



ASI 388 Clear

Section 1: Product and Company Identification	
American Sealants, Inc. 9190 Yeager Ln Fort Wayne, Indiana 46809 Phone: 260-489-0728 Fax: 260-489-0519	Emergency Phone Number Infotrac: +1-800-535-5053 (Within US) Infotrac: +1-352-323-3500 (Outside US)
Product Identifier:	ASI 388 Clear
Recommended Use:	RTV rubbers (for electrical, electronic and general industry (gluing and sealing))
Restrictions on Use:	Industrial use only.

Section 2: Hazard(s) Identification	
Classification in accordance with 29 CFR 1910.1200.	
Serious eye damage/eye irritation, Category 2	
Sensitization, skin, Category 1	
Reproductive toxicity (fertility), Category 2	
Specific target organ toxicity, repeated exposure, Category 2 (Cardiovascular/Hematological: hematopoiesis)	
Acute and Delayed Effects:	Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.
Indication of Immediate Medical Attention and Special Treatment Needed, If Needed:	Treat symptomatically and supportively.
GHS Label Elements	
Symbol(s):	
Signal Word:	Warning
Hazard Statement(s):	Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility. May cause damage to organs (Cardiovascular/Hematological: hematopoiesis) through prolonged or repeated exposure.
Precautionary Statement(s) Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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	<p>Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.</p>
Response:	<p>IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention if you feel unwell. 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 exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.</p>
Storage:	<p>Store locked up.</p>
Disposal:	<p>Dispose of contents/container in accordance with local/regional/national/international regulations.</p>

Section 3: Composition/Information on Ingredients

<u>CAS</u>	<u>Component</u>	<u>Percent</u>
Proprietary	Methyloximesilane	1 - < 3
Proprietary	Vinyloximesilane	< 1
Proprietary	Alkoxysilane	< 1
96-29-7	Methylethylketoxime (Impurity)	< 1
556-67-2	Octamethylcyclotetrasiloxane (Impurity)	< 1

Section 4: First-Aid Measures

Inhalation:	<p>IF INHALED: Remove to fresh air. Get medical attention if symptoms occur.</p>
Skin Contact:	<p>IF ON SKIN: Wash off with plenty of soap and water. For minor skin contact, avoid spreading material on unaffected skin. Get medical advice/attention if symptoms occur. Take off contaminated clothing and wash before use.</p>
Eye Contact:	<p>IF IN EYES: Flush eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops and persists: Get medical advice/attention.</p>
Ingestion:	<p>Rinse mouth thoroughly with water. Get immediate medical attention if symptoms occur.</p>

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Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Use carbon dioxide, regular dry chemical powder, alcohol-resistant foam, or water fog.

Unsuitable Extinguishing Media: None known.

Specific Hazards Arising from the Chemical

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)

Special Protective Equipment and Precautions for Firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.

Specific extinguishing methods: Move containers from fire area if you can do so without risk.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Keep unnecessary personnel away. Do not touch or walk through spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment.

Environment Precautions: Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Containment and Cleaning Up: Eliminate sources of ignition. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.

Section 7: Handling and Storage

Precautions for Safe Handling

Protective Measures: Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes. Avoid contact with skin.

Advice on General Occupational Hygiene: Do not eat, drink, or smoke when using this product.

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<p>Conditions for Safe Storage, including any Incompatibilities:</p> <p>Incompatibilities:</p>	<p>Wash thoroughly after handling. Wash contaminate clothing before reuse.</p> <p>Store locked up. Keep in original container and tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight.</p> <p>Strong oxidizing agents, water, moisture</p>
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Section 8: Exposure Controls/Personal Protection		
Component Exposure Limits		
CAS	Component	Exposure Limits
96-29-7	Methylethylketoxime (Impurity)	<p>WEEL: 36 mg/m3 TWA 10 ppm</p> <p>Vendor: 10 ppm STEL; 3 ppm TWA</p>
<p>Appropriate Engineering Controls:</p> <p>Individual Protection Measures</p> <p>Eye/Face Protection:</p> <p>Skin Protection:</p> <p>Hand Protection:</p> <p>Respiratory Protection:</p>	<p>Provide adequate general and local exhaust ventilation. Provide eyewash station. Pay attention to ventilation such as local exhaust, mechanical and/or door open for at least 24 hours after application.</p> <p>Wear tightly sealed safety glasses according to EN 166. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.</p> <p>Skin should be washed after contact.</p> <p>Wear protective gloves. Wash hands before breaks and at the end of workday.</p> <p>If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.</p>	

Section 9: Physical and Chemical Properties	
<p>Physical State: Liquid</p> <p>Color: Translucent</p> <p>Odor: Oxime odor</p> <p>pH: Not applicable</p> <p>Boiling Point: Not applicable</p> <p>Flash Point: 204.8 °F (96 °C) Closed cup</p> <p>OSHA Flammability Class: Not classified as a flammability hazard</p> <p>Vapor Density (air = 1): > 1 (air=1)</p> <p>Specific Gravity (water = 1): Not available</p>	<p>Appearance: Paste</p> <p>Physical Form: : Paste</p> <p>Odor Threshold: Not available</p> <p>Melting Point: Not applicable</p> <p>Decomposition: Not available</p> <p>Evaporation Rate: < 1 (Butyl Acetate=1)</p> <p>Vapor Pressure: Negligible (25 °C)</p> <p>Density: 1.03 (25 °C)</p> <p>Water Solubility: Not soluble</p>

