



EUCLID CHEMICAL

Version: 2.0
Revision Date: 01/14/2016

This is a kit that contains the following components:

DURAL FAST SET EPOXY GEL CONGRY 1:1 PT A, DURAL FAST SET EPOXY GEL 1:1 PART A
DURAL FAST SET EPOXY GEL 1:1 PART B



SAFETY DATA SHEET

1. Identification

Product identifier: DURAL FAST SET EPOXY GEL CONGRY 1:1 PT A, DURAL FAST SET EPOXY GEL 1:1 PART A

Product Code: TD5323122NC

Recommended use and restriction on use

Recommended use: Sealant

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:

EH&S Department

Telephone:

216-531-9222

Emergency telephone number:

1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2B
Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A

Unknown toxicity - Health

Acute toxicity, oral	9.98 %
Acute toxicity, dermal	11 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	99.71 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	99.99 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

**Signal Word:** Danger**Hazard Statement:** Causes eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.**Precautionary Statement****Prevention:** Wash thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.**Response:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Specific treatment (see this label). Wash contaminated clothing before reuse.**Storage:** Store locked up.**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.**Other hazards which do not result in GHS classification:** None.**3. Composition/information on ingredients****Mixtures**

Chemical Identity	CAS number	Content in percent (%)*
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	60 - 100%
Acrylate Ester	15625-89-5	7 - 13%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	5 - 10%
Titanium dioxide	13463-67-7	0.5 - 1.5%
Stoddard solvent (Mineral	8052-41-3	0.1 - 1%



Spirits)

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
- Inhalation:** Move to fresh air.
- Skin Contact:** If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
- Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures



Personal precautions, protective equipment and emergency procedures:

See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up:

Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:

Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Crystalline Silica (Quartz)/ Silica Sand - Total dust.	TWA	0.3 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Stoddard solvent	TWA	100 ppm	US. ACGIH Threshold Limit Values



(Mineral Spirits)			(2011)
	PEL	500 ppm 2,900 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWAEV	0.10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Titanium dioxide - Total dust.	TWA	10 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWAEV	10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment**General information:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection



Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear suitable protective clothing. Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Gray
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 93 °C > 200 °F (Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.13
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
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Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	May be harmful in contact with skin. Causes mild skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	No data available.
Dermal Product:	ATEmix: 3,227.79 mg/kg
Inhalation Product:	No data available.

Repeated dose toxicity Product:	No data available.
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Skin Corrosion/Irritation Product:	No data available.
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Specified substance(s): Titanium dioxide	in vivo (Rabbit): Experimental result, Supporting study
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Serious Eye Damage/Eye Irritation Product:	No data available.
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**Specified substance(s):**

Bisphenol A Polyglycidyl Ether Resin	in vivo (Rabbit, 24 hrs): Slightly irritating
Acrylate Ester	in vivo (Rabbit, 24 hrs): Moderately irritating
Titanium dioxide	in vivo (Rabbit, 24 hrs): Not irritating
Stoddard solvent (Mineral Spirits)	Irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand	Overall evaluation: Carcinogenic to humans.
Titanium dioxide	Overall evaluation: Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand	Known To Be Human Carcinogen.
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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:** No data available.**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

Titanium dioxide ED 0 (Phoxinus phoxinus, 30 d): \geq 1,000 mg/l Experimental result, Supporting study
LC 10 (Oncorhynchus mykiss, 28 d): 0.981 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
LC 50 (Oncorhynchus mykiss, 28 d): 7.31 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
LC 1 (Oncorhynchus mykiss, 28 d): 0.191 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study
LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l Experimental result, Supporting study

Aquatic Invertebrates**Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio**



Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Stoddard solvent (Mineral Spirits) Log Kow: 3.16 - 7.15

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.



US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Methanol	5000 lbs.
Hydroquinone (HQ)	100 lbs.
Butyl acetate	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Immediate (Acute) Health Hazards
- Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Hydroquinone (HQ)	100 lbs.	- - -

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Methanol	5000 lbs.
Copper phthalocyanine	
Hydroquinone (HQ)	100 lbs.
Butyl acetate	5000 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Hydroquinone (HQ)	500lbs
Bisphenol A Polyglycidyl	500 lbs
Ether Resin	
Acrylate Ester	500 lbs
Crystalline Silica (Quartz)/	500 lbs
Silica Sand	
Titanium dioxide	500 lbs
Stoddard solvent (Mineral	500 lbs
Spirits)	

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

**US. New Jersey Worker and Community Right-to-Know Act****Chemical Identity**

Crystalline Silica (Quartz)/ Silica Sand

US. Massachusetts RTK - Substance List**Chemical Identity**

Crystalline Silica (Quartz)/ Silica Sand

Hydroquinone (HQ)

US. Pennsylvania RTK - Hazardous Substances**Chemical Identity**

Crystalline Silica (Quartz)/ Silica Sand

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	1 g/l
VOC Method 310:	0.11 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.



New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision
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Revision Date:	01/14/2016
Version #:	2.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.



