damage in a mouse dominant lethal oral gavage study conducted up to a high dose level of 10 grams/kg and in a mouse micronucleus test conducted up to a high dose of 5000 mg/kg. Negative in a male mouse spermatocyte cytogenetic assay with treatment for 5 days by oral gavage up to a high dose of 3000 mg/kg. Did not induce an increase in the frequency of chromosome damage in a Chinese hamster bone marrow cytogenetic test by oral gavage up to a high dose of 3300 mg/kg. Failed to induce an increase of DNA strand breaks in rat liver cells following oral gavage treatment with 500 mg/kg as measured by alkaline elution.

Carcinogenicity
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity
Based on available data, classification data are not met

Specific target organ toxicity (STOT) - single exposure
No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

SECTION 12: Ecological information

Toxicity
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
LC50 - Fish - 1.3 mg/l - 96 h
EC50 - Daphnia magna (water flea) - 2.1 mg/l - 48 h
LC50 - Algae - >11 mg/l - 72 h

Persistence and degradability
No data available on product

Bioaccumulative potential
EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN),

Remarks: LogPow 2.64 3.78
BCF 3-31 31.00
Potential - low

Mobility in soil
No data available on product.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Packaging disposal
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: Transport information

DOT (US)
UN Number: UN3082
Class: 9
Packing Group: III
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)
Reportable quantity (RQ):
Marine pollutant: Yes
Poison inhalation hazard:

IMDG
UN Number: UN3082
Class: 9
Packing Group: III
EMS Number:
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)

IATA
UN Number: UN3082
Class: 9
Packing Group: III
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (EPOXY RESIN)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Canadian Domestic Substances List (DSL)
Chemical name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
CAS number: 25068-38-6

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
CAS number: 25068-38-6

US EPA TSCA public inventory
Chemical name: EPOXYRESIN, reaction product: BISPHENOL-A(EPICHLOROHYDRIN), average molecule wei
CAS number: 25068-38-6

Canadian Domestic Substances List (DSL)
Chemical name: Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.
CAS number: 68609-97-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Alkyl epoxy resin
CAS number: 68609-97-2

US EPA TSCA public inventory
Chemical name: Alkyl epoxy resin
CAS number: 68609-97-2

Canadian Domestic Substances List (DSL)
Chemical name: Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-
CAS number: 17557-23-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Component 3
CAS number: 17557-23-2

US EPA TSCA public inventory
Chemical name: Component 3
CAS number: 17557-23-2

Pennsylvania Right To Know Components
Chemical name: 2-FURANMETHANOL, TETRAHYDRO-
CAS number: 97-99-4

Canadian Domestic Substances List (DSL)
Chemical name: 2-Furanmethanol, tetrahydro-
CAS number: 97-99-4

EU Cosmetics Prohibited Substances List, (EC) 2009/1223 Annex II
Chemical name/INN: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

US EPA TSCA public inventory
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: TETRAHYDROFURFURYL ALCOHOL
CAS number: 97-99-4

SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

POLYMER NATION

Safety Data Sheet
F-00, -01 Standard Set Part B

SECTION 1: Identification

1.1 GHS Product identifier

Product name	F-00, -01 Standard Set Part B
Product number	H1
Brand	Polymer Nation

1.2 Other means of identification

Epoxy Hardener

1.3 Recommended use of the chemical and restrictions on use

100% solids clear epoxy hardener for use in resinous flooring applications

1.4 Supplier's details

Name	Polymer Nation
Address	405 Oakwood Ave Waukegan IL 60085
Telephone	847-774-5038

1.5 Emergency phone number

800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2024)

- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Acute toxicity, dermal, Cat. 4
- Eye damage/irritation, Cat. 1
- Sensitization, respiratory, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Sensitization, skin, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3
- Specific target organ toxicity (repeated exposure), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **Danger**

Hazard statement(s)

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
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H372	Causes damage to organs [organs] through prolonged or repeated exposure [route]

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER /doctor/...if you feel unwell,
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor/...
P312	Call a POISON CENTER/doctor/.../ if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Concentration	25 - 50 % (weight)
EC no.	220-666-8
CAS no.	2855-13-2
Index no.	612-067-00-9

