

RTV6428**Silicone Rubber - Component A****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Manufactured By: Momentive performance material
260 Hudson River Rd
Waterford NY 12188

Revised: 12/17/2010
Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Silicone Rubber
Formula: Mixture

HMIS

Flammability: 1 Reactivity: 0 Health: 0

NFPA

Flammability: 0 Reactivity: 0 Health: 0

2. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

CAUTION! May cause eye irritation. Attention: Not for injection into humans. May generate formaldehyde at temperatures greater than 150 C(300 F). See Section 10 of MSDS for details.

Form: Paste**Color:** Black**Odor:** None.**POTENTIAL HEALTH EFFECTS****INGESTION**

None known.

SKIN

None known.

INHALATION

None known.

EYES

May cause mild eye irritation.

MEDICAL CONDITIONS AGGRAVATED

None known.

SUBCHRONIC (TARGET ORGAN)

None known.

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or

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suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE

Eyes

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>PRODUCT COMPOSITION</u>	<u>CAS REG NO.</u>	<u>WGT. %</u>
<u>A. HAZARDOUS</u>		
QUARTZ	14808-60-7	30 - 60 %
Carbon Black	1333-86-4	0.1 - 1 %
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1 %
<u>B. NON-HAZARDOUS</u>		
polyvinylsiloxane	68083-19-2	30 - 60 %

4. FIRST AID MEASURES**INGESTION**

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN

Wash with soap and water. Get medical attention if irritation or other symptoms develop.

INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

None known.

RTV6428
Silicone Rubber - Component A**5. FIRE-FIGHTING MEASURES**

FLASH POINT: > 149 °C; 300 °F
METHOD: Closed Cup
IGNITION TEMPERATURE: No data available.
FLAMMABLE LIMITS IN AIR - LOWER (%): Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%): Not applicable

SENSITIVITY TO MECHANICAL IMPACT: No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard.

7. HANDLING AND STORAGE**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Avoid contact with skin and eyes. Keep out of reach of children. Keep container tightly closed. Store away from heat, sources of ignition, and incompatibles.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**RESPIRATORY PROTECTION**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Cloth gloves.

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EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value
QUARTZ	14808-60-7	ACGIH, TWA	Respirable fraction. 0.025 mg/m3
Carbon Black	1333-86-4	ACGIH, TWA	3.5 mg/m3
Carbon Black	1333-86-4	OSHA Z1, PEL	3.5 mg/m3
Ethylbenzene	100-41-4	ACGIH, TWA	100 ppm
Ethylbenzene	100-41-4	ACGIH, STEL	125 ppm
Ethylbenzene	100-41-4	OSHA Z1, PEL	100 ppm; 435 mg/m3
Benzene	71-43-2	ACGIH, TWA	0.5 ppm
Benzene	71-43-2	ACGIH, STEL	2.5 ppm
Benzene	71-43-2	ACGIH, SKIN_DES	Can be absorbed through the skin.
Benzene	71-43-2	OSHA Z2, TWA	10 ppm
Benzene	71-43-2	OSHA Z2, Ceiling	25 ppm
Benzene	71-43-2	OSHA Z2, MAX. CONC	50 ppm
Benzene	71-43-2	ACGIH,	Listed.
Benzene	71-43-2	OSHA Z2,	Listed.
Octamethylcyclotetrasiloxane	556-67-2	Z_INTL_OEL, REL	5 ppm

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	260.00 °C; 500 °F
VAPOR PRESSURE (20 C) (MM HG):	Not applicable
FREEZING POINT:	Not applicable
PHYSICAL STATE:	Paste
ODOR:	None.
COLOR:	Black
SPECIFIC GRAVITY (WATER=1):	1.39
DENSITY:	1,390.00 g/cm3
ACID / ALKALINITY (MEQ/G):	Not applicable

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pH:	No data available.
SOLUBILITY IN WATER (20 C):	Insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	PARTIAL IN TOLUENE
VOLATILE ORGANIC CONTENT:	< 1 %(m)

10. STABILITY AND REACTIVITY**STABILITY**

Stable

HAZARDOUS POLYMERIZATION

Hazardous polymerisation does not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS

Carbon dioxide; Formaldehyde.; Carbon Monoxide.; Silicon dioxide.

