

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : 60-7108RCL

1.2. Recommended use and restrictions on use

Recommended use : Adhesives
Restrictions on use : Not to be used for any purpose other than the one the product was designed for

1.3. Supplier

Epoxies, Etc.
21 Starline Way
Cranston, RI 02921
USA
T 401-946-5564
www.epoxies.com

1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Reproductive toxicity Category 1B	H360	May damage fertility or the unborn child
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment – Acute Hazard Category 2	H401	Toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H360 - May damage fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS US)

H401 - Toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects
: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face 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.
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.
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.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P310 - Immediately call a poison center or doctor.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction 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.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Acrylated resin	-	30 – 60	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Specialty resin*	CAS-No.: Trade Secret	< 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	GHS US classification
acrylic oligomer	-	< 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317
Ethoxylated trimethylolpropane triacrylate esters	CAS-No.: 28961-43-5	1 – 5	Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 2, H401
Acrylic phosphate monoester	-	< 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Acrylic phosphate diester	-	< 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
2-hydroxyethyl acrylate	CAS-No.: 818-61-1	< 5	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H336 STOT SE 3, H335 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Ethanol, 2-butoxy-	CAS-No.: 111-76-2	< 1	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 2 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361 STOT SE 1, H370 STOT SE 3, H336 STOT RE 1, H372
Organometallic Catalyst*	CAS-No.: Trade Secret	< 1	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments : Components not listed are either non-hazardous or are below reportable limits.

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

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 measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.
----------------------	---

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. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. For more storage information please refer to the Technical Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

60-7108RCL	
No additional information available	
Specialty resin	
No additional information available	
Ethoxylated trimethylolpropane triacrylate esters (28961-43-5)	
No additional information available	
Acrylic phosphate monoester	
No additional information available	
Acrylic phosphate diester	
No additional information available	
Organometallic Catalyst	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.1 mg/m ³
ACGIH OEL STEL	0.2 mg/m ³
Acrylated resin	
No additional information available	
acrylic oligomer	
No additional information available	
2-hydroxyethyl acrylate (818-61-1)	
No additional information available	

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ethanol, 2-butoxy- (111-76-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Butoxyethanol (EGBE)
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	2- BUTOXYETHANOL
BEI	200 mg/g Kreatinin Parameter: Butoxyacetic acid (BAA) (with hydrolysis) - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	2-Butoxyethanol
OSHA PEL TWA [1]	240 mg/m ³
OSHA PEL TWA [2]	50 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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:
Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: According to product specification
Odor	: Mild odour
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
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
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.

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Specialty resin	
LD50 oral rat	4350 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg Source: Corporate Solution From Thomson Micromedex
LD50 dermal rabbit	> 3000 mg/kg body weight (Rabbit, Male, Experimental value, Skin, 14 day(s))
ATE US (oral)	4350 mg/kg body weight

Ethoxylated trimethylolpropane triacrylate esters (28961-43-5)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rabbit	> 13200 mg/kg body weight Animal: rabbit

Organometallic Catalyst	
LD50 oral rat	2071 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	175 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LD50 dermal	2500 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.075 mg/l/4h
ATE US (oral)	175 mg/kg body weight
ATE US (dermal)	2500 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.075 mg/l/4h

2-hydroxyethyl acrylate (818-61-1)	
LD50 oral rat	540 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 oral	540 mg/kg
LD50 dermal rat	> 1000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LD50 dermal rabbit	154 – 1000 mg/kg Source: OECD Screening Information Data Set
LD50 dermal	154 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1.87 mg/l/4h
ATE US (oral)	540 mg/kg body weight
ATE US (dermal)	154 mg/kg body weight
ATE US (dust, mist)	1.87 mg/l/4h

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ethanol, 2-butoxy- (111-76-2)	
LD50 oral rat	1746 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 oral	1414 mg/kg body weight (OECD 401: Acute Oral Toxicity, Guinea pig, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal	220 mg/kg
LC50 Inhalation - Rat	> 4.26 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
LC50 Inhalation - Rat (Vapours)	2.03 mg/l/4h
ATE US (oral)	1414 mg/kg body weight
ATE US (dermal)	220 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Organometallic Catalyst	
pH	No data available in the literature

2-hydroxyethyl acrylate (818-61-1)	
pH	No data available in the literature

Ethanol, 2-butoxy- (111-76-2)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye damage.

Organometallic Catalyst	
pH	No data available in the literature

2-hydroxyethyl acrylate (818-61-1)	
pH	No data available in the literature

Ethanol, 2-butoxy- (111-76-2)	
pH	No data available in the literature

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Ethanol, 2-butoxy- (111-76-2)	
IARC group	3 - Not classifiable

Reproductive toxicity : May damage fertility or the unborn child.

Organometallic Catalyst	
NOAEL (animal/male, F0/P)	1.9 – 2.3 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	1.7 – 2.4 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure : May cause respiratory irritation.

