Safety Data Sheet
Fast-Setting Anchoring Epoxy

Version 1.0

Akona Manufacturing, LLC.
A TCC Materials Company
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Emergency Telephone Number:
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Revision Date
March 2016

Section 1: Product Identification

Product Type: Sealant & Adhesive

Akona Product Name:
Fast-Setting Anchoring Epoxy – Epoxy Resin

Section 2: Hazard Identification

Classification of the substance or mixture:

GHS07

Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2A	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.

Label elements

GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS07

This chemical has been evaluated according to GHS (Globally Harmonized System) and by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

Signal Word: Warning

Hazard Statements:

Cause skin irritation.
May cause serious eye irritation.
May cause an allergic skin reaction.

Precautionary statements:

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wear eye protection/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label).
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Read label before use.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA Ratings (scale 0-4)
Health = 1
Fire = 1
Reactivity = 0

HMIS Ratings (scale 0-4)
Health = 1
Fire = 1
Physical Hazard = 0

Other hazards:
Results of PBT and vPvB assessment
PBT: Not applicable
vPvB: Not applicable

Section 3: Hazardous Ingredients/Composition

Chemical characterization: Mixtures
Description: Mixture.
Hazardous components:

Chemical Name	CAS No	Weight-%
Epoxy Resin	25085-99-8	50-100%
glycerol	56-81-5	2.5-1.0%
titanium dioxide	13463-67-7	≤0.5%

Section 4: First Aid Measures

Description of first aid measures
Inhalation:
Supply fresh air and to be sure call for a doctor. In case of unconsciousness, place patient stably in side position for transportation.
Skin Contact:
In case of contact, wipe excess from skin. Immediately wash skin with soap and water, rinse thoroughly. Remove and wash contaminated clothing before reuse or discard. If irritation persists, seek medical attention.
Eye Contact:
Immediately rinse opened eye with plenty of running water for at least 20 minutes. If eye becomes irritated, obtain medical treatment.
Ingestion:
Rinse mouth with water.
Do not induce vomiting. Obtain medical advice.

Most Important Symptoms and Effects, both Acute and Delayed
No further relevant information is available.

Indication of any Immediate Medical Attention and Special Treatment Needed
No further relevant information is available.

Section 5: Fire Fighting Measures

Extinguishing Media
Suitable Extinguishing Agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray. Use fire-fighting measures that suit the environment.
Specific Hazards Arising from the Substance or Mixture:
No further relevant information is available.
Advice for firefighters:
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Protective Equipment and Precautions for Firefighters:

Protective clothing and respiratory protective device.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective equipment.
Keep unprotected persons away.
Ensure adequate ventilation.

Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Methods and Material for Containment and Cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust), shovel into suitable containers for disposal.
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.

Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7: Handling and Storage

Handling

Precautions for Safe Handling:

Avoid prolonged or repeated contact with skin.
Avoid contact with eyes.
Wash thoroughly after handling.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Open containers in a well ventilated area and avoid breathing headspace vapors.

Information about protection against explosions and fires:

No special measures required.

Storage

Conditions for Safe Storage, Including any Incompatibilities:

Requirements to be met by storerooms and receptacles:

Store in a cool location away from direct heat.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Store in cool, dry conditions in well-sealed receptacles.

Specific end use(s):
No further relevant information available.

Section 8: Exposure Controls/Personal Protection

Additional information about design of technical systems:
No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:				
	CAS No	PEL	REL	TLV
glycerol	56-81-5	Long-term value: 15* 5** mg/m³ mist; *total dust **respirable fraction		TLV withdrawn – insufficient data human occup. exp.
titanium dioxide	13463-67-7	Long-term value: 15* 5** mg/m³ *total dust	See Pocket Guide App. A	Long-term value: 10 mg/m³ withdrawn from NIC

Additional information:
The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment (see listings below):
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Breathing equipment:
Not necessary if room is well-ventilated.
Protection of hands:
Protective gloves.
The glove material has to be impermeable and resistant to the product/ the substrate/ the preparation.
Material of gloves:
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses with side shields.
Tightly sealed goggles.