- Acute toxicity, oral, Cat. 4
- Skin corrosion/irritation, Cat. 1B
- Eye damage/irritation, Cat. 1
- Sensitization, skin, Cat. 1A

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
SCLs/M-factors/ATEs	Oral: ATE = 1030 mg/kg bw
	Skin Sens. 1A; H317: C ≥ 0,001 %

2. Benzyl alcohol

Concentration	25 - 50 % (weight)
EC no.	202-859-9
CAS no.	100-51-6
Index no.	603-057-00-5

- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1B

H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
SCLs/M-factors/ATEs	oral: ATE = 1200 mg/kg bw

3. Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer

Concentration	1 - 10 % (weight)
CAS no.	68609-08-5

4. Triethanolamine

Concentration	1 - 5 % (weight)
EC no.	203-049-8
CAS no.	102-71-6

5. 4-TERT-BUTYL PHENOL

Concentration	1 - 5 % (weight)
EC no.	202-679-0
CAS no.	98-54-4
Index no.	604-090-00-8

- Toxic to reproduction, Cat. 2
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 1

H315	Causes skin irritation
H318	Causes serious eye damage
H361f	
H410	Very toxic to aquatic life with long lasting effects
SCLs/M-factors/ATEs	M=1

6. Xylylenediamine

Concentration	1 - 5 % (weight)
EC no.	216-032-5
CAS no.	1477-55-0

7. 1,3-Cyclohexanedimethanamine

Concentration	1 - 5 % (weight)
EC no.	219-941-5
CAS no.	2579-20-6

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If inhaled, remove to fresh air.
In case of skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Take victim immediately to hospital.
In case of eye contact	In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. If easy to do, remove contact lens, if worn. Continue rinsing eyes during transport to hospital. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	Rinse mouth with water. If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Personal protective equipment for first-aid responders	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical
Burning produces irritant fumes.
Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Unsuitable extinguishing media: Do NOT use water jet.

In the event of fire and/or explosion do not breathe fumes.
Prevent fire extinguishing water from contaminating surface water or the ground water system.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep people away from and upwind of spill/leak.

6.2 Environmental precautions
Local authorities should be advised if significant spillages cannot be contained.
Do not allow contact with soil, surface or ground water.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Wear personal protective equipment.
Avoid inhalation, ingestion and contact with skin and eyes.
Use only with adequate ventilation.
Do not breathe vapours/dust.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not
be employed in any process in which this mixture is being used.

7.2 Conditions for safe storage, including any incompatibilities
Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.

Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Triethanolamine (CAS: 102-71-6 EC: 203-049-8)
PEL (Inhalation): 5 mg/m3; US (Cal/OSHA)
California permissible exposure limits for chemical contaminants (Title 8, Article 107)

TWA (Inhalation): 5 mg/m3; AU (AU/SWA)
Other advisory: Sen

2. Xylylenediamine (CAS: 1477-55-0)
TWA [m-Xylene-alpha,alpha'-diamine] (Inhalation): 0.1 Peak limitation mg/m3; AU (AU/SWA)
Other advisory: Sk

3. Benzyl alcohol (CAS: 100-51-6 EC: 202-859-9)
TWA: 10 ppm
US WEEL

8.2 Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker
exposure to airborne contaminants below any recommended or statutory limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection
Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection
Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Thermal hazards
No data available

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	clear
Color	straw; yellow
Odor	amine
Odor threshold	ND
Melting point/freezing point	ND
Boiling point or initial boiling point and boiling range	ND
Flammability	ND
Lower and upper explosion limit/flammability limit	ND
Flash point	> 201 F/> 94 C
Auto-ignition temperature	ND
Decomposition temperature	ND
pH	ND
Kinematic viscosity	< 200 cP @ 72 F
Solubility	water - negligible
Partition coefficient n-octanol/water (log value)	ND
Vapor pressure	ND
Evaporation rate	ND
Density and/or relative density	1.02 g/cm3
Relative vapor density	ND

SECTION 10: Stability and reactivity

10.1 Reactivity
None under normal use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None under normal use conditions.