INCOMPATIBILITY (MATERIALS TO AVOID)

None known.

CONDITIONS TO AVOID

None known.

11. TOXICOLOGICAL INFORMATION**ACUTE ORAL**

Remarks: No data available.

ACUTE DERMAL

Remarks: No data available.

ACUTE INHALATION

Remarks: No data available.

OTHER

Octamethylcyclotetrasiloxane Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size). Inhalation: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liverweights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats

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were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or 700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight, increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial adenomas. All of these effects are limited to the 700 ppm exposure group. These results have been shown to be rat-specific. Further studies are ongoing. In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

MUTAGENICITY

No data available.

OTHER EFFECTS OF OVEREXPOSURE

This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive., Attention: Not for injection into humans.

12. ECOLOGICAL INFORMATION**ECOTOXICITY**

No data available.

CHEMICAL FATE

No data available.

13. DISPOSAL CONSIDERATIONS**DISPOSAL METHOD**

Disposal should be made in accordance with federal, state and local regulations., Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national

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and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION**Inventories**

Canada DSL Inventory	y (positive listing)	
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)	
Korea Existing Chemicals Inventory (KECI)	y (positive listing)	
China Inventory of Existing Chemical Substances	y (positive listing)	
Australia Inventory of Chemical Substances (AICS)	y (positive listing)	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)	
TSCA list	y (positive listing)	On TSCA Inventory
EU list of existing chemical substances	y (positive listing)	
Canada NDSL Inventory	n (Negative listing)	

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information**CERCLA**

Reportable quantity 409836 lbs

PRODUCT COMPOSITION

Xylenes

Chemical

1330-20-7

CERCLA Reportable Quantity

Reportable quantity: 100 LBS

SARA (311,312) HAZARD CLASS

No SARA Hazards

SARA (313) CHEMICALS**CALIFORNIA PROPOSITION 65**

Warning! This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

71-43-2, Benzene. 108-88-3, Toluene. 1333-86-4, Carbon Black. 100-41-4, Ethylbenzene. 14808-60-7, Quartz.

Canadian Regulatory Information**WHMIS HAZARD CLASS**

D2A - Very Toxic Material Causing Other Toxic Effects

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16. OTHER INFORMATION**OTHER**

C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable
UNKN = unknown NE = none established REC = recommended ND = none determined V =
recommended by vendor SKN = skin TS = trade secret R = recommended MST =
mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per
billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part
720.30(h-2)., These data are offered in good faith as typical values and not as product specifications.
No warranty, either expressed or implied, is 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.

**RTV6428
Silicone Compound - Component B****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Manufactured By: Momentive performance material
260 Hudson River Rd
Waterford NY 12188

Revised: 12/17/2010
Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Silicone Rubber
Formula: Mixture

HMIS

Flammability: 1 Reactivity: 0 Health: 0

NFPA

Flammability: 1 Reactivity: 1 Health: 0

2. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

CAUTION! May cause irritation of skin and eyes. Product generates flammable gas on contact with acids, bases or oxidizing substances. May generate formaldehyde at temperatures greater than 150 C(300 F). See Section 10 of MSDS for details.

Form: Paste**Color:** Off-white**Odor:** Slight**POTENTIAL HEALTH EFFECTS****INGESTION**

None known.

SKIN

May cause mild skin irritation.

INHALATION

None known.

EYES

May cause mild eye irritation.

MEDICAL CONDITIONS AGGRAVATED

None known.

SUBCHRONIC (TARGET ORGAN)

None known.

**RTV6428
Silicone Compound - Component B****CHRONIC EFFECTS / CARCINOGENICITY**

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

ROUTES OF EXPOSURE

Eyes

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>PRODUCT COMPOSITION</u>	<u>CAS REG NO.</u>	<u>WGT. %</u>
<u>A. HAZARDOUS</u>		
QUARTZ	14808-60-7	30 - 60 %
Dimethylhydrogenpolysiloxane	68037-59-2	1 - 5 %
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1 %
<u>B. NON-HAZARDOUS</u>		
polyvinylsiloxane	68083-19-2	30 - 60 %

4. FIRST AID MEASURES**INGESTION**

Rinse mouth.

SKIN

Wash area with soap and water.

INHALATION

None known.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

None known.

