

SAFETY DATA SHEET

Version: 3.0
Date of Issue: 27-Apr-2017
Date of First Issue: 09-Oct-2012




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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

SECTION 1: IDENTIFICATION

Product identifier used on the label	RTV Primer No. 1
Other means of identification	
Chemical Name	Mixture
CAS No.	Mixture
EINECS No.	Mixture
Recommended use of the chemical and restrictions on use	
Recommended use	PC14 Metal surface treatment products, including galvanic and electroplating products
Restrictions on use	None known.
Details of the supplier of the safety data sheet	
Supplier	VISHAY MEASUREMENTS GROUP, INC.
Address of Supplier	Post Office Box 27777 Raleigh, NC 27611 USA
Telephone	+1 919-365-3800
Fax	+1 919-365-3945
E-Mail (competent person)	mm.us@vishaypg.com
Emergency telephone number	1-800-424-9300 CHEMTREC (24 hours)

SECTION 2: HAZARD(S) IDENTIFICATION

Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200	
Physical hazards	Flammable Liquid, Category 2
Health hazards	Aspiration hazard, Category 1 Skin corrosion/irritation, Category 2 Eye Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 Reproductive toxicity, Category 2 Specific target organ toxicity — repeated exposure, Category 2
Environmental hazards	Not classified
Hazard Symbol	  
Signal Word(s)	DANGER
Hazard Statement(s)	Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May cause damage to organs (Central Nervous System) through prolonged or repeated exposure.

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Precautionary Statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Do not breathe vapour.
Wash hands and exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs, get medical advice/attention.
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.
Store locked up.
Dispose of contents in accordance with local, state or national legislation.

Other hazards

None known.

Percent of the mixture consists of ingredient(s) of unknown acute toxicity:

0%

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances Not applicable

Mixtures Substances in preparations / mixtures

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
Acetone	< 100	67-64-1	200-662-2	Flammable Liquid, Category 2 Eye Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Narcotic Effects)
Toluene	10 - 30	108-88-3	203-625-9	Flammable Liquid, Category 2 Aspiration hazard, Category 1 Skin corrosion/irritation, Category 2 Specific target organ toxicity — repeated exposure, Category 2 (Affected Organs: Central Nervous System) Specific target organ toxicity — single exposure, Category 3 (Narcotic Effects) Reproductive toxicity, Category 2
Tetraethylorthosilicate	1-5	78-10-4	201-083-8	Flammable Liquid, Category 3 Eye Irritation, Category 2 Acute toxicity, Category 4 (Inhalation) Specific target organ toxicity — single exposure, Category 3 (Respiratory tract irritation)
Methyltrichlorosilane	0.1 – 1	75-79-6	200-902-6	Flammable Liquid, Category 2 Skin corrosion/irritation, Category 2 Eye Irritation, Category 2 Specific target organ toxicity — single exposure, Category 3 (Respiratory tract irritation) Acute toxicity, Category 4 (Oral) Acute toxicity, Category 4 (Dermal) Acute toxicity, Category 3 (Inhalation)

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SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Do not breathe vapour. Avoid all contact. Contaminated clothing should be laundered before reuse.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Apply artificial respiration if necessary. Call a POISON CENTER or doctor/physician if you feel unwell. IF exposed or concerned: Get medical advice/attention.

Skin Contact

IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Contaminated clothing should be thoroughly cleaned. If skin irritation occurs: Get medical advice/attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.

Ingestion

IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. Drink two glasses of water. Do not give milk or alcoholic beverages. Do not give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

Most important symptoms and effects, both acute and delayed

May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. - Inhalation. May cause damage to organs through prolonged or repeated exposure: Central nervous system - Inhalation.

Indication of any immediate medical attention and special treatment needed

Do NOT induce vomiting, if vomiting does occur, have victim lean forward to reduce risk of aspiration. Initiate inhalative cortisone therapy (e.g. Auxilison, Thomae). Check the acid/alkali balance. Latency of several hours is possible. After swallowing do not give any milk or digestible oils. Activated charcoal (20-60 g) and sodium sulfate (1 tablespoon/250 ml) should reduce absorption.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.

Unsuitable extinguishing Media

Do not use water jet. Direct water jet may spread the fire.

Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. May decompose in a fire giving off toxic fumes. Silicon Dioxide, Chlorine compounds, Hydrogen chloride, Formaldehyde, Carbon oxides and traces of incompletely burned carbon compounds. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. May form explosive mixture with air particularly in empty uncleaned receptacles.

Special protective equipment and precautions for fire fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. Avoid

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Methods and material for containment and cleaning up

breathing vapours.
 Use non-sparking equipment when picking up flammable spill. Do not use any plastic equipment. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharge. Do not use sparking tools. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin, eyes or clothing. Do not breathe vapour. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Do not use any plastic equipment. Protect from moisture.

Conditions for safe storage, including any incompatibilities

Ground/bond container and receiving equipment. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Protect from moisture.

Storage temperature
 Incompatible materials

Ambient. Keep at temperature not exceeding (°C): 32
 Keep away from: Oxidizing agents, Alkalis, Bases, Acids, Amines and Copper
 Can react with Rubber. Do not use any plastic equipment. Protect from moisture.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Acetone	67-64-1	250	590	-	-	NIOSH
		1000	2400	-	-	OSHA
		250	-	500	-	ACGIH, A4
Toluene	108-88-3	100	375	150*	560*	NIOSH
		200	-	300	-	OSHA
		20	-	-	-	ACGIH, A4
Tetraethylorthosilicate	78-10-4	10	85	-	-	NIOSH
		100	850	-	-	OSHA
		10	-	-	-	ACGIH

Note: OSHA PELs 1910.1000 TABLE Z-1 / NIOSH RELs / ACGIH TLVs

*NIOSH 15 minutes average value

A4: Not Classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of the lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.

The other components listed in Section 3 do not have occupational exposure limits.

Biological Exposure Indices

SUBSTANCE	CAS No.	Determinant	Biological Exposure Indices	Sampling Time	Note
Acetone	67-64-1	Acetone in urine	25 mg/l	End of shift	Ns
Toluene	108-88-3	Toluene in blood	0.02 mg/l	Prior to last shift of workweek	-
		Toluene in urine	0.03 mg/l	End of shift	-
		o-Cresol in urine with	0.3 mg/g creatinine	End of shift	B

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		hydrolysis			
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Source: 2015 ACGIH Biological Exposure Indices (BEIs)

Ns – Nonspecific

B - Background

The other components listed in Section 3 do not have biological exposure indices.

Appropriate engineering controls

Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Avoid contact with skin, eyes or clothing. Do not breathe vapour. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection.

Skin protection



Hand protection: Wear impervious gloves. Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Body protection: Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment. A suitable mask with filter type A may be appropriate (Filter type AX (Brown)).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear White - Yellow Coloured liquid.
Odor	Solvent Odour
Odor Threshold	Not available.
pH	Not established.
Melting Point/Freezing Point	Not established.
Initial boiling point and boiling range	-94.8°C (Acetone)
Flash Point	>35°C (Mixture)
Evaporation rate (Butyl acetate = 1)	-19.8 °C (Mixture) [Closed cup]
Flammability (solid, gas)	Not applicable - Liquid
Upper/lower flammability or explosive limits	Not established.
Vapour pressure	Not established.
Vapour density	>1 (Air = 1)
Relative density	0.87 (H ₂ O = 1) (Mixture)
Solubility(ies)	Not established.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.

Other information

Max VOC = 138 g/L inclusive of water and exempt compounds.

Max VOC = 467 g/L exclusive of water and exempt compounds.

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SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Highly flammable liquid and vapour. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. May form explosive mixture with air particularly in empty uncleaned receptacles.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Do not use sparking tools. Do not use any plastic equipment. Protect from moisture.
Incompatible materials	Keep away from: Oxidizing agents, Alkalis, Bases, Acids, Amines and Copper Can react with Rubber. Do not use any plastic equipment.
Hazardous decomposition product(s)	May decompose in a fire giving off toxic fumes. Silicon Dioxide, Chlorine compounds, Hydrogen chloride, Formaldehyde, Carbon oxides and traces of incompletely burned carbon compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects (Substances in preparations / mixtures)