10.4 Conditions to avoid
Strong oxidizer

10.5 Incompatible materials
No specific data.

Benzyl alcohol: Strong oxidizing agents

Triethanolamine: Acids, Oxidizing agents

10.6 Hazardous decomposition products
Carbon dioxide, carbon monoxide, oxides of nitrogen, other undetermined compounds

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Benzyl alcohol: Other decomposition products - No data available
In the event of fire: see section 5

Triethanolamine: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Benzyl alcohol: LD50 Oral - Rat - 1,230 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Excitement. Behavioral:Coma.
LD50 Oral - Rat - male - 1,620 mg/kg
Dermal: No data available
No data available

Triethanolamine
LD50 Oral - Mouse - 5,846 mg/kg
Remarks: Behavioral:Convulsions or effect on seizure threshold. Diarrhoea Kidney, Ureter, Bladder:Other changes.
LD50 Oral - Rat - 5,530 mg/kg
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Diarrhoea Skin and Appendages: Other: Hair.
LD50 Oral - Rabbit - 2,200 mg/kg
LD50 Oral - Guinea pig - 2,200 mg/kg
LD50 Skin - Rabbit - >22.5 g/kg

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
LD50 Oral - Rat - 1030 mg/kg
LD50 Skin - Rat - >2000 mg/kg
LC50 Inhalation - Rat - 5.01 mg/l - 4 h

Skin corrosion/irritation
Causes severe burns

Benzyl alcohol: Benzyl alcohol
OECD Test Guideline 404 Skin - Rabbit - 24 h
Result: No skin irritation

Serious eye damage/irritation
Causes serious eye damage.

Benzyl alcohol: Benzyl alcohol
OECD Test Guideline 405 Eyes - Rabbit - 24 h
Result: Eye irritation

Respiratory or skin sensitization
Skin sensitisation-May cause an allergic skin reaction.

Respiratory sensitisation-Not classified based on available information.

Benzyl alcohol: No data available.

Germ cell mutagenicity
Not classified based on available information.

Benzyl alcohol: No data available.

Carcinogenicity
Not classified based on available information.

Benzyl alcohol: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Suspected of damaging fertility or the unborn child.

Benzyl alcohol: No data available.

Summary of evaluation of the CMR properties

Benzyl alcohol: No data available.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Benzyl alcohol: No data available.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Benzyl alcohol: No data available.

Aspiration hazard
Not classified based on available information.

Benzyl alcohol: No data available.

SECTION 12: Ecological information

Toxicity
Benzyl Alcohol:
Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 460 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no

GLP: no

Toxicity to fish (Chronic toxicity): NOEC: 48.897 mg/l
Exposure time: 30 d
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test

Persistence and degradability
benzyl alcohol:
Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Biochemical oxygen demand
Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 14 d
Method: OECD Test Guideline 301C
Stability in water : Degradation half life: 9 yr

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 6.9 mg/l
Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: Tested according to Directive 92/69/EEC.
Stability in water : Degradation half life (DT50): > 1 yr (25 °C) pH: 4 - 9
Hydrolysis: < 10 % at 50 °C(5 d)

Bioaccumulative potential
benzyl alcohol:
Bioaccumulation : Bioconcentration factor (BCF): 1.37
Remarks: Bioaccumulation is unlikely.
Partition coefficient: noctanol/water: log Pow: 1.05 (68 °F / 20 °C)

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 76.22
Remarks: Bioaccumulation is unlikely.
Partition coefficient: noctanol/water: log Pow: 0.99 (73 °F / 23 °C)
pH: 6.34

Mobility in soil
3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Mobility : Medium: Air
Content: 0.02 %
Method: Calculation, Mackay Level I Fugacity Model

Medium: Water
Content: 99.83 %
Medium: Soil
Content: 0.08 %
Medium: Sediment
Content: 0.08 %
Distribution among environmental compartments: Koc: 928, log Koc: 2.97

SECTION 13: Disposal considerations

Disposal methods

Product disposal
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Packaging disposal
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: Transport information

DOT (US)
UN Number: UN2735
Class: 8
Packing Group: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)
Reportable quantity (RQ):
Marine pollutant: no
Poison inhalation hazard:

IMDG
UN Number: UN2735
Class: 8
Packing Group: II
EMS Number:
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

IATA
UN Number: UN2735
Class: 8
Packing Group: II
Proper Shipping Name: Amines, liquid, corrosive, n.o.s. (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

New Jersey Right To Know Components
Common name: ISOPHORONEDIAMINE
CAS number: 2855-13-2