Body protection:

Protective work clothing.

Section 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

General Information	
Appearance:	
Form:	Paste.
Color:	White.
Odor:	Characteristic.
Odor Threshold:	Not determined.
pH:	Not determined.
Melting Point:	Undetermined.
Boiling Point/Boiling Range:	Undetermined.
Flash Point:	**>**250°C (482°F).
Flammability (Solid, Gas):	Not applicable.
Ignition Temperature:	435°C (815°F)
Decomposition Temperature:	Not determined.
Auto Igniting:	Product is not self-igniting.
Danger of Explosion:	Product does not present an explosion hazard.
Vapor Pressure:	Not determined.
Specific Gravity @ 20°C (68°F):	1.29 g/cm^3 (10.765 lb/gal)
Relative Density:	Not determined.
Vapor Density:	Not determined.
Evaporation Rate:	Not determined.
Solubility in /	
Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient	
(n-octanol/water):	Not determined.
Dynamic Viscocity:	Not determined.
Kinematic Viscocity:	Not determined.
Solvent Content:	
Solids Content:	Not available.
Other Information:	No further relevant information available.

Section 10: Stability and Reactivity

Reactivity:
No further relevant information available.

Chemical Stability
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of Hazardous Reactions:
No dangerous reactions known.
Conditions to avoid:
Avoid high temperatures. Avoid freezing.
I**ncompatible Materials:**
Reacts with oxidizing agents.
Hazardous Decomposition Products:
Carbon Monoxide, Carbon Dioxide, Aldehydes, acids.

Section 11: Toxicological Information

Information on Toxicological Effects
Acute Toxicity:
Primary irritant effect:
Skin Contact:
Skin irritant.
Eye Contact:
Causes serious eye Irritation.
Sensitization:
Sensitization possible through skin contact.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

Carcinogenic categories:
IARC (International Agency for Research on Cancer):

titanium dioxide	13463-67-7	2B

NTP (National Toxicological Program):
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients is listed.

Section 12: Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Ecotoxical effects:
Remark: Toxic for fish
Additional ecological information:
General notes: At present there are no ecotoxicological assessments.
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

Section 13: Disposal Considerations

Waste Treatment Methods:
Recommendation: Must be specially treated adhering to official regulations.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Section 14: Transportation

UN-Number
DOT, ADR, ADN, IMDG, IATA not regulated

UN proper shipping name
DOT, ADR, ADN, IMDG, IATA not regulated

Transport Hazard Class(es)
DOT, ADR, ADN, IMDG, IATA
Class not regulated

Packing group
DOT, ADR, IMDG, IATA not regulated

Environmental hazards: Not applicable.

Special precautions for user Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

UN "Model Regulation": not regulated

Section 15: Regulatory Information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

Proposition 65

Chemicals known to the State of California (Prop. 65) to cause cancer:

titanium dioxide	13463-67-7

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed**.**

(DSL) Canada Dosmestic Substance List

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

New Jersey Right-to-Know List:

glycerol	56-81-5
titanium dioxide	13463-67-7

New Jersey Special Hazardous Substance List:

None of the ingredients is listed.

Pennsylvania Right-to-Know List:

glycerol	56-81-5
titanium dioxide	13463-67-7

Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.

Cancerogenity categories:

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

Titanium dioxide	13463-67-7	A4

MAK (German Maximum Workplace Concentration)

Titanium dioxide	13463-67-7	3A

NIOSH-Ca (National Institute for Occupational Safety and Health)

Titanium dioxide	13463-67-7

National regulations:

Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

Section 16: Other Information

Additional information on the products is available at. www.tccmaterials.com

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Before using any product, read its label and safety data sheet.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International
Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

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Revision Date
March 2016

Section 1: Product Identification

Product Type: Sealant & Adhesive

Akona Product Name:
Fast-Setting Anchoring Epoxy – Hardener

Section 2: Hazard Identification

Classification of the substance or mixture:

GHS08 Health hazard
Repr. 1B — H360 May damage fertility or the unborn child**.**