RTV6428**Silicone Compound - Component B****5. FIRE-FIGHTING MEASURES**

FLASH POINT: > 121 °C; 250 °F
METHOD: Closed Cup
IGNITION TEMPERATURE: No data available.
FLAMMABLE LIMITS IN AIR - LOWER (%): Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%): Not applicable

SENSITIVITY TO MECHANICAL IMPACT: No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

None known.

6. ACCIDENTAL RELEASE MEASURES**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

7. HANDLING AND STORAGE**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Avoid contact with skin and eyes. Do not re-use empty containers. Store away from heat, sources of ignition, and incompatibles. Small amounts of hydrogen may be evolved during shipping and storage. Containers must be periodically vented to prevent swelling and eventual rupturing. Take normal precautionary measures when venting hydrogen. Keep container closed when not in use to prevent contact with "acidic, basic, or oxidizing materials, and metallic catalysts" like tin soaps and noble metals (Pt, Rh, etc.)."

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**ENGINEERING CONTROLS**

Eyewash stations

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None known.

PROTECTIVE GLOVES

Cloth gloves.

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

None known.

Exposure Guidelines

Component	CAS RN	Source	Value
QUARTZ	14808-60-7	ACGIH, TWA	Respirable fraction. 0.025 mg/m3
Octamethylcyclotetrasiloxane	556-67-2	Z_INTL_OEL, REL	5 ppm

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	>260 °C; 500 °F
VAPOR PRESSURE (20 C) (MM HG):	Not applicable
FREEZING POINT:	Not applicable
PHYSICAL STATE:	Paste
ODOR:	Slight
COLOR:	Off-white
SPECIFIC GRAVITY (WATER=1):	1.39
DENSITY:	1,390.00 g/cm3
ACID / ALKALINITY (MEQ/G):	No data available.
pH:	Not applicable
SOLUBILITY IN WATER (20 C):	Insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	PARTIAL IN TOLUENE
VOLATILE ORGANIC CONTENT:	< 1 %(m)

10. STABILITY AND REACTIVITY**STABILITY**
Stable

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HAZARDOUS POLYMERIZATION

Hazardous polymerisation does not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS

Carbon dioxide; Formaldehyde.; Carbon Monoxide.; Silicon dioxide.; Flammable hydrogen gas.

INCOMPATIBILITY (MATERIALS TO AVOID)

"Avoid contact with acidic, basic, or oxidizing agents, and""metallic catalysts like tin soaps and noble metals (Pt, Rh,"etc.).

CONDITIONS TO AVOID

Product generates flammable gas on contact with acids, bases or oxidizing substances.

11. TOXICOLOGICAL INFORMATION**ACUTE ORAL**

Remarks: No data available.

ACUTE DERMAL

Remarks: No data available.

ACUTE INHALATION

Remarks: No data available.

OTHER

Octamethylcyclotetrasiloxane Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size). Inhalation: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or 700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight, increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial

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adenomas. All of these effects are limited to the 700 ppm exposure group. These results have been shown to be rat-specific. Further studies are ongoing. In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

MUTAGENICITY

No data available.

OTHER EFFECTS OF OVEREXPOSURE

This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

12. ECOLOGICAL INFORMATION**ECOTOXICITY**

No data available.

CHEMICAL FATE

No data available.

13. DISPOSAL CONSIDERATIONS**DISPOSAL METHOD**

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION**Further Information:**

This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION**Inventories**

Canada DSL Inventory	y (positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)
Korea Existing Chemicals	y (positive listing)

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Inventory (KECI)

China Inventory of Existing Chemical Substances	y (positive listing)	
Australia Inventory of Chemical Substances (AICS)	y (positive listing)	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)	
TSCA list	y (positive listing)	On TSCA Inventory
EU list of existing chemical substances	y (positive listing)	
Canada NDSL Inventory	n (Negative listing)	

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information**SARA (311,312) HAZARD CLASS**

No SARA Hazards

SARA (313) CHEMICALS**CALIFORNIA PROPOSITION 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.
14808-60-7, Quartz.

Canadian Regulatory Information**WHMIS HAZARD CLASS**

D2A - Very Toxic Material Causing Other Toxic Effects

16. OTHER INFORMATION**OTHER**

C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable
UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor
SKN = skin TS = trade secret R = recommended MST = mist
NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion
By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is 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.

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