Canadian Domestic Substances List (DSL)
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-
CAS number: 2855-13-2

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
CAS number: 2855-13-2

US EPA TSCA public inventory
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE
CAS number: 2855-13-2

Water hazard class (WGK, Germany)
Chemical name: 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE, CAS number: 2855-13-2
WGK hazard class: WGK 1 - Slightly hazardous to water

Pennsylvania Right To Know Components
Chemical name: BENZENEMETHANOL
CAS number: 100-51-6

SARA 302 Components
No chemicals in this material [Benzyl alcohol] are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material [Benzyl alcohol] does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard for: Benzyl alcohol.

Canadian Domestic Substances List (DSL)
Chemical name: Benzenemethanol
CAS number: 100-51-6

Water hazard class (WGK, Germany)
Chemical name: Benzyl alcohol, CAS number: 100-51-6
WGK hazard class: WGK 1 - Slightly hazardous to water

EU Cosmetics Allowed preservatives List, (EC) 2009/1223 Annex V
Chemical name: Benzyl alcohol

CAS number: 100-51-6

EU Cosmetics Restricted Substances List, (EC) 2009/1223 Annex III
Chemical name/INN: Benzyl alcohol
CAS number: 100-51-6

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Benzyl alcohol
CAS number: 100-51-6

US EPA TSCA public inventory
Chemical name: Benzyl alcohol
CAS number: 100-51-6

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: BENZYL ALCOHOL
CAS number: (none)

Canadian Domestic Substances List (DSL)
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer
CAS number: 68609-08-5

US EPA TSCA public inventory
Chemical name: Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer
CAS number: 68609-08-5

Pennsylvania Right To Know Components
Chemical name: ETHANOL, 2,2',2''-NITRILOTRIS-
CAS number: 102-71-6

SARA 302 Components
No chemicals in this material [Triethanolamine] are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material [Triethanolamine] does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard for: Triethanolamine.

Canadian Domestic Substances List (DSL)
Chemical name: Ethanol, 2,2',2''-nitrilotris-
CAS number: 102-71-6

Water hazard class (WGK, Germany)
Chemical name: Triethanolamine, CAS number: 102-71-6

WGK hazard class: WGK 1 - Slightly hazardous to water

US EPA TSCA public inventory
Chemical name: Triethanolamine
CAS number: 102-71-6

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: TRIETHANOLAMINE
CAS number: 102-71-6

Canadian Domestic Substances List (DSL)
Chemical name: Phenol, 4-(1,1-dimethylethyl)-
CAS number: 98-54-4

EU Cosmetics Prohibited Substances List, (EC) 2009/1223 Annex II
Chemical name/INN: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

EU SVHC Candidate List for Authorisation
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

US EPA TSCA public inventory
Chemical name: 4-TERT-BUTYL PHENOL
CAS number: 98-54-4

Water hazard class (WGK, Germany)
Chemical name: 4-TERT-BUTYL PHENOL, CAS number: 98-54-4
WGK hazard class: WGK 3 - Extremely hazardous to water

New Jersey Right To Know Components
Common name: m-XYLENE alpha, alpha'-DIAMINE
CAS number: 1477-55-0

Pennsylvania Right To Know Components
Chemical name: 1,3-BENZENEDIMETHANAMINE
CAS number: 1477-55-0

Canadian Domestic Substances List (DSL)
Chemical name: 1,3-Benzenedimethanamine
CAS number: 1477-55-0

US EPA TSCA public inventory
Chemical name: Xylylenediamine
CAS number: 1477-55-0

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: MXDA
CAS number: 1477-55-0

Water hazard class (WGK, Germany)
Chemical name: Xylylenediamine, CAS number: 1477-55-0
WGK hazard class: WGK 2 - Hazardous to water

Canadian Domestic Substances List (DSL)
Chemical name: 1,3-Cyclohexanedimethanamine
CAS number: 2579-20-6

US EPA TSCA public inventory
Chemical name: 1,3-Cyclohexanedimethanamine
CAS number: 2579-20-6

Water hazard class (WGK, Germany)
Chemical name: 1,3-Cyclohexanedimethanamine, CAS number: 2579-20-6
WGK hazard class: WGK 2 - Hazardous to water

SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.