

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 7/6/2023 Supersedes: 3/13/2018 Version: 3.0

SECTION 1: Identification				
1.1. Identification				
Product form Product name	Mixture Modeling Resir	n		
1.2. Recommended use and restrictions on u	ISE			
Use of the substance/mixture	For Rx Only			
1.3. Supplier				
Manufacturer BISCO, Inc. 1100 W. Irving Park Rd. Schaumburg, IL , 60193 U.S.A. T 1-800-247-3368 or 1-847-534-6000 sales@bisco.com - www.bisco.com				
1.4. Emergency telephone number				
Emergency number			t Emergency Communications Center tside the U.S.: 1-703-527-3887, collect calls accepted	
SECTION 2: Hazard(s) identification				
2.1. Classification of the substance or mixtu	re			
GHS US classification				
Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2 Skin sensitization, Category 1 Specific target organ toxicity - Single exposure, Categor Respiratory tract irritation Full text of H statements : see section 16	ory 3,	H315 H319 H317 H335	Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction May cause respiratory irritation	
2.2. GHS Label elements, including precaution	onary stateme	nts		
GHS US labeling				
Hazard pictograms (GHS US)		•		
Signal word (GHS US) Hazard statements (GHS US)	H319 - Causes	s skin irritation use an allergic s s serious eye irri use respiratory	tation	
	P261 - Avoid b P264 - Wash h P272 - Contar P280 - Wear p P302+P352 - I P304+P340 - I	preathing fume, r hands thoroughly hinated work clo rotective gloves f on skin: Wash f inhaled: Remo	nist, vapors.	
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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center/a doctor if you feel unwell
P321 - Specific treatment (see First aid measures 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.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose in a safe manner in accordance with local/national regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Urethane Dimethacrylate	CAS-No.: Proprietary	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Ethoxylated Bis A Dimethacrylate	CAS-No.: 41637-38-1	10 - 30	Aquatic Chronic 4, H413
Triethylene Glycol Dimethacrylate	CAS-No.: 109-16-0	10 - 30	Skin Sens. 1B, H317
Bisphenol A Dimethacrylate	CAS-No.: 3253-39-2	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general First-aid measures after inhalation First-aid measures after skin contact	 Call a poison center/doctor/physician if you feel unwell. Remove person to fresh air and keep comfortable for breathing. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact First-aid measures after ingestion	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
4.2. Most important symptoms and eff	fects (acute and delayed)
Symptoms/effects Symptoms/effects after skin contact Symptoms/effects after eye contact	: May cause respiratory irritation. : Irritation. : Eye irritation.

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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures			
5.1. Suitable (and unsuitable) extinguishing media			
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.		
5.2. Specific hazards arising from the chemical			
Hazardous decomposition products in case of fire	: Toxic fumes may be released.		
5.3. Special protective equipment and precautions for fire-fighters			
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.		

SECTION 6: Accidental release me	asures
6.1. Personal precautions, protective e	equipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. Avoid breathing fume, mist, vapors. Avoid contact with skin and eyes.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Avoid release to the environment.	

6.3. Methods and material for containment and cleaning up		
Methods for cleaning up Other information	Take up liquid spill into absorbent material.Dispose of materials or solid residues at an authorized site.	

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage)
7.1. Precautions for safe handling	
Precautions for safe handling Hygiene measures	 Wear personal protective equipment. Avoid breathing fume, mist, vapors. Avoid contact with skin and eyes. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, inclu	uding any incompatibilities
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed.

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SECTION 8: Exposure controls/personal protection 8.1. Control parameters No additional information available 8.2. Appropriate engineering controls Appropriate engineering controls : Ensure good ventilation of the work station. Environmental exposure controls : Avoid release to the environment. 8.3. Individual protection measures/Personal protective equipment Hand protection: Protective gloves Eye protection: Safety glasses Skin and body protection: Wear suitable protective clothing **Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Appearance Color	: Liquid : Flowable Paste. [:] Pale Yellow
Odor	: Acrylic
Odor threshold	: No data available
рН	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11.1. Information on toxicological e	iffects
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	 Not classified Not classified Not classified
Ethoxylated Bis A Dimethacrylate	(41637-38-1)
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read across, Dermal, 15 day(s))
Bisphenol A Dimethacrylate (3253-	39-2)
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
Triethylene Glycol Dimethacrylate	(109-16-0)
LD50 oral rat	10837 mg/kg Source: NLM,THOMSON
LD50 dermal	> 2000 mg/kg body weight (US EPA, 14 day(s), Mouse, Male, Experimental value, Skin, 14 day(s))
ATE US (oral)	10837 mg/kg body weight

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Ethoxylated Bis A Dimethacrylate (41637-38-1	
рН	4.7 (< 0.01 %, 20 °C, OECD 105: Water Solubility)
Triethylene Glycol Dimethacrylate (109-16-0)	
рН	6.8 - 7.2
Serious eye damage/irritation :	Causes serious eye irritation.
Ethoxylated Bis A Dimethacrylate (41637-38-1	I)
рН	4.7 (< 0.01 %, 20 °C, OECD 105: Water Solubility)
Triethylene Glycol Dimethacrylate (109-16-0)	
рН	6.8 - 7.2
Respiratory or skin sensitization :	May cause an allergic skin reaction.
Germ cell mutagenicity :	Not classified
Carcinogenicity :	Not classified
Reproductive toxicity :	Not classified
STOT-single exposure :	May cause respiratory irritation.
Urethane Dimethacrylate (Proprietary)	
STOT-single exposure	May cause respiratory irritation.
Bisphenol A Dimethacrylate (3253-39-2)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	Not classified
Triethylene Glycol Dimethacrylate (109-16-0)	
LOAEC (inhalation,rat,gas,90 days)	350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:
NOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation,rat,gas,90 days)	100 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:
Aspiration hazard :	Not classified
Viscosity, kinematic	No data available
Ethoxylated Bis A Dimethacrylate (41637-38-	I)
Viscosity, kinematic	No data available in the literature
Symptoms/effects :	May cause respiratory irritation.
Symptoms/effects after skin contact	Irritation.
Symptoms/effects after eye contact :	Eye irritation.