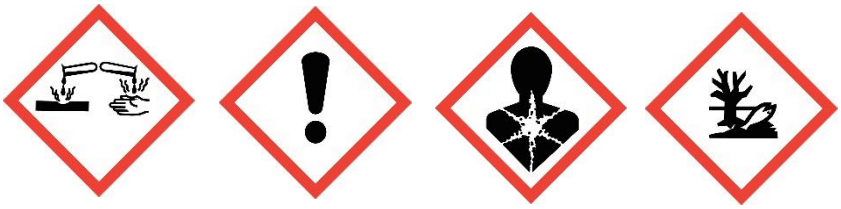
GHS05 Corrosion
Skin Corr. 1B — H314 Causes severe skin burns and eye damage.
Eye Dam. 1 — H318 Causes serious eye damage.

GHS09 Environment
Aquatic Chronic 2 — H411 Toxic to aquatic life with long lasting effects.

GHS07
Acute Tox. 4 — H302 Harmful if swallowed.
Skin Sens. 1 — H317 May cause an allergic skin reaction.
Aquatic Acute 2 — H401 Toxic to aquatic life.

Label elements
GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05 GHS07 GHS08 GHS09

This chemical has been evaluated according to GHS (Globally Harmonized System) and by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

Signal Word: Danger

Hazard Statements:

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary statements:

Do not breathe dusts or mists.
Wear protective gloves.
Wear eye protection / face protection.
Avoid release to the environment.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Collect spillage.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
20.3 % of the mixture consists of component(s) of unknown toxicity.

Classification system:
NFPA Ratings (scale 0-4)
Health = 3
Fire = 1
Reactivity = 0

HMIS Ratings (scale 0-4)
Health = 3
Fire = 1
Physical Hazard = 0

Other hazards:
Results of PBT and vPvB assessment
PBT: Not applicable
vPvB: Not applicable

Section 3: Hazardous Ingredients/Composition

Chemical characterization: Mixtures
Description: Mixture.
Dangerous components:

Chemical Name	CAS No	Weight-%
Quartz (SiO2)	14808-60-7	25-50%
4-nonylphenol, branched	84852-15-3	5-20%
aminoethylpiperazine	140-31-8	2.5-10%
Polyetheramine		2.5-10%
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	2.5-10%

2,2'-iminodiethylamine	111-40-0	≤0.5%
titanium dioxide	13463-67-7	≤0.05%

Section 4: First Aid Measures

Description of first aid measures

Inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

Skin Contact:

Immediately wash with water and soap and rinse thoroughly.

If skin becomes irritated seek medical attention.

Eye Contact:

Rinse opened eye for 20 minutes under running water. Call a Doctor immediately.

Ingestion:

Rinse mouth with water.

Do not induce vomiting; immediately call for medical help.

Most Important Symptoms and Effects, both Acute and Delayed

No further relevant information is available.

Indication of any Immediate Medical Attention and Special Treatment Needed

No further relevant information is available.

Section 5: Fire Fighting Measures

Extinguishing Media

Suitable Extinguishing Agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Use fire-fighting measures that suit the environment.

Specific Hazards Arising from the Substance or Mixture:

No further relevant information is available.

Advice for firefighters:

Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Protective Equipment:

Protective clothing and respiratory protective device.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear protective equipment.
Keep unprotected persons away.
Ensure adequate ventilation.

Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Methods and Material for Containment and Cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.

Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7: Handling and Storage

Handling

Precautions for Safe Handling:

Avoid prolonged or repeated contact with skin.
Avoid contact with eyes.
Wash thoroughly after handling.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Open containers in a well ventilated area and avoid breathing headspace vapors.

Information about protection against explosions and fires:

No special measures required.

Storage

Conditions for Safe Storage, Including any Incompatibilities

Requirements to be met by storerooms and receptacles:

Store in a cool location away from direct heat.

Information about storage in one common storage facility:

Store away from oxidizing agents..

Further information about storage conditions:

Keep receptacle tightly sealed.

Specific end use(s):

No further relevant information available.

