

Flammability Limits in Air:		
	Upper limit	Not Determined
	Lower Limit	Not Determined

Extinguishing Media – All standard firefighting media. On large fires, use dry chemical, foam or water spray. On small fires use carbon dioxide(CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.

Firefighting Procedure - NIOSH/MSHA approved self-contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals. Determine the need to evacuate or isolate the area depending on your local emergency plan. Use water spray to keep fire exposed containers cool.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Nitrogen Oxides. Metal Oxides. Formaldehyde. Silicone Dioxide. Carbon oxides and traces of incompletely burned carbon compounds.

6. Accidental Release Measures

Containment/Clean-up

Determine the need to evacuate based on you local emergency plan. Ensure all personal protective equipment is utilized (see section 5 and 8). For large spills, provide diking or other measure to contain material. Store recovered material in an appropriate container. Clean up non-recoverable material with a suitable absorbent. Clean area thoroughly as silicone materials are a known slip hazard. Disposal of all cleaning materials, including absorbent and any non-usable materials should be done in accordance with Federal, State and Local laws.

7. Handling and Storage

Keep container closed when not in use. Avoid eye contact. Store away from heat, sources of ignition, oxidizers and incompatibles.

8. Exposure Controls/Personal Protection

Component exposure limits- There are no components with workplace exposure limits.

Engineering Controls-
 Eye wash station
 Safety shower
 General ventilation recommended

Personal Protective equipment for routine use:

Eyes	Use proper protection – safety glasses at minimum
Skin	Washing after use is recommended
Gloves	Recommended
Inhalation	No respiratory protection is required

Personal Protective equipment for spills:

Eyes	Safety glasses
Skin	Washing after exposure
Inhalation/Respirator	None should be required

Precautionary Measures Use safety glasses. Use reasonable care.

Note; These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require additional precautions.

9. Physical and Chemical Properties

Physical Form:	Viscous liquid
Color	Beige
Specific Gravity	1.31
Vapor Pressure	Negligible
Vapor Density	Negligible
Freezing point	NA
Melting point	NA
Boiling point	>260C(>500F)
pH	Not Determined
Odor	Odorless
Solubility in water	Negligible

10. Stability and Reactivity

Chemical Stability	Stable
Hazardous Polymerization	Will not occur
Conditions to Avoid	None
Materials to avoid	Strong oxidizers may cause a reaction

Hazardous Thermal Decomposition/Combustion Products

Carbon Monoxide
Carbon Dioxide
Silicone Dioxide
Formaldehyde

11. Toxicological Information

Special Hazard Information on material and components - No known application information

12. Ecological Information

Ecotoxicological Information –	Complete information is not yet available
Chemical Fate Information -	Complete information is not yet available

13. Disposal Considerations

RCRA Hazard Class (40CFR 261)
Material as received is non-hazardous with regard to disposal

Disposal should be made in accordance with Federal, State and Local regulations.

14. Transportation Information

DOT Road Shipment (49CFR 172.101)	Not subject to DOT
Ocean Shipment (IMDG)	Not subject to IMDG code
Air Shipment (IATA)	Not subject to IATA regulations

15. Regulatory Information

Contents of this MSDS comply with OSHA 29 CFR 1910.1200

TSCA – All chemical components of this material are included on or exempt from listing on the TSCA inventory of Chemical Substances

SARA Regulations

SARA 302	None
SARA 304	None
SARA 311, 312	None
SARA 313	None

California Prop 65 None

HMIS	Flammability	0	Reactivity	0	Health	0
NFPA	Flammability	0	Reactivity	0	Health	0

16. Other Information

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.



Material Safety Data Sheet QM Cat Purple

1. Chemical Product and Company Identification

Quantum Silicones
8021 Reycan Road
Richmond, VA 23237

Phone (804)271-9010

Prepared by: Philip McDermott
Date Prepared: 6/5/07
Chemical Family: Mixture
Generic Description: Moldmaking Catalyst
Physical Form: Viscous Liquid

NFPA Profile Health 2 Flammability 2 Reactivity 1

2. OSHA Hazardous Ingredients

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
68928-76-7	3-7	Dibutyl Tin bisneodecanoate
77-58-7	0.3-4	Dibutyl tin Dilaurate
78-10-4	5-10	Ethyl Silicate
682-01-9	5-15	n-Propyl Silicate

The above components are hazardous as defined in 29 CFR 1910.1200

3. Hazards Identification

Acute effects

Eye: May cause irreversible damage and burns to the eyes. Irritant effect may be delayed
Skin: May cause moderate irritation. Irritant effect may be delayed
Inhalation: Vapor irritating to the respiratory tract. Vapor overexposure may cause drowsiness.
Oral: May cause vomiting

Prolonged/Repeated Exposure Effects

Skin: Repeated or prolonged exposure may irritate seriously. Overexposure by skin absorption may injure
The following organ(s); Blood
Inhalation: Overexposure by inhalation may injure the following organ(s): Lungs, Liver, Kidney
Oral: Over exposure by ingestion may injure the following organ(s): Liver

Signs and Symptoms of Overexposure

No Known application information

Medical Conditions Aggravated by Exposure

None Known

Carcinogenicity

This product or one of it's ingredients present 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC or OSHA.

4. First Aid Measures

Eyes: Immediately flush with water for 15 minutes. Seek medical attention.
Skin: Remove from skin and flush with water for 15 minutes. Seek medical attention if irritation persists or ill effects develop or persist.
Inhalation: Remove to fresh air. Immediately seek medical attention.
Oral: Get medical attention. DO NOT induce vomiting.