Acute toxicity - Ingestion	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Acute toxicity - Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l.
Acute toxicity - Skin Contact	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Skin corrosion/irritation	Skin corrosion/irritation, Category 2: Causes skin irritation.
Serious eye damage/irritation	Eye Irritation, Category 2: Causes serious eye irritation.
Respiratory or skin sensitization	Based upon the available data, the classification criteria are not met.
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Reproductive toxicity, Category 2: Suspected of damaging the unborn child - Inhalation.
STOT - single exposure	Specific target organ toxicity — single exposure, Category 3: May cause respiratory irritation. Specific target organ toxicity — single exposure, Category 3: May cause drowsiness or dizziness.
STOT - repeated exposure	Specific target organ toxicity — repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure: Central nervous system - Inhalation.
Aspiration hazard	Aspiration hazard, Category 1: May be fatal if swallowed and enters airways.
Information on likely routes of exposure	
Inhalation	Possible – accidental exposure
Ingestion	Unlikely – accidental exposure
Skin Contact	Possible – accidental exposure
Eye Contact	Unlikely – accidental exposure
Early onset symptoms related to exposure	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.
Delayed health effects from exposure	Suspected of damaging the unborn child. May cause damage to organs (Central Nervous System) through prolonged or repeated exposure.
Other information	
NTP Report on Carcinogens	Not listed

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IARC Monographs
OSHA Designated Carcinogen

Toluene – Group 3
Not listed

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
Persistence and degradability	Part of the components are poorly biodegradable.
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	The product is predicted to have high mobility in soil. May evaporate quickly.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.
Additional Information	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA
UN number	UN1993	UN1993	UN1993
UN proper shipping name	FLAMMABLE LIQUID N.O.S (CONTAINS ACETONE AND TOLUENE)	FLAMMABLE LIQUID N.O.S (CONTAINS ACETONE AND TOLUENE)	FLAMMABLE LIQUID N.O.S (CONTAINS ACETONE AND TOLUENE)
Transport hazard class(es)	3	3	3
Packing group	II	II	II
Environmental hazards	Not classified as a Marine Pollutant. / Environmentally hazardous substance	Not classified as a Marine Pollutant. / Environmentally hazardous substance	Not classified as a Marine Pollutant. / Environmentally hazardous substance
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.		
Special precautions for user	See Section: 2		

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

US Federal Regulations

TSCA (Toxic Substance Control Act)

Acetone: Subject to 25,000 lb reporting threshold
Toluene: Subject to 25,000 lb reporting threshold
Tetraethylorthosilicate: Subject to 25,000 lb reporting threshold
Methyltrichlorosilane: Subject to 25,000 lb reporting threshold
Not listed

EPCRA/SARA Section 302 Extremely Hazardous Substances

EPCRA Section 313 Toxics Release Inventory (TRI) Program

Toluene: De Minimis limit: 1%

NIOSH Occupational Carcinogen List

Not listed

OSHA List of highly hazardous chemicals, toxics and reactives

Methyltrichlorosilane: Threshold Quantity = 500 lbs

NTP Report on Carcinogens (RoC) List

Not listed

Poison Prevention Packaging Act

Toluene: Substance requiring special packaging - Solvents for paint or other similar surface-coating material

US State Regulations

California State, Proposition 65 List

Toluene: Safe harbor level - MADL: 7000 ug/day

California State, Safer Consumer Products Regulations

Acetone: Candidate Chemicals List

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Maine State, Toxic Chemicals in Children's Products Act	Toluene: Initial Candidate Chemicals List
New Jersey State Worker and Community RTK Act	Toluene: COC list. CHC list
	Acetone: RTKHSL. SHHSL
	Toluene: RTKHSL. SHHSL
	Tetraethylorthosilicate: RTKHSL. SHHSL
	Methyltrichlorosilane: RTKHSL. SHHSL
Pennsylvania State, Worker and Community RTK Act	Acetone: Hazardous Substance List. Environmental Hazard List
	Toluene: Hazardous Substance List. Environmental Hazard List
	Tetraethylorthosilicate: Hazardous Substance List
	Methyltrichlorosilane: Hazardous Substance List. Environmental Hazard List
Rhode Island State, Hazardous Substances RTK