SAFETY DATA SHEET

1. Identification

Product identifier: DURAL FAST SET EPOXY GEL 1:1 PART B
Product Code: TD5323122NC

Recommended use and restriction on use

Recommended use: Curative
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person: EH&S Department
Telephone: 216-531-9222
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 4
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A
Toxic to reproduction	Category 2

Acute toxicity, oral	27.54 %
Acute toxicity, dermal	49.59 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	97.12 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
Acute hazards to the aquatic environment	64 %
Chronic hazards to the aquatic environment	100 %

**Label Elements****Hazard Symbol:****Signal Word:**

Danger

Hazard Statement:

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life.

Precautionary Statement**Prevention:**

Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection. 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. Use personal protective equipment as required.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification:

None.

3. Composition/information on ingredients

**Mixtures**

Chemical Identity	CAS number	Content in percent (%)*
1,3-Cyclohexanedimethanamine	2579-20-6	15 - 40%
4-Nonylphenol	84852-15-3	15 - 40%
Bisphenol A	80-05-7	15 - 40%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	15 - 40%
Tris(dimethylaminomethyl)phenol	90-72-2	3 - 7%
Benzyl alcohol	100-51-6	1 - 5%
1,2-Cyclohexanediamine	694-83-7	1 - 5%
**	**	1 - 5%
**	**	1 - 5%
Calcium oxide	1305-78-8	1 - 5%
Iron oxide	1309-37-1	0.1 - 1%
Magnesium oxide	1309-48-4	0.1 - 1%
Stoddard solvent (Mineral Spirits)	8052-41-3	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Trade secret information: ** A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Trade secret information: ** A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Ingestion: Rinse mouth. Call a physician or poison control center immediately. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center.

Inhalation: Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.

Skin Contact: Call a physician or poison control center immediately. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing.



Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

**7. Handling and storage**

Precautions for safe handling: Do not taste or swallow. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not get in eyes. Do not get in eyes, on skin, on clothing. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection**Control Parameters****Occupational Exposure Limits**

Chemical Identity	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Crystalline Silica (Quartz)/ Silica Sand - Total dust.	TWA	0.3 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
**	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.8 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	1 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium oxide	TWA	2 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Iron oxide - Respirable	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values



fraction.			(2011)
Iron oxide - Fume.	PEL	10 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Magnesium oxide - Inhalable fraction.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Magnesium oxide - Total particulate.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	500 ppm 2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)



Chemical name	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWAEV	0.10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Amorphous silica - Total	TWA	4 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable.	TWA	1.5 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica	TWAEV	10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Amorphous silica - Respirable dust.	TWA	6 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Aluminum oxide - Respirable.	TWA	1 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Aluminum oxide - Respirable fraction.	TWAEV	1 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Aluminum oxide - Total dust. - as Al	TWA	10 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium oxide	TWA	2 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium oxide	TWAEV	2 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium oxide	TWA	2 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the



			Quality of the Work Environment) (12 2008)
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Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

- General information:** Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- Eye/face protection:** Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.
- Skin Protection**
 - Hand Protection:** Use suitable protective gloves if risk of skin contact.
 - Other:** Wear suitable protective clothing. Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
- Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
- Hygiene measures:** Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

- Physical state:** liquid
- Form:** liquid
- Color:** Gray
- Odor:** Mild pungent
- Odor threshold:** No data available.
- pH:** No data available.
- Melting point/freezing point:** No data available.
- Initial boiling point and boiling range:** No data available.
- Flash Point:** > 93 °C > 200 °F (Setaflash Closed Cup)
- Evaporation rate:** Slower than Ether



Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.20
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Avoid contact with acids.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Harmful if swallowed.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	May be harmful in contact with skin. Causes severe skin burns. May cause an allergic skin reaction.
Eye contact:	Causes serious eye damage.



Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral****Product:** ATEmix: 1,299.18 mg/kg**Dermal****Product:** ATEmix: 2,287.1 mg/kg**Inhalation****Product:** ATEmix: 6.13 mg/l**Repeated dose toxicity****Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Specified substance(s):**Tris(dimethylaminomet
hyl)phenol in vivo (Rabbit): Experimental result, Key studyCalcium oxide in vivo (Rabbit): Read-across from supporting substance (structural
analogue or surrogate), Key study**Serious Eye Damage/Eye Irritation****Product:** No data available.

**Specified substance(s):**

4-Nonylphenol	in vivo (Rabbit, 24 - 72 hrs): Corrosive
Bisphenol A	in vivo (Rabbit, 24 hrs): Not classified as an Irritant
Tris(dimethylaminomet hyl)phenol	in vivo (Rabbit, 3 d): Corrosive
Benzyl alcohol	in vivo (Rabbit, 1 - 72 hrs): Irritating
Amorphous silica	in vivo (Rabbit, 24 hrs): Not irritating
Aluminum oxide	in vivo (Rabbit, 24 hrs): Not irritating
Calcium oxide	in vivo (Rabbit, 24 hrs): Category 1
Iron oxide	in vivo (Rabbit, 1 - 72 hrs): Not irritating
Magnesium oxide	Slightly irritating
Stoddard solvent (Mineral Spirits)	Irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

**Germ Cell Mutagenicity**

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity

Product: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information**Ecotoxicity:****Acute hazards to the aquatic environment:****Fish**

Product: No data available.

