

SS4155

SAFETY DATA SHEET

1. Identification

Product identifier: SS4155

Other means of identification

Synonyms: SILICON PRIMER MIXTURE

Recommended use and restriction on use

Recommended use: Primer

Restrictions on use: Not known.

Manufacturer : Momentive Performance Materials LLC
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2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Health Hazards

Serious Eye Damage/Eye Irritation Category 1

Specific Target Organ Toxicity -
Single Exposure Category 3¹.

Specific Target Organ Toxicity -
Repeated Exposure Category 1².

Target Organs

1. Respiratory tract irritation.
2. Central nervous system.

Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %

SS4155

Acute toxicity, inhalation, vapor	0 %
Acute toxicity, inhalation, dust or mist	0 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: H226; Flammable liquid and vapor.
 H318; Causes serious eye damage.
 H335; May cause respiratory irritation.
 H372; Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor. In case of fire: Use alcohol resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

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

SS4155

Other hazards which do not result in GHS classification:

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
STODDARD SOLVENT	8052-41-3	50 - <100%	# This substance has workplace exposure limit(s).
Tetraethyl Silicate	78-10-4	20 - <50%	# This substance has workplace exposure limit(s).
1-butanol, titanium(4+)salt	5593-70-4	5 - <10%	No data available.
1,2,4-TRIMETHYLBENZENE	95-63-6	1 - <5%	# This substance has workplace exposure limit(s).
Silicic acid, ethyl ester	11099-06-2	1 - <5%	# This substance has workplace exposure limit(s).

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

4. First-aid measures

- Ingestion:** Drink plenty of water.
- Inhalation:** Move the exposed person to fresh air at once. Remove from contaminated area. Apply artificial respiration if not breathing. Call a physician or poison control center immediately. For breathing difficulties, oxygen may be necessary.
- Skin Contact:** Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if symptoms persist. Wash contaminated clothing before reuse.
- Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
- Most important symptoms/effects, acute and delayed**
- Symptoms:** No data available.

SS4155

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Ground container and transfer equipment to eliminate static electric sparks.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically during pouring or filling. All equipment used when handling the product must be grounded.

Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with eyes, skin, and clothing. Keep out of reach of children. Attention: Not for injection into humans.

Methods and material for containment and cleaning up: Warn other workers of spill. 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.

Notification Procedures: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions: Avoid discharge into drains, water courses or onto the ground.

SS4155

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is expected; material has a flash point below 200 F. Do not breathe vapor/spray. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. See Section 8 of the SDS for Personal Protective Equipment. Wash hands after handling. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Keep container closed. Store in original container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
STODDARD SOLVENT	TWA	100 ppm	US. ACGIH Threshold Limit Values (03 2015)
	REL	350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceil_Time	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	500 ppm 2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Tetraethyl Silicate	TWA	100 ppm 525 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	10 ppm 85 mg/m3	US. ACGIH Threshold Limit Values (03 2015)
	PEL	100 ppm 850 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	100 ppm 85 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 ppm 85 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	10 ppm 85 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	850 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	85 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	ST ESL	100 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	TWA PEL	10 ppm 85 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
	1,2,4-TRIMETHYLBENZENE	25 ppm	US. ACGIH Threshold Limit Values (03 2015)
	REL	25 ppm 125 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	25 ppm 125 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

SS4155

Appropriate Engineering Controls Provide eyewash station and safety shower. General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment. Provide adequate ventilation if fumes or vapors are generated.

Individual protection measures, such as personal protective equipment

General information: General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Eye/face protection: Monogoggles Use safety goggles and face shield in case of splash risk.

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing and eye/face 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).