SECTION 12: Ecological information

12.1		
		, I L Y

Ecology - general

: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
LC50 - Fish [1]	> 100 mg/l Source: ECAH
EC50 72h - Algae [1]	> 100 mg/l Source: ECAH

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Bisphenol A Dimethacrylate (3253-39-2)		
LC50 - Fish [1] 0.232 mg/l Source: ECOSAR Class		
EC50 - Crustacea [1]	0.658 mg/l Source: ECOSAR Class	
EC50 96h - Algae [1]	5.278 mg/l Source: ECOSAR Class	
Triethylene Glycol Dimethacrylate (109-16-0)		
LC50 - Fish [1]	16.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)	
EC50 72h - Algae [1]	 > 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) 	
EC50 72h - Algae [2]	72.8 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)	
LOEC (chronic)	100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	
NOEC (chronic)	32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	

12.2. Persistence and degradability

Ethoxylated Bis A Dimethacrylate (41637-38-1)		
Persistence and degradability Not readily biodegradable in water.		
Bisphenol A Dimethacrylate (3253-39-2)		
Persistence and degradability	Biodegradability in soil: no data available.	
Triethylene Glycol Dimethacrylate (109-16-0)		
Persistence and degradability Readily biodegradable in water.		

12.3. Bioaccumulative potential

Ethoxylated Bis A Dimethacrylate (41637-38-1)		
Partition coefficient n-octanol/water (Log Pow)	5.62 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)	
Bioaccumulative potential High potential for bioaccumulation (Log Kow > 5).		
Bisphenol A Dimethacrylate (3253-39-2)		
Partition coefficient n-octanol/water (Log Pow)	5.3 (QSAR)	
Bioaccumulative potential	No bioaccumulation data available.	
Triethylene Glycol Dimethacrylate (109-16-0)		
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	

12.4. Mobility in soil

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
Surface tension No data available in the literature	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.56 - 3.88 (log Koc, Calculated value)

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ow potential for mobility in soil.			
ow potential for mobility in soil.			
Bisphenol A Dimethacrylate (3253-39-2)			
Mobility in soil 3.891 Source: Quantitative Structure Activity Relation			
Triethylene Glycol Dimethacrylate (109-16-0)			
Organic Carbon Normalized Adsorption Coefficient (Log Koc, SRC PCKOCWIN v2.0, Calculated value) (Log Koc)			
ighly mobile in soil.			
.8			

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations			
13.1. Disposal methods			
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.		
SECTION 14: Transport information			
In accordance with DOT / TDG / IMDG / IATA			
14.1. UN number			
Not regulated for transport			
14.2. UN proper shipping name			
Proper Shipping Name (DOT) Proper Shipping Name (TDG) Proper Shipping Name (IMDG)	 Not applicable Not applicable Not applicable 		

: Not applicable

: Not applicable

14.3. Transport hazard class(es)

Proper Shipping Name (IATA)

DOT Transport hazard class(es) (DOT)	: Not applicable
TDG Transport hazard class(es) (TDG)	: Not applicable
IMDG Transport hazard class(es) (IMDG)	: Not applicable
IATA Transport hazard class(es) (IATA)	: Not applicable
14.4. Packing group	
Packing group (DOT) Packing group (TDG) Packing group (IMDG)	Not applicableNot applicableNot applicableNot applicable

Packing group (IATA)

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14.5. Environmental hazards

Other information

: No supplementary information available.

14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

	Urethane Dimethacrylate	CAS-No. Proprietary	10 - 30%
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This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Ethoxylated Bis A Dimethacrylate (41637-38-1)

Listed on the Canadian DSL (Domestic Substances List)

Bisphenol A Dimethacrylate (3253-39-2)

Listed on the Canadian DSL (Domestic Substances List)

Triethylene Glycol Dimethacrylate (109-16-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Triethylene Glycol Dimethacrylate (109-16-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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Full text of H-phrases		
H315	Causes skin irritation	
H317	May cause an allergic skin reaction	
H319	Causes serious eye irritation	
H335	May cause respiratory irritation	
H413	May cause long lasting harmful effects to aquatic life	

Indication of changes:			
Section	Changed item	Change	Comments
	Revision date	Added	
	Signal word (GHS US)	Added	
	Precautionary statements (GHS US)	Modified	
	Hazard statements (GHS US)	Modified	
	Supersedes	Added	
	Issue date	Removed	
1	Name	Modified	
2.1	GHS-US classification	Modified	
3	Composition/Information on ingredients	Modified	
4	Symptoms/effects	Modified	
5.2	Fire hazard	Removed	
6	Methods for cleaning up	Modified	
6	Emergency procedures	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Storage conditions	Modified	
10	Conditions to avoid	Modified	

Safety Data Sheet (SDS), USA

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