Specified substance(s):

4-Nonylphenol LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 0.13825 mg/l Mortality

Bisphenol A LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 4 - 5.5 mg/l Mortality

Benzyl alcohol LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 460 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

4-Nonylphenol LC 50 (Amphipod (*Leptocheirus plumulosus*), 144 h): +/- 0.05 mg/l Mortality
EC 50 (Clam (*Mulinia lateralis*), 24 h): +/- +/- 0.05 mg/l Mortality
LC 50 (Marsh grass shrimp (*Palaemonetes vulgaris*), 72 h): > 0.05 - 0.1 mg/l Mortality
LC 50 (Amphipod (*Leptocheirus plumulosus*), 72 h): > 0.05 - 0.1 mg/l Mortality
LC 50 (American lobster (*Homarus americanus*), 48 h): > 0.1 - 0.15 mg/l Mortality

**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

4-Nonylphenol LOAEL (Lepomis macrochirus, 28 d): 0.126 mg/l experimental result

Bisphenol A LOAEL (Oryzias latipes, 60 d): 355 - 1,820 µg/l Experimental result, Supporting study
NOAEL (Oryzias latipes, 60 d): 355 µg/l Experimental result, Supporting study
NOAEL (Cyprinodon variegatus, 4 d): 250 µg/l Experimental result, Key study
NOAEL (Pimephales promelas, 164 d): 160 µg/l Experimental result, Key study
NOAEL (Oryzias latipes): 247 µg/l Experimental result, Supporting study

Aluminum oxide NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result

Calcium oxide LC 50 (7 d): 3,206.2 mg/l Read-across based on grouping of substances (category approach), Key study
NOAEL (Oncorhynchus mykiss, 60 d): 307 mg/l Read-across based on grouping of substances (category approach), Key study
LC 50 (Hypophthalmichthys molitrix, 16 d): 75 - 450 mg/l Experimental result, Key study
LOAEL (Cyprinodon variegatus, 10 d): 697 mg/l Read-across based on grouping of substances (category approach), Key study
LC 50 (7 d): 4,408.5 mg/l Read-across based on grouping of substances (category approach), Key study

Iron oxide LOAEL (Pimephales promelas, 33 d): 1.6 mg/l experimental result

Aquatic Invertebrates**Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative Potential****Bioconcentration Factor (BCF)****Product:** No data available.



Specified substance(s):

4-Nonylphenol Fathead minnow (*Pimephales promelas*), Bioconcentration Factor (BCF): 498 (Flow through)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Bisphenol A Log Kow: 3.32

Benzyl alcohol Log Kow: 1.10

Stoddard solvent (Mineral Spirits) Log Kow: 3.16 - 7.15

Mobility in Soil: No data available.

Other Adverse Effects: Toxic to aquatic organisms.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol), 9, PG III, MARINE POLLUTANT

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations



TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Chemical Identity

4-Nonylphenol

**

Reportable quantity

De minimis concentration: 1.0% One-Time Export Notification only.

De minimis concentration: 1.0% One-Time Export Notification only.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Chemical Identity

Benzene

OSHA hazard(s)

Blood
respiratory tract irritation
Central nervous system
Flammability
Cancer
Skin
Aspiration
Eye

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

Benzene

Reportable quantity

10 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards

Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity

Bisphenol A

Benzene

Reportable quantity

10 lbs.



SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
1,3-Cyclohexanedimethanamine	500 lbs
4-Nonylphenol	500 lbs
Bisphenol A	500 lbs
Crystalline Silica (Quartz)/ Silica Sand	500 lbs
Tris(dimethylaminomethyl) phenol	500 lbs
Benzyl alcohol	500 lbs
1,2-Cyclohexanediamine	500 lbs
Amorphous silica	500 lbs
Aluminum oxide	500 lbs
Calcium oxide	500 lbs
Iron oxide	500 lbs
Magnesium oxide	500 lbs
Stoddard solvent (Mineral Spirits)	500 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Bisphenol A
Aluminum oxide

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Bisphenol A
Crystalline Silica (Quartz)/ Silica Sand
Amorphous silica
Aluminum oxide
Calcium oxide

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
4-Nonylphenol
Bisphenol A
Crystalline Silica (Quartz)/ Silica Sand
Benzyl alcohol
Calcium oxide

**US. Pennsylvania RTK - Hazardous Substances****Chemical Identity**

4-Nonylphenol
Bisphenol A
Crystalline Silica (Quartz)/ Silica Sand
Benzyl alcohol
Amorphous silica
Aluminum oxide
Calcium oxide

US. Rhode Island RTK**Chemical Identity**

Bisphenol A

Other Regulations:

Regulatory VOC (less water and exempt solvent):	228 g/l
VOC Method 310:	19.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	One or more components in this product are not listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are



not listed on or exempt from the Inventory.

Japan ISHL Listing:

One or more components in this product are not listed on or exempt from the Inventory.

Japan Pharmacopoeia Listing:

One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision
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Revision Date: 01/14/2016

Version #: 2.0

Further Information: No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.