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Specialty resin	
STOT-single exposure	May cause respiratory irritation.
Organometallic Catalyst	
STOT-single exposure	Causes damage to organs.
2-hydroxyethyl acrylate (818-61-1)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
Ethanol, 2-butoxy- (111-76-2)	
STOT-single exposure	Causes damage to organs. May cause drowsiness or dizziness.
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.
Specialty resin	
NOAEL (oral, rat, 90 days)	100 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Ethoxylated trimethylolpropane triacrylate esters (28961-43-5)	
NOAEL (oral, rat, 90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Organometallic Catalyst	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
2-hydroxyethyl acrylate (818-61-1)	
NOAEC (inhalation, rat, vapor, 90 days)	0.0024 mg/l air Animal: rat
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Ethanol, 2-butoxy- (111-76-2)	
NOAEL (dermal, rat/rabbit, 90 days)	> 150 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Specialty resin	
Viscosity, kinematic	Not determined
Organometallic Catalyst	
Viscosity, kinematic	No data available in the literature
2-hydroxyethyl acrylate (818-61-1)	
Viscosity, kinematic	No data available in the literature
Ethanol, 2-butoxy- (111-76-2)	
Viscosity, kinematic	3.642 mm ² /s (20 °C)
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Specialty resin	
LC50 - Fish [1]	0.704 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	1.98 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.596 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	0.172 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	1.98 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
LOEC (chronic)	0.277 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.092 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Ethoxylated trimethylolpropane triacrylate esters (28961-43-5)	
LC50 - Fish [1]	1.95 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	70.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	2.2 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
Organometallic Catalyst	
LC50 - Fish [1]	3.1 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	< 463 µg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 - Crustacea [2]	< 463 µg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
2-hydroxyethyl acrylate (818-61-1)	
LC50 - Fish [1]	6.81 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	0.78 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
LC50 - Fish [2]	4.8 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	6 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
EC50 72h - Algae [2]	3.88 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	0.48 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	0.48 mg/l

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ethanol, 2-butoxy- (111-76-2)	
LC50 - Fish [1]	1474 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	1550 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	911 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	1840 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	1840 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC (chronic)	100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '21 d'

12.2. Persistence and degradability

Specialty resin	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.
Organometallic Catalyst	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.
2-hydroxyethyl acrylate (818-61-1)	
Persistence and degradability	Readily biodegradable in water.
Ethanol, 2-butoxy- (111-76-2)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Specialty resin	
BCF - Fish [1]	37 (OECD 305: Bioconcentration: Flow-Through Fish Test, 56 h, Danio rerio, Flow-through system, Fresh water, Read-across, GLP)
Partition coefficient n-octanol/water (Log Pow)	4.52 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Potential for bioaccumulation ($4 \leq \text{Log Kow} \leq 5$).
Organometallic Catalyst	
Partition coefficient n-octanol/water (Log Pow)	4.44 (Practical experience/observation, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20.8 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \leq \text{Log Kow} \leq 5$).
2-hydroxyethyl acrylate (818-61-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.17 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ethanol, 2-butoxy- (111-76-2)	
Partition coefficient n-octanol/water (Log Pow)	0.81 (Experimental value, BASF test, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Specialty resin	
Ecology - soil	No (test)data on mobility of the substance available.

Organometallic Catalyst	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

2-hydroxyethyl acrylate (818-61-1)	
Surface tension	25.65 mN/m (16 °C, 100 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.029 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

Ethanol, 2-butoxy- (111-76-2)	
Surface tension	65.03 mN/m (20 °C, 2 g/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.451 – 0.882 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

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

DOT NA No : UN3082
UN-No. (TDG) : UN3082
UN-No. (IMDG) : 3082
UN-No. (IATA) : 3082

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Specialty resin)
Proper Shipping Name (TDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Specialty resin)
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Specialty resin)
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s. (Specialty resin)

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 9
Hazard labels (DOT) : 9



TDG

Transport hazard class(es) (TDG) : 9
Hazard labels (TDG) : 9



IMDG

Transport hazard class(es) (IMDG) : 9
Hazard labels (IMDG) : 9



IATA

Transport hazard class(es) (IATA) : 9
Hazard labels (IATA) : 9



14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : III
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes



Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN3082

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 173 - An appropriate generic entry may be used for this material. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No Limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No Limit
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
TDG	
UN-No. (TDG)	: UN3082

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS,99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, may be handled, offered for transport or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means containment and during transport. (2) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Emergency Response Guide (ERG) Number	: 171
IMDG	
Special provision (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A
IATA	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Special provision (IATA) : A97, A158, A197, A215
ERG code (IATA) : 9L

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

15.2. International regulations

CANADA

Specialty resin

Listed on the Canadian DSL (Domestic Substances List)

Ethoxylated trimethylolpropane triacrylate esters (28961-43-5)

Listed on the Canadian DSL (Domestic Substances List)

Acrylic phosphate monoester

Listed on the Canadian DSL (Domestic Substances List)

Acrylic phosphate diester

Listed on the Canadian DSL (Domestic Substances List)

Organometallic Catalyst

Listed on the Canadian DSL (Domestic Substances List)

Acrylated resin

Listed on the Canadian DSL (Domestic Substances List)

2-hydroxyethyl acrylate (818-61-1)

Listed on the Canadian DSL (Domestic Substances List)

Ethanol, 2-butoxy- (111-76-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

National regulations

Acrylic phosphate monoester

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Not listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on the Japanese ISHL (Industrial Safety and Health Law)

Acrylic phosphate diester

Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)

Organometallic Catalyst

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Acrylated resin

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

2-hydroxyethyl acrylate (818-61-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Ethanol, 2-butoxy- (111-76-2)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

Component	State or local regulations
2-hydroxyethyl acrylate(818-61-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Ethanol, 2-butoxy-(111-76-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H227	Combustible liquid
------	--------------------

60-7108RCL

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases	
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

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.