Section 8: Exposure Controls/Personal Protection

Additional information about design of technical systems:
No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:				
	CAS No	PEL	REL	TLV
Quartz (SiO2)	14808-60-7	see Quartz listing	Long-term value: 0.05* mg/m³ *respirable dust; See Pocket Guide App. A	Long-term value: 0.025* mg/m³ *as respirable fraction
2,2'-iminodiethylamine	111-40-0		Long-term value: 4 mg/m³, 1 ppm Skin	Long-term value: 4.2 mg/m³, 1 ppm Skin
titanium dioxide	13463-67-7	Long-term value: 15* mg/m³ *total dust	See Pocket Guide App. A	Long-term value: 10 mg/m³ withdrawn from NIC

Additional information:
The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment (see listings below):
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Breathing equipment:
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
Protection of hands:
Protective Gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves:
Nitrile rubber, NBR.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses with side shields.
Tightly sealed goggles.
Eye wash stations should be available.

Body protection:

Protective work clothing.

Section 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

General Information	
Appearance:	
Form:	Paste.
Color:	Dark Gray.
Odor:	Characteristic.
Odor Threshold:	Not determined.
pH:	Not determined.
Melting Point:	Undetermined.
Boiling Point/Boiling Range:	Undetermined.
Flash Point:	Not applicable.
Flammability (Solid, Gas):	Not applicable
Ignition Temperature:	315°C (599°F)
Decomposition Temperature:	Not determined.
Auto Igniting:	Product is not self-igniting.
Danger of Explosion:	Product does not present an explosion hazard.
Vapor Pressure:	Not determined.
Specific gravity @ 20°C (68°F):	1.72 g/cm^3 (14.353 lbs/gal)
Relative Density:	Not determined.
Vapor Density:	Not determined.
Evaporation Rate:	Not determined.
Solubility in /	
Miscibility with Water:	Not miscible or difficult to mix.
Partition coefficient	
(n-octanol/water):	Not determined.
Dynamic Viscocity:	Not determined.
Kinematic Viscocity:	Not determined.
Solvent Content:	
Solids Content:	not available.
Other Information:	No further relevant information available.

Section 10: Stability and Reactivity

Reactivity

No further relevant information available.

Chemical Stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of Hazardous Reactions:

No dangerous reactions known.

Conditions to avoid:

Heat, flames, sparks.
Exposure to high temperatures.

Incompatible Materials:

Reacts with oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide.
Ammonia.
Amines.

Section 11: Toxicological Information

Information on Toxicological Effects

Acute Toxicity:

LD/LC50 values that are relevant for classification

	CAS No	Oral LD50	Dermal LD50
aminoethylpiperazine	140-31-8	2140 mg/kg (rat)	880 mg/kg (rabbit)

Primary irritant effect:

Skin Contact:

Caustic effect on skin and mucous membranes.

Eye Contact:

Causes serious eye damage.
Vapors may be irritating to the eyes.

Sensitization:

Skin Contact: Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories:
IARC (International Agency for Research on Cancer):

Quartz (SiO2)	14808-60-7	1
red iron oxide	1309-37-1	3
titanium dioxide	13463-67-7	2B
Carbon black	1333-86-4	2B

NTP (National Toxicological Program):

Quartz (SiO2)	14808-60-7	K

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients is listed.

Section 12: Ecological Information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Ecotoxical effects
Remark: Toxic for fish
Additional ecological information:
General notes: Water hazard class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms.
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

Section 13: Disposal Considerations

Waste Treatment Methods
Recommendation: Must not be disposed of together with household garbage.
Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.
Disposal must be made according to official regulations.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Section 14: Transportation

UN-Number
DOT, ADR, IMDG, IATA: UN1760

UN proper shipping name

DOT: RQ Corrosive liquids, n.o.s. (4-nonylphenol, branched, NAminoethylpiperazine)
ADR: 1760 Corrosive liquids, n.o.s. (4-nonylphenol, branched, NAminoethylpiperazine), ENVIRONMENTALLY HAZARDOUS
IMDG: CORROSIVE LIQUID, N.O.S. (4-nonylphenol, branched, NAMINOETHYLPIPERAZINE), MARINE POLLUTANT
IATA: Corrosive liquids, n.o.s. (4-nonylphenol, branched, NAminoethylpiperazine)