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<p>Log KOW: Not available</p> <p>KOC: Not available</p> <p>Viscosity: Not applicable</p> <p>Volatility: Not available</p>	<p>Coeff. Water/Oil Dist: Not available</p> <p>Auto Ignition: Not available</p> <p>VOC: 1 – 3%</p> <p>Molecular Formula: Not applicable</p>
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Section 10: Stability and Reactivity	
Reactivity:	Not classified as a reactivity hazard.
Chemical Stability:	Stable at normal temperatures and pressure.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	None known.
Incompatible Materials:	Strong oxidizing materials, water, moisture
Hazardous Decomposition Products:	<p>This product reacts with water, moisture or humid air to evolve following compounds: Methylethylketoxime. Refer to section 8: exposure controls/personal protection and section 11: toxicological information.</p> <p>Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide, Nitrogen oxides, and Formaldehyde.</p>

Section 11: Toxicological Information					
<u>Acute Toxicity</u>					
Component Analysis – LD50/LC50					
CAS	Component	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	LD50 Oral	Rat	2995 mg/kg 2400 mg/kg	N/A
		LC50 Inhalation	Rat	1.49-2.44 mg/L	4 hr
		LD50 Dermal	Rabbit	>2000 mg/kg 16 ml/kg	N/A
96-297	Methylethylketoxime (Impurity)	LD50 Oral	Rat	930 mg/kg	N/A
		LD50 Dermal	Rabbit	200 µl/kg	N/A
Information on Likely Routes of Exposure					
Inhalation:		No significant effects are expected.			
Ingestion:		No significant effects are expected.			

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Skin Contact:	May cause an allergic skin reaction.
Eye Contact:	Causes serious eye irritation.
Immediate and Delayed Effects:	Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.
Medical Conditions Aggravated by Exposure:	No information is available.
Irritation/Corrosivity Data:	SKIN-RABBIT : Moderately irritating [Alkoxysilane] SKIN-RABBIT : 500mg/24 r MILD [Octamethylcyclotetrasiloxane] Causes serious eye damage. [Vinyloximesilane] [Methylethylketoxime] EYE-RABBIT : 15mg SEVERE [Alkoxysilane] Causes serious eye irritation. [Methyloximesilane] EYE-RABBIT : MILD [Octamethylcyclotetrasiloxane]
Respiratory Sensitization:	Not available.
Dermal Sensitization:	May cause an allergic skin reaction. [Methyloximesilane] [Vinyloximesilane] [Methylethylketoxime] Positive (Guinea pig) [Alkoxysilane] No evidence of sensitization [Octamethylcyclotetrasiloxane]
Germ Cell Mutagenicity:	Negative(Ames test, Chromosome analysis, Micronucleus test) [Alkoxysilane] Negative(Bacteria) [Octamethylcyclotetrasiloxane]
Carcinogenicity:	Suspected of causing cancer. [Methylethylketoxime]
Component Carcinogenicity OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.	
Reproductive Toxicity:	Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in live litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats exposed to vapor concentrations of 700 ppm had decreases in the number of implantation sites and live litter size. The significance of these findings to humans is not known. [Octamethylcyclotetrasiloxane] Developmental toxicity: NOAEL 500mg/kg/day (Rat), Maternal toxicity: NOAEL 500mg/kg/day (Rat) [Alkoxysilane]

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Specific Target Organ Toxicity –
Single Exposure:

Not available.

Specific Target Organ Toxicity –
Repeated Exposure:

May cause damage to the following organs through prolonged or repeated exposure:

Cardiovascular / Hematological: hematopoiesis. [Vinylloximesilane]

Cardiovascular / Hematological: hematopoiesis. [Methyloximesilane]

Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. A two year combined chronic and carcinogenicity assay was conducted on octamethylcyclotetrasiloxane. Rats were exposed by whole-body vapor inhalation 6hrs/day, 5days/week for up to 104weeks to 0, 10, 30, 150 or 700ppm of octamethylcyclotetrasiloxane. The increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700ppm. Since these effects only occurred at 700ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing octamethylcyclotetrasiloxane would result in a significant risk to humans.
[Octamethylcyclotetrasiloxane]

Aspiration Hazard:

Not classified based on available information.

Further Information:

Methyl Ethyl Ketoxime (MEKO). Material will generate MEKO on exposure to humid air gradually. Male rodents exposed to MEKO vapor at high concentration throughout their lifetime developed liver cancer. But relevance to humans is uncertain now. Please read the detail information to MEKO below:

Skin Irritation: Causes mild irritation. Can be absorbed through the skin.

Eyes Irritation: Causes severe irritation.

Acute Oral Toxicity: LD50(rat)= >900mg/kg

Acute Dermal Toxicity: LD50(rabbit)= >1000mg/kg

Acute Inhalation Toxicity: LC50(rat) > 4.83mg/l/4Hr
Inhalation Toxicity: Shows narcotic action at high concentration. May produce blood effects

Skin Sensitization: Positive (guinea pig)

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Neurotoxicity:	High dose can produce transient and reversible change in neurobehavioral function.
Carcinogenicity:	Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.
Other Chronic Study:	Degenerative effects on the olfactory epithelium of nasal passages occurred in a concentration related manner in males and females of mice and rats at MEKO concentration of 15, 75 and 375ppm. The significant change in hematological parameters were observed at 404ppm concentration.
Workplace Environmental Exposure Level:	Vendor guide: 3ppm(TWA), 10ppm(STEL) AIHA WEEL: 10ppm(TWA)

Section 12: Ecological Information						
Ecotoxicity						
Toxic to aquatic life. Toxic to aquatic life with long lasting effects. [Alkoxysilane]						
May cause long lasting harmful effects to aquatic life. [Octamethylcyclotetrasiloxane]						
Component Analysis – Aquatic Toxicity						
CAS	Component	Aquatic	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	>100 mg/L	96 hr
			LC50	Fathead minnow (<i>Pimephales promelas</i>)	>100 mg/L	96 hr
			LC50	Rainbow trout (<i>Oncorhynchus mykiss</i>)	>100 mg/L	96 hr
		Invertebrates	EC50	Water flea (<i>Daphnia magna</i>)	90 mg/L	48 hr
		Algae	EbC50	Green algae (<i>Selenastrum capricornutum</i>)	5.5 mg/L	72 hr
			ErC50	Green algae (<i>Selenastrum capricornutum</i>)	8.8 mg/L	72 hr
96-29-7	Methylethylketoxime (Impurity)	Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	777-914 mg/L	96 hr

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Persistence and Degradability:	Causes easily hydrolysis in water or atmosphere. [Alkoxysilane]
Bioaccumulative Potential:	Bio concentration Factor(BCF) / (Fathead minnows) : 12400 [Octamethylcyclotetrasiloxane]
Biodegration:	No information available for the product.

Section 13: Disposal Considerations

Disposal Methods:	Dispose in accordance with all applicable federal, state/regional and local laws and regulations.
Disposal of Contaminated Packaging:	Dispose of unused product properly. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Component Waste Numbers:	The U.S. EPA has not published waste numbers for this product's components.

Section 14: Transport Information

International Regulation

IATA:	Not regulated as a dangerous good.
IMDG:	Not regulated as a dangerous good.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	This product is not intended to be transported in bulk.

Domestic Regulation

DOT:	Not regulated as a dangerous good.
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Section 15: Regulatory Information

US Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed

SARA 302 Extremely Hazardous

Substances: None contained in product.

SARA 304: Not applicable.

SARA 311/312: None known.

SARA 313: TRI reporting

TSCA: All components of this product are listed on TSCA Inventory.

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US State Regulations

Massachusetts Right-to-Know - Substance List: Not regulated
 New Jersey Worker and Community Right-to-Know Act: Not listed
 Pennsylvania Worker and Community Right-to-Know Law: Not listed
 Rhode Island Right-to-Know: Not regulated

California Proposition 65: This product does not contain any chemicals known by the State of California to cause cancer or reproductive harm.

Component Analysis – International Inventories

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Methylethylketoxime (Impurity)	96-29-7	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes
Octamethylcyclotetrasiloxane (Impurity)	556-67-2	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes

Section 16: Other Information

Issue Date: 7/7/15

Revision: 1

NFPA Ratings:

Health: 2

Fire: 1

Reactivity: 0



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = Not Significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Key/Legend:

AICS (Australia); DSL (Canada); IECS (China); REACH (European Union); ENCS (Japan); ISHL (Japan); KECI (Korea); NZIoC (New Zealand); PICCS (Philippines); TCSI (Taiwan); TSCA (USA); ACGIH – USA. ACGIH Threshold Limit Values (TLV); NIOSH REL – USA. NIOSH Recommended Exposure Limits; OSHA P0 – USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000; OSHA Z-1 – USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminates; OSHA Z-3 – USA. Occupational Exposure Limits (OSHA) – Table Z-3 Mineral Dusts; ACGIH / TWA – 8-hour, time-weighted average; NIOSH REL / TWA – Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek; NIOSH REL / ST – STEL – 15-minute TWA exposure that should not be exceeded at any time during a workday; OSHA P0 / TWA - 8-hour, time-weighted average; OSHA Z-1 / TWA - 8-hour, time-weighted average; OSHA Z-3 / TWA - 8-hour, time-weighted average

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Disclaimer:

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Document



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Section 1: Product and Company Identification

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 Phone: 260-489-0728
 Fax: 260-489-0519

Emergency Phone Number
 Infotrac: +1-800-535-5053 (Within US)
 Infotrac: +1-352-323-3500 (Outside US)

Product Identifier: ASI 388 White
 Recommended Use: RTV rubbers (for electrical, electronic and general industry (gluing and sealing))
 Restrictions on Use: Industrial use only.

Section 2: Hazard(s) Identification

Classification in accordance with 29 CFR 1910.1200.

Serious eye damage/eye irritation, Category 2
 Sensitization, skin, Category 1
 Reproductive toxicity (fertility), Category 2
 Specific target organ toxicity, repeated exposure, Category 2 (Cardiovascular/Hematological: hematopoiesis)

Acute and Delayed Effects: Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed: Treat symptomatically and supportively.

GHS Label Elements

Symbol(s):



Signal Word:

Warning

Hazard Statement(s):

Causes serious eye irritation.
 May cause an allergic skin reaction.
 Suspected of damaging fertility.
 May cause damage to organs (Cardiovascular/Hematological: hematopoiesis) through prolonged or repeated exposure.

Precautionary Statement(s)

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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Response:	<p>Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.</p> <p>IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention if you feel unwell. 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 exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.</p>
Storage:	Store locked up.
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

<u>CAS</u>	<u>Component</u>	<u>Percent</u>
Proprietary	Methyloximesilane	1 - < 3
Proprietary	Vinyloximesilane	< 1
13463-67-7	Titanium oxide	< 1
Proprietary	Alkoxysilane	< 1
96-29-7	Methylethylketoxime (Impurity)	< 1
556-67-2	Octamethylcyclotetrasiloxane (Impurity)	< 1

Section 4: First-Aid Measures

Inhalation:	<p>IF INHALED: Remove to fresh air. Get medical attention if symptoms occur.</p>
Skin Contact:	<p>IF ON SKIN: Wash off with plenty of soap and water. For minor skin contact, avoid spreading material on unaffected skin. Get medical advice/attention if symptoms occur. Take off contaminated clothing and wash before use.</p>
Eye Contact:	<p>IF IN EYES: Flush eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops and persists: Get medical advice/attention.</p>
Ingestion:	<p>Rinse mouth thoroughly with water. Get immediate medical attention if symptoms occur.</p>

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Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Use carbon dioxide, regular dry chemical powder, alcohol-resistant foam, or water fog.

Unsuitable Extinguishing Media: None known.

Specific Hazards Arising from the Chemical

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)

Special Protective Equipment and Precautions for Firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.

Specific extinguishing methods: Move containers from fire area if you can do so without risk.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Keep unnecessary personnel away. Do not touch or walk through spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment.

Environment Precautions: Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Containment and Cleaning Up: Eliminate sources of ignition. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.

Section 7: Handling and Storage

Precautions for Safe Handling

Protective Measures: Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes. Avoid contact with skin.

Advice on General Occupational Hygiene: Do not eat, drink, or smoke when using this product.

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<p>Conditions for Safe Storage, including any Incompatibilities:</p> <p>Incompatibilities:</p>	<p>Wash thoroughly after handling. Wash contaminate clothing before reuse.</p> <p>Store locked up. Keep in original container and tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight.</p> <p>Strong oxidizing agents, water, moisture</p>
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Section 8: Exposure Controls/Personal Protection		
Component Exposure Limits		
CAS	Component	Exposure Limits
13463-67-7	Titanium oxide	OSHA Z-1: 15 mg/m3 PEL (Total dust) ACGIH: 10 mg/m3 TWA
96-29-7	Methylethylketoxime (Impurity)	WEEL: 36 mg/m3 TWA 10 ppm Vendor: 10 ppm STEL; 3 ppm TWA
<p>Appropriate Engineering Controls: Provide adequate general and local exhaust ventilation. Provide eyewash station. Pay attention to ventilation such as local exhaust, mechanical and/or door open for at least 24 hours after application.</p> <p>Individual Protection Measures</p> <p>Eye/Face Protection: Wear tightly sealed safety glasses according to EN 166. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.</p> <p>Skin Protection: Skin should be washed after contact.</p> <p>Hand Protection: Wear protective gloves. Wash hands before breaks and at the end of workday.</p> <p>Respiratory Protection: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.</p>		

Section 9: Physical and Chemical Properties	
<p>Physical State: Liquid</p> <p>Color: White</p> <p>Odor: Oxime odor</p> <p>pH: Not applicable</p> <p>Boiling Point: Not applicable</p> <p>Flash Point: 204.8 °F (96 °C) Closed cup</p> <p>OSHA Flammability Class: Not classified as a flammability hazard</p> <p>Vapor Density (air = 1): > 1 (air=1)</p>	<p>Appearance: Paste</p> <p>Physical Form: : Paste</p> <p>Odor Threshold: Not available</p> <p>Melting Point: Not applicable</p> <p>Decomposition: Not available</p> <p>Evaporation Rate: < 1 (Butyl Acetate=1)</p> <p>Vapor Pressure: Negligible (25 °C)</p> <p>Density: 1.03 (25 °C)</p>

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<p>Specific Gravity (water = 1): Not available</p> <p>Log KOW: Not available</p> <p>KOC: Not available</p> <p>Viscosity: Not applicable</p> <p>Volatility: Not available</p>	<p>Water Solubility: Not soluble</p> <p>Coeff. Water/Oil Dist: Not available</p> <p>Auto Ignition: Not available</p> <p>VOC: 1 – 3%</p> <p>Molecular Formula: Not applicable</p>
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Section 10: Stability and Reactivity	
Reactivity:	Not classified as a reactivity hazard.
Chemical Stability:	Stable at normal temperatures and pressure.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	None known.
Incompatible Materials:	Strong oxidizing materials, water, moisture
Hazardous Decomposition Products:	<p>This product reacts with water, moisture or humid air to evolve following compounds: Methylethylketoxime. Refer to section 8: exposure controls/personal protection and section 11: toxicological information.</p> <p>Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide, Nitrogen oxides, and Formaldehyde.</p>

Section 11: Toxicological Information					
<u>Acute Toxicity</u>					
Component Analysis – LD50/LC50					
CAS	Component	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	LD50 Oral	Rat	2995 mg/kg 2400 mg/kg	N/A
		LC50 Inhalation	Rat	1.49-2.44 mg/L	4 hr
		LD50 Dermal	Rabbit	>2000 mg/kg 16 ml/kg	N/A
96-297	Methylethylketoxime (Impurity)	LD50 Oral	Rat	930 mg/kg	N/A
		LD50 Dermal	Rabbit	200 µl/kg	N/A
Information on Likely Routes of Exposure					
Inhalation:		No significant effects are expected.			
Ingestion:		No significant effects are expected.			

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Skin Contact:	May cause an allergic skin reaction.	
Eye Contact:	Causes serious eye irritation.	
Immediate and Delayed Effects:	Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.	
Medical Conditions Aggravated by Exposure:	No information is available.	
Irritation/Corrosivity Data:	SKIN-RABBIT : Moderately irritating [Alkoxysilane] SKIN-RABBIT : 500mg/24 r MILD [Octamethylcyclotetrasiloxane] Causes serious eye damage. [Vinyloximesilane] [Methylethylketoxime] EYE-RABBIT : 15mg SEVERE [Alkoxysilane] Causes serious eye irritation. [Methyloximesilane] EYE-RABBIT : MILD [Octamethylcyclotetrasiloxane]	
Respiratory Sensitization:	Not available.	
Dermal Sensitization:	May cause an allergic skin reaction. [Methyloximesilane] [Vinyloximesilane] [Methylethylketoxime] Positive (Guinea pig) [Alkoxysilane] No evidence of sensitization [Octamethylcyclotetrasiloxane]	
Germ Cell Mutagenicity:	Negative(Ames test, Chromosome analysis, Micronucleus test) [Alkoxysilane] Negative(Bacteria) [Octamethylcyclotetrasiloxane]	
Carcinogenicity:	Suspected of causing cancer. [Methylethylketoxime] The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards: Titanium oxide	
Component Carcinogenicity		
CAS	Component	Result
13463-67-7	Titanium oxide	IARC: Group 2B (possibly carcinogenic to humans)
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.		
Reproductive Toxicity:	Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in live litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats exposed to vapor concentrations of 700 ppm had decreases in the	

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	<p>number of implantation sites and live litter size. The significance of these findings to humans is not known. [Octamethylcyclotetrasiloxane] Developmental toxicity: NOAEL 500mg/kg/day (Rat), Maternal toxicity: NOAEL 500mg/kg/day (Rat) [Alkoxysilane]</p>
Specific Target Organ Toxicity – Single Exposure:	Not available.
Specific Target Organ Toxicity – Repeated Exposure:	<p>May cause damage to the following organs through prolonged or repeated exposure: Cardiovascular / Hematological: hematopoiesis. [Vinyloximesilane] Cardiovascular / Hematological: hematopoiesis. [Methyloximesilane]</p> <p>Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. A two year combined chronic and carcinogenicity assay was conducted on octamethylcyclotetrasiloxane. Rats were exposed by whole-body vapor inhalation 6hrs/day, 5days/week for up to 104weeks to 0, 10, 30, 150 or 700ppm of octamethylcyclotetrasiloxane. The increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700ppm. Since these effects only occurred at 700ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing octamethylcyclotetrasiloxane would result in a significant risk to humans. [Octamethylcyclotetrasiloxane]</p>
Aspiration Hazard:	Not classified based on available information.
Further Information:	<p>Methyl Ethyl Ketoxime (MEKO). Material will generate MEKO on exposure to humid air gradually. Male rodents exposed to MEKO vapor at high concentration throughout their lifetime developed liver cancer. But relevance to humans is uncertain now. Please read the detail information to MEKO below:</p> <p>Skin Irritation: Causes mild irritation. Can be absorbed through the skin.</p> <p>Eyes Irritation: Causes severe irritation.</p> <p>Acute Oral Toxicity: LD50(rat)= >900mg/kg</p> <p>Acute Dermal Toxicity: LD50(rabbit)= >1000mg/kg</p> <p>Acute Inhalation Toxicity: LC50(rat) > 4.83mg/l/4Hr</p>

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Inhalation Toxicity:	Shows narcotic action at high concentration. May produce blood effects
Skin Sensitization:	Positive (guinea pig)
Neurotoxicity:	High dose can produce transient and reversible change in neurobehavioral function.
Carcinogenicity:	Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.
Other Chronic Study:	Degenerative effects on the olfactory epithelium of nasal passages occurred in a concentration related manner in males and females of mice and rats at MEKO concentration of 15, 75 and 375ppm. The significant change in hematological parameters were observed at 404ppm concentration.
Workplace Environmental Exposure Level:	Vendor guide: 3ppm(TWA), 10ppm(STEL) AIHA WEEL: 10ppm(TWA)

Section 12: Ecological Information

Ecotoxicity

Toxic to aquatic life. Toxic to aquatic life with long lasting effects. [Alkoxysilane]

May cause long lasting harmful effects to aquatic life. [Octamethylcyclotetrasiloxane]

Component Analysis – Aquatic Toxicity

CAS	Component	Aquatic	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	>100 mg/L	96 hr
			LC50	Fathead minnow (<i>Pimephales promelas</i>)	>100 mg/L	96 hr
			LC50	Rainbow trout (<i>Oncorhynchus mykiss</i>)	>100 mg/L	96 hr
		Invertebrates	EC50	Water flea (<i>Daphnia magna</i>)	90 mg/L	48 hr
		Algae	EbC50	Green algae (<i>Selenastrum capricornutum</i>)	5.5 mg/L	72 hr

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			ErC50	Green algae (<i>Selenastrum capricornutum</i>)	8.8 mg/L	72 hr
96-29-7	Methylethylketoxime (Impurity)	Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	777-914 mg/L	96 hr
13463-67-7	Titanium oxide	Invertebrates	EC50	Water flea (<i>Daphnia magna</i>)	>1000 mg/L	98 hr
		Fish	LC50	Mummichog (<i>Fundulus heteroclitus</i>)	>1000 mg/L	96 hr

Persistence and Degradability: Causes easily hydrolysis in water or atmosphere. [Alkoxysilane]

Bioaccumulative Potential: Bio concentration Factor(BCF) / (Fathead minnows) : 12400
[Octamethylcyclotetrasiloxane]

Biodegradation: No information available for the product.

Section 13: Disposal Considerations

Disposal Methods: Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Disposal of Contaminated Packaging: Dispose of unused product properly. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Component Waste Numbers: The U.S. EPA has not published waste numbers for this product's components.

Section 14: Transport Information

International Regulation

IATA: Not regulated as a dangerous good.

IMDG: Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: This product is not intended to be transported in bulk.

Domestic Regulation

DOT: Not regulated as a dangerous good.

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Section 15: Regulatory Information

US Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed

SARA 302 Extremely Hazardous

Substances: None contained in product.

SARA 304: Not applicable.

SARA 311/312: None known.

SARA 313: TRI reporting

TSCA: All components of this product are listed on TSCA Inventory.

US State Regulations

Massachusetts Right-to-Know - Substance List: Titanium oxide (13463-67-7)

New Jersey Worker and Community Right-to-Know Act: Titanium oxide (13463-67-7)

Pennsylvania Worker and Community Right-to-Know Law: Titanium oxide (13463-67-7)

Rhode Island Right-to-Know: Not regulated

California Proposition 65: WARNING! This product contains a chemical known to the state of California to cause cancer.

The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards: Titanium oxide

Component Analysis – International Inventories

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Methylethylketoxime (Impurity)	96-29-7	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes
Octamethylcyclotetrasiloxane (Impurity)	556-67-2	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	DSL	REACH	Yes	Yes	Yes	Yes	Yes	Yes

Section 16: Other Information

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NFPA Ratings:

Health: 2

Fire: 1

Reactivity: 0



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = Not Significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Key/Legend:

AICS (Australia); DSL (Canada); IECSC (China); REACH (European Union); ENCS (Japan); ISHL (Japan); KECI (Korea); NZIoC (New Zealand); PICCS (Philippines); TCSI (Taiwan); TSCA (USA); ACGIH – USA. ACGIH Threshold Limit Values (TLV); NIOSH REL – USA. NIOSH Recommended Exposure Limits; OSHA P0 – USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000; OSHA Z-1 – USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminates; OSHA Z-3 – USA. Occupational Exposure Limits (OSHA) – Table Z-3 Mineral Dusts; ACGIH / TWA – 8-hour, time-weighted average; NIOSH REL / TWA – Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek; NIOSH REL / ST – STEL – 15-minute TWA exposure that should not be exceeded at any time during a workday; OSHA P0 / TWA - 8-hour, time-weighted average; OSHA Z-1 / TWA - 8-hour, time-weighted average; OSHA Z-3 / TWA - 8-hour, time-weighted average

Disclaimer:

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Document



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Section 1: Product and Company Identification	
American Sealants, Inc. 9190 Yeager Ln Fort Wayne, Indiana 46809 Phone: 260-489-0728 Fax: 260-489-0519	Emergency Phone Number Infotrac: +1-800-535-5053 (Within US) Infotrac: +1-352-323-3500 (Outside US)
Product Identifier:	ASI 388 Black
Recommended Use:	RTV rubbers (for electrical, electronic and general industry (gluing and sealing))
Restrictions on Use:	Industrial use only.

Section 2: Hazard(s) Identification	
Classification in accordance with 29 CFR 1910.1200.	
Serious eye damage/eye irritation, Category 2	
Sensitization, skin, Category 1	
Reproductive toxicity (fertility), Category 2	
Specific target organ toxicity, repeated exposure, Category 2 (Cardiovascular/Hematological: hematopoiesis)	
Acute and Delayed Effects:	Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.
Indication of Immediate Medical Attention and Special Treatment Needed, If Needed:	Treat symptomatically and supportively.
GHS Label Elements	
Symbol(s):	
Signal Word:	Warning
Hazard Statement(s):	Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility. May cause damage to organs (Cardiovascular/Hematological: hematopoiesis) through prolonged or repeated exposure.
Precautionary Statement(s) Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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Response:	<p>Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.</p> <p>IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention if you feel unwell. 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. Take off contaminated clothing and wash it before reuse.</p>
Storage:	Store locked up.
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

<u>CAS</u>	<u>Component</u>	<u>Percent</u>
Proprietary	Methyloximesilane	1 - < 3
Proprietary	Vinyloximesilane	< 1
Proprietary	Alkoxysilane	< 1
1333-86-4	Carbon black	< 0.2
96-29-7	Methylethylketoxime (Impurity)	< 1
556-67-2	Octamethylcyclotetrasiloxane (Impurity)	< 1

Section 4: First-Aid Measures

Inhalation:	<p>IF INHALED: Remove to fresh air. Get medical attention if symptoms occur.</p>
Skin Contact:	<p>IF ON SKIN: Wash off with plenty of soap and water. For minor skin contact, avoid spreading material on unaffected skin. Get medical advice/attention if symptoms occur. Take off contaminated clothing and wash before use.</p>
Eye Contact:	<p>IF IN EYES: Flush eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops and persists: Get medical advice/attention.</p>
Ingestion:	<p>Rinse mouth thoroughly with water. Get immediate medical attention if symptoms occur.</p>

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Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Use carbon dioxide, regular dry chemical powder, alcohol-resistant foam, or water fog.

Unsuitable Extinguishing Media: None known.

Specific Hazards Arising from the Chemical

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)

Special Protective Equipment and Precautions for Firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.

Specific extinguishing methods: Move containers from fire area if you can do so without risk.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Keep unnecessary personnel away. Do not touch or walk through spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment.

Environment Precautions: Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and Materials for Containment and Cleaning Up: Eliminate sources of ignition. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use.

Section 7: Handling and Storage

Precautions for Safe Handling

Protective Measures: Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid contact with eyes. Avoid contact with skin.

Advice on General Occupational Hygiene: Do not eat, drink, or smoke when using this product.

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<p>Conditions for Safe Storage, including any Incompatibilities:</p> <p>Incompatibilities:</p>	<p>Wash thoroughly after handling. Wash contaminate clothing before reuse.</p> <p>Store locked up. Keep in original container and tightly closed. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight.</p> <p>Strong oxidizing agents, water, moisture</p>
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Section 8: Exposure Controls/Personal Protection		
Component Exposure Limits		
CAS	Component	Exposure Limits
1333-86-4	Carbon black	ACGIH: 3 mg/m ³ TWA (Inhalable fraction) OSHA Z-1: 3.5 mg/m ³ PEL NIOSH REL: 0.1 mg/m ³ TWA
96-29-7	Methylethylketoxime (Impurity)	WEEL: 36 mg/m ³ TWA 10 ppm Vendor: 10 ppm STEL; 3 ppm TWA
<p>Appropriate Engineering Controls:</p> <p>Individual Protection Measures</p> <p>Eye/Face Protection:</p> <p>Skin Protection:</p> <p>Hand Protection:</p> <p>Respiratory Protection:</p>	<p>Provide adequate general and local exhaust ventilation. Provide eyewash station. Pay attention to ventilation such as local exhaust, mechanical and/or door open for at least 24 hours after application.</p> <p>Wear tightly sealed safety glasses according to EN 166. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.</p> <p>Skin should be washed after contact.</p> <p>Wear protective gloves. Wash hands before breaks and at the end of workday.</p> <p>If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.</p>	

Section 9: Physical and Chemical Properties	
<p>Physical State: Liquid</p> <p>Color: Black</p> <p>Odor: Oxime odor</p> <p>pH: Not applicable</p> <p>Boiling Point: Not applicable</p> <p>Flash Point: 204.8 °F (96 °C) Closed cup</p> <p>OSHA Flammability Class: Not classified as a flammability hazard</p>	<p>Appearance: Paste</p> <p>Physical Form: : Paste</p> <p>Odor Threshold: Not available</p> <p>Melting Point: Not applicable</p> <p>Decomposition: Not available</p> <p>Evaporation Rate: < 1 (Butyl Acetate=1)</p> <p>Vapor Pressure: Negligible (25 °C)</p>

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<p>Vapor Density (air = 1): > 1 (air=1)</p> <p>Specific Gravity (water = 1): Not available</p> <p>Log KOW: Not available</p> <p>KOC: Not available</p> <p>Viscosity: Not applicable</p> <p>Volatility: Not available</p>	<p>Density: 1.03 (25 °C)</p> <p>Water Solubility: Not soluble</p> <p>Coeff. Water/Oil Dist: Not available</p> <p>Auto Ignition: Not available</p> <p>VOC: 1 – 3%</p> <p>Molecular Formula: Not applicable</p>
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Section 10: Stability and Reactivity	
Reactivity:	Not classified as a reactivity hazard.
Chemical Stability:	Stable at normal temperatures and pressure.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	None known.
Incompatible Materials:	Strong oxidizing materials, water, moisture
Hazardous Decomposition Products:	<p>This product reacts with water, moisture or humid air to evolve following compounds: Methylethylketoxime. Refer to section 8: exposure controls/personal protection and section 11: toxicological information.</p> <p>Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Nitrogen oxides. Formaldehyde.</p>

Section 11: Toxicological Information					
Acute Toxicity					
Component Analysis – LD50/LC50					
CAS	Component	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	LD50 Oral	Rat	2995 mg/kg 2400 mg/kg	N/A
		LC50 Inhalation	Rat	1.49-2.44 mg/L	4 hr
		LD50 Dermal	Rabbit	>2000 mg/kg 16 ml/kg	N/A
1333-86-4	Carbon Black	LD50 Oral	Rat	>8000 mg/kg	N/A
96-297	Methylethylketoxime (Impurity)	LD50 Oral	Rat	930 mg/kg	N/A
		LD50 Dermal	Rabbit	200 µl/kg	N/A
Information on Likely Routes of Exposure					
Inhalation:		No significant effects are expected.			

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Ingestion:	No significant effects are expected.
Skin Contact:	May cause an allergic skin reaction.
Eye Contact:	Causes serious eye irritation.
Immediate and Delayed Effects:	Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.
Medical Conditions Aggravated by Exposure:	No information is available.
Irritation/Corrosivity Data:	SKIN-RABBIT : Moderately irritating [Alkoxysilane] SKIN-RABBIT : 500mg/24 r MILD [Octamethylcyclotetrasiloxane] Causes serious eye damage. [Vinyloximesilane] [Methylethylketoxime] EYE-RABBIT : 15mg SEVERE [Alkoxysilane] Causes serious eye irritation. [Methyloximesilane] EYE-RABBIT : MILD [Octamethylcyclotetrasiloxane]
Respiratory Sensitization:	Not available.
Dermal Sensitization:	May cause an allergic skin reaction. [Methyloximesilane] [Vinyloximesilane] [Methylethylketoxime] Positive (Guinea pig) [Alkoxysilane] No evidence of sensitization [Octamethylcyclotetrasiloxane]
Germ Cell Mutagenicity:	Negative(Ames test, Chromosome analysis, Micronucleus test) [Alkoxysilane] Negative(Bacteria) [Octamethylcyclotetrasiloxane]
Carcinogenicity:	Suspected of causing cancer. [Methylethylketoxime] The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards: Carbon black
Component Carcinogenicity	
CAS	Component
1333-86-4	Carbon Black
Result	
IARC: Group 2B (possibly carcinogenic to humans)	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.	
Reproductive Toxicity:	Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in live litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats

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	exposed to vapor concentrations of 700 ppm had decreases in the number of implantation sites and live litter size. The significance of these findings to humans is not known. [Octamethylcyclotetrasiloxane] Developmental toxicity: NOAEL 500mg/kg/day (Rat), Maternal toxicity: NOAEL 500mg/kg/day (Rat) [Alkoxysilane]
Specific Target Organ Toxicity – Single Exposure:	Not available.
Specific Target Organ Toxicity – Repeated Exposure:	May cause damage to the following organs through prolonged or repeated exposure: Cardiovascular / Hematological: hematopoiesis. [Vinylloximesilane] Cardiovascular / Hematological: hematopoiesis. [Methyloximesilane] Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. A two year combined chronic and carcinogenicity assay was conducted on octamethylcyclotetrasiloxane. Rats were exposed by whole-body vapor inhalation 6hrs/day, 5days/week for up to 104weeks to 0, 10, 30, 150 or 700ppm of octamethylcyclotetrasiloxane. The increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700ppm. Since these effects only occurred at 700ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing octamethylcyclotetrasiloxane would result in a significant risk to humans. [Octamethylcyclotetrasiloxane]
Aspiration Hazard:	Not available.
Further Information:	Methyl Ethyl Ketoxime (MEKO). Material will generate MEKO on exposure to humid air gradually. Male rodents exposed to MEKO vapor at high concentration throughout their lifetime developed liver cancer. But relevance to humans is uncertain now. Please read the detail information to MEKO below: Skin Irritation: Causes mild irritation. Can be absorbed through the skin. Eyes Irritation: Causes severe irritation. Acute Oral Toxicity: LD50(rat)= >900mg/kg Acute Dermal Toxicity: LD50(rabbit)= >1000mg/kg

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Acute Inhalation Toxicity:	LC50(rat) > 4.83mg/l/4Hr
Inhalation Toxicity:	Shows narcotic action at high concentration. May produce blood effects
Skin Sensitization:	Positive(guinea pig)
Neurotoxicity:	High dose can produce transient and reversible change in neurobehavioral function.
Carcinogenicity:	Liver carcinomas were observed in a lifetime inhalation study (ca.2 years) in which mice and rats were exposed.
Other Chronic Study:	Degenerative effects on the olfactory epithelium of nasal passages occurred in a concentration related manner in males and females of mice and rats at MEKO concentration of 15, 75 and 375ppm. The significant change in hematological parameters were observed at 404ppm concentration.
Workplace Environmental Exposure Level:	Vendor guide: 3ppm(TWA), 10ppm(STEL) AIHA WEEL: 10ppm(TWA)

Section 12: Ecological Information						
Ecotoxicity						
Toxic to aquatic life. Toxic to aquatic life with long lasting effects. [Alkoxysilane]						
May cause long lasting harmful effects to aquatic life. [Octamethylcyclotetrasiloxane]						
Component Analysis – Aquatic Toxicity						
CAS	Component	Aquatic	Result	Species	Dose	Exposure
Proprietary	Alkoxysilane	Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	>100 mg/L	96 hr
			LC50	Fathead minnow (<i>Pimephales promelas</i>)	>100 mg/L	96 hr
			LC50	Rainbow trout (<i>Oncorhynchus mykiss</i>)	>100 mg/L	96 hr
		Invertebrates	EC50	Water flea (<i>Daphnia magna</i>)	90 mg/L	48 hr

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		Algae	EbC50	Green algae (<i>Selenastrum capricornutum</i>)	5.5 mg/L	72 hr
			ErC50	Green algae (<i>Selenastrum capricornutum</i>)	8.8 mg/L	72 hr
96-29-7	Methylethylketoxime (Impurity)	Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	777-914 mg/L	96 hr

Persistence and Degradability: Causes easily hydrolysis in water or atmosphere. [Alkoxysilane]

Bioaccumulative Potential: Bio concentration Factor(BCF) / (Fathead minnows) : 12400
[Octamethylcyclotetrasiloxane]

Biodegradation: No information available for the product.

Section 13: Disposal Considerations

Disposal Methods: Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Disposal of Contaminated Packaging: Dispose of unused product properly. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Component Waste Numbers: The U.S. EPA has not published waste numbers for this product's components.

Section 14: Transport Information

International Regulation

IATA: Not regulated as a dangerous good.

IMDG: Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: This product is not intended to be transported in bulk.

Domestic Regulation

DOT: Not regulated as a dangerous good.

Section 15: Regulatory Information

US Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed

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SARA 302 Extremely Hazardous Substances: None contained in product.
 SARA 304: Not applicable.
 SARA 311/312: None known.
 SARA 313: TRI reporting

TSCA: All components of this product are listed on TSCA Inventory.

US State Regulations

Massachusetts Right-to-Know - Substance List: Carbon black (1333-86-4)
 New Jersey Worker and Community Right-to-Know Act: Carbon black (1333-86-4)
 Pennsylvania Worker and Community Right-to-Know Law: Carbon black (1333-86-4)
 Rhode Island Right-to-Know: Not regulated

California Proposition 65: **WARNING!** This product contains a chemical known to the state of California to cause cancer.
 The following material is embedded in the product and not available as respirable dusts. When used as intended or as supplied, the product will not pose hazards: Carbon black

Component Analysis – International Inventories

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Carbon black	1333-86-4	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes
Methylethylketoxime (Impurity)	96-29-7	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes
Octamethylcyclotetrasiloxane (Impurity)	556-67-2	Yes	DSL	EINECS	Yes	Yes	Yes	Yes	Yes	Yes

Section 16: Other Information

Issue Date: 7/6/15
 Revision: 1
 NFPA Ratings:

Health: 2
 Fire: 1
 Reactivity: 0



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = Not Significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

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Key/Legend:

AICS (Australia); DSL (Canada); IECSC (China); REACH (European Union); ENCS (Japan); ISHL (Japan); KECI (Korea); NZIoC (New Zealand); PICCS (Philippines); TCSI (Taiwan); TSCA (USA); ACGIH – USA. ACGIH Threshold Limit Values (TLV); NIOSH REL – USA. NIOSH Recommended Exposure Limits; OSHA P0 – USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000; OSHA Z-1 – USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminates; OSHA Z-3 – USA. Occupational Exposure Limits (OSHA) – Table Z-3 Mineral Dusts; ACGIH / TWA – 8-hour, time-weighted average; NIOSH REL / TWA – Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek; NIOSH REL / ST – STEL – 15-minute TWA exposure that should not be exceeded at any time during a workday; OSHA P0 / TWA - 8-hour, time-weighted average; OSHA Z-1 / TWA - 8-hour, time-weighted average; OSHA Z-3 / TWA - 8-hour, time-weighted average

Disclaimer:

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Document



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