Hygiene measures: Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. When using do not eat, drink or smoke. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance

Physical state: liquid

Form: liquid

Color: Blue

Odor: Faint

Odor threshold: No data available.

pH: Not applicable

Melting point/freezing point: < -34 °C

Initial boiling point and boiling range : > 98 °C (1,013 hPa)

Flash Point: 36.60 °C (Closed Cup)

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): 6.00 %(V)

Flammability limit - lower (%): 1.00 %(V)

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

SS4155

Heat of combustion:	No data available.
Vapor pressure:	Not applicable
Vapor density:	No data available.
Density:	calculated 0.86 g/cm ³
Relative density:	0.81
Solubility(ies)	
Solubility in water:	Negligible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature :	245.00 °C
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
VOC:	765 g/l ;

10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerisation does not occur.
Conditions to avoid:	Keep away from sources of ignition - No smoking. Keep away from sources of ignition - No smoking.
Incompatible Materials:	Oxidizing agents.
Hazardous Decomposition Products:	Carbon dioxide Silicon dioxide. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

SS4155

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix : 24,693.8 mg/kg

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

Product: ATEmix : 41.83 mg/l
ATEmix : 5.7 mg/l

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

SS4155

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

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

No carcinogenic components identified

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure: Central nervous system.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

SS4155

Tetraethyl Silicate LC100 (No data available., 24 h): 9,000 mg/l
LC50 (Brachydanio rerio, 96 h): > 245 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Tetraethyl Silicate EC50 (Blue Crab): 7,800 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Tetraethyl Silicate 98 % (28 d, OECD-Guideline 301 A (DOC Die-Away Test)) Readily biodegradable

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

SS4155

STODDARD SOLVENT	No data available.
Tetraethyl Silicate	No data available.
1-butanol, titanium(4+)salt	No data available.
1,2,4-	No data available.
TRIMETHYLBENZE NE	

Silicic acid, ethyl ester	No data available.
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Other adverse effects: No data available.

13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

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

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT

UN Number:	UN 1993
UN Proper Shipping Name:	Flammable liquids, n.o.s.(SOLVENT NAPHTHA, TETRAETHYL SILICATE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No

IMDG

UN Number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(SOLVENT NAPHTHA, TETRAETHYL SILICATE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	III
Marine Pollutant:	No
Limited quantity	5.00L
Excepted quantity	E1

IATA

UN Number:	UN 1993
Proper Shipping Name:	Flammable liquid, n.o.s.(SOLVENT NAPHTHA, TETRAETHYL SILICATE)

SS4155

Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	III
Cargo aircraft only Packing	366
Instructions:	
Passenger and cargo aircraft	366
Packing Instructions:	
Limited quantity:	10.00L
Packing Instructions:	Y344
Excepted quantity	E1
Environmental Hazards:	Not regulated.
Marine Pollutant:	No

15. Regulatory information

US Federal Regulations

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

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard

Immediate (Acute) Health Hazards

Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SS4155

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
STODDARD SOLVENT	10000 lbs
Tetraethyl Silicate	10000 lbs
1-butanol, titanium(4+)salt	10000 lbs
1,2,4-TRIMETHYLBENZE NE	10000 lbs
Silicic acid, ethyl ester	10000 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
1,2,4-TRIMETHYLBENZE NE		

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

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

<u>Chemical Identity</u>
STODDARD SOLVENT
Tetraethyl Silicate
1-butanol, titanium(4+)salt
1,2,4-TRIMETHYLBENZE NE
Silicic acid, ethyl ester

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
STODDARD SOLVENT
Tetraethyl Silicate
1,2,4-TRIMETHYLBENZE NE

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
STODDARD SOLVENT
Tetraethyl Silicate
1,2,4-TRIMETHYLBENZE NE
Silicic acid, ethyl ester

SS4155

US. Rhode Island RTK

Chemical Identity
 STODDARD SOLVENT
 Tetraethyl Silicate

Inventory Status:

Australia AICS:	y (positive listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	y (positive listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	y (positive listing)	Remarks: None.
Canada NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	y (positive listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: None.
Taiwan. Taiwan inventory (CSNN):	y (positive listing)	Remarks: None.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	4
Flammability	3
Physical Hazards	1
PERSONAL PROTECTION	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 04/09/2018
Revision Date: No data available.
Version #: 3.0
Further Information: No data available.

SS4155

Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safehandling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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