Transport Hazard Class(es)

DOT:

Class: 8 Corrosive substances
Label: 8

ADR, IMDG:

Class: 8 Corrosive substances
Label: 8

IATA:

Class: 8 Corrosive substances
Label: 8

Packing group
DOT, ADR, IMDG, IATA: III

Environmental hazards: Product contains environmentally hazardous substances: 4-nonylphenol, branched
Marine pollutant: Yes (DOT)
Symbol (fish and tree)
Special marking (ADR): Symbol (fish and tree)

Special precautions for user: Warning: Corrosive substances
Danger code (Kemler): 80
EMS Number: F-A,S-B
Stowage Category: A
Stowage Code: SW2 Clear of living quarters.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC:
Not applicable.

Transport/Additional information:
DOT
Remarks: Special marking with the symbol (fish and tree).

UN "Model Regulation": UN 1760 CORROSIVE LIQUIDS, N.O.S. (4-NONYLPHENOL, BRANCHED, N-AMINOETHYLPIPERAZINE), 8, III, ENVIRONMENTALLY HAZARDOUS

Section 15: Regulatory Information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

4-nonylphenol, branched	84852-15-3
aluminium oxide	1344-28-1

TSCA (Toxic Substances Control Act):

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

Proposition 65

Chemicals known to the State of California (Prop. 65) to cause cancer:

titanium dioxide	13463-67-7

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed**.**

(DSL) Canada Dosmestic Substance List

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

New Jersey Right-to-Know List:

Quartz (SiO2)	14808-60-7
Talc (Mg3H2(SiO3)4)	14807-96-6
aluminium oxide	1344-28-1
2,2'-iminodiethylamine	111-40-0
2-(2-aminoethylamino)ethanol	111-41-1
titanium dioxide	13463-67-7

New Jersey Special Hazardous Substance List:

Quartz (SiO2)	14808-60-7	CA
Talc (Mg3H2(SiO3)4)	14807-96-6	CA
2,2'-iminodiethylamine	111-40-0	CO
2-(2-aminoethylamino)ethanol	111-41-1	CO

Pennsylvania Right-to-Know List:

Quartz (SiO2)	14808-60-7
Talc (Mg3H2(SiO3)4)	14807-96-6
aluminium oxide	1344-28-1
2,2'-iminodiethylamine	111-40-0
2-(2-aminoethylamino)ethanol	111-41-1
titanium dioxide	13463-67-7

Pennsylvania Special Hazardous Substance List:

aluminium oxide	1344-28-1	E

Cancerogenity categories:
EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

Quartz (SiO2)	14808-60-7	A2
Talc (Mg3H2(SiO3)4)	14807-96-6	A4
aluminium oxide	1344-28-1	A4
red iron oxide	1309-37-1	A4
titanium dioxide	13463-67-7	A4
Carbon black	1333-86-4	A4

MAK (German Maximum Workplace Concentration)

Quartz (SiO2)	14808-60-7	1
Talc (Mg3H2(SiO3)4)	14807-96-6	3B
aluminium oxide	1344-28-1	2
titanium dioxide	13463-67-7	3A
Carbon black	1333-86-4	3B

NIOSH-Ca (National Institute for Occupational Safety and Health)

Quartz (SiO2)	14808-60-7
titanium dioxide	13463-67-7
Carbon black	1333-86-4

National regulations:
Water hazard class:

Water hazard class 3 (Self-assessment): extremely hazardous for water.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

Section 16: Other Information

Additional information on the products is available at. www.tccmaterials.com

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Before using any product, read its label and safety data sheet.

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International
Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Repr. 1B: Reproductive toxicity, Hazard Category 1B
Aquatic Acute 2: Hazardous to the aquatic environment - AcuteHazard, Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2