5. Fire Fighting Measures

Flash point >141F (>62C)
Auto Ignition Temp: Not determined

Flammability Limits in Air:
Upper limit Not Determined
Lower Limit Not Determined

Extinguishing Media – On large fires, use dry chemical, foam or water spray. On small use carbon dioxide(CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.

Firefighting Procedure - NIOSH/MSHA approved self-contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals. Determine the need to evacuate or isolate the area depending on your local emergency plan. Use water spray to keep fire exposed containers cool.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Nitrogen Oxides. Metal Oxides. Formaldehyde. Silicone Dioxide. Carbon oxides and traces of incompletely burned carbon compounds.

6. Accidental Release Measures

Containment/Clean-up

Determine the need to evacuate based on you local emergency plan. Ensure all personal protective equipment is utilized (see section 5 and 8). For large spills, provide diking or other measure to contain material. Store recovered material in an appropriate container. Clean up non-recoverable material with a suitable absorbent. Clean area thoroughly as silicone materials are a known slip hazard. Disposal of all cleaning materials, including absorbent and any non-usable materials should be done in accordance with Federal, State and Local laws.

7. Handling and Storage

Keep container closed when not in use. Avoid eye contact. Store away from heat, sources of ignition, oxidizers and incompatibles.

8. Exposure Controls/Personal Protection

Component exposure limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
68928-76-7	Dibutyl Tin (bis)neodecanoate	Observe organic tin compounds limits. OSHA PEL and ACGIH TLV Skin: TWA 0.1mg/m3; ACGIH STEL 0.2 mg/m3
77-58-7	Dibutyl Tin Dilaurate	Observe organic tin compounds limits. OSHA PEL and ACGIH TLV Skin: TWA 0.1mg/m3; ACGIH STEL 0.2 mg/m3
78-10-4	Ethyl Silicate	OSHA PEL(final rule): TWA 100 ppm, 850mg/m3 ACGIH TLV: TWA 10 ppm

682-01-9 n-Propyl Silicate

OSHA PEL : TWA 200ppm, STEL 250ppm: ACGIH TLV 200ppm
STEL 250ppm (skin)

Engineering Controls- Eye wash station
Safety shower
General ventilation recommended

Personal Protective equipment for routine use:

Eyes Safety glasses/goggles
Skin Washing after use is recommended. Change any contaminated clothing as soon as Possible. Chemical protective gloves are recommended.
Gloves Rubber gloves
Inhalation Use respiratory protection unless adequate local ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial hygiene personnel can assist in judging the adequacy of existing engineering controls.
Respirators Local ventilation is recommended to maintain vapor exposures below recommended Limits. Where concentrations are above the recommended limits, respirators that meet OSHA regulations (29 CFR 1910.134).

Personal Protective equipment for spills:

Eyes Safety glasses/goggles
Skin Washing after exposure. Gloves are recommended
Inhalation/Respirator Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Precautionary Measures Avoid eye contact. Avoid skin contact. DO NOT breath vapor. Do not take internally.

Comments: Ethyl alcohol, a flammable material, evolves upon exposure of this material to moisture or humid air. Provide adequate ventilation or respiratory equipment when processing this material.

Note; These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require additional precautions.

9. Physical and Chemical Properties

Physical Form:	Liquid
Color	Purple
Specific Gravity	1.03
Vapor Pressure	Not Determined
Vapor Density	Not Determined
Freezing point	Not Determined
Melting point	Not Determined
Boiling point	Not Determined
pH	Not Determined
Odor	Slight
Solubility in water	Not determined. Reacts.

10. Stability and Reactivity

Chemical Stability	Stable
Hazardous Polymerization	Will not occur
Conditions to Avoid	None
Materials to avoid	Strong Acids, Bases and Oxidizers can cause hydrogen evolution. Water, moisture or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous Thermal Decomposition/Combustion Products

Carbon Monoxide
Carbon Dioxide
Silicone Dioxide
Formaldehyde

11. Toxicological Information

Special Hazard Information on material and components - No known application information.

12. Ecological Information

Ecotoxicological Information – Complete information is not yet available
Chemical Fate Information - Complete information is not yet available

13. Disposal Considerations

RCRA Hazard Class (40CFR 261)
Material as received is non-hazardous with regard to disposal

Disposal should be made in accordance with Federal, State and Local regulations.

14. Transportation Information

DOT Road Shipment (49CFR 172.101)

Proper Shipping Name: Combustible Liquid, N.O.S.
Hazard Technical Name: Ethyl Silicate
Hazard Class: Combustible Liquid
UN/NA Number: NA1993
Packing Group: III
Remarks: Above applies only to containers over 119 gallons or 450 liters.

Ocean Shipment (IMDG)

Proper Shipping Name: Environmentally Hazardous Substances, Liquid, N.O.S.
Hazard Technical Name: Dibutyl Tin (bis)neodecanoate
Dibutyl Tin Dilaurate
Hazard Class: 9
UN Number: 3082
Packing Group: III
Hazard Label: Miscellaneous (class 9) Pollutant
Marine Pollutant

Air Shipment (IATA) Not subject to IATA regulations

15. Regulatory Information

Contents of this MSDS comply with OSHA 29 CFR 1910.1200

TSCA – All chemical components of this material are included on or exempt from listing on the TSCA inventory of Chemical Substances

SARA Regulations

SARA 302	None
SARA 304	None
SARA 311, 312	
Acute	Yes
Chronic	Yes
Fire	Yes
Pressure	No
Reactive	No
SARA 313	None
California Prop 65	None

HMIS	Flammability	2	Reactivity	1	Health	2
NFPA	Flammability	2	Reactivity	1	Health	2

16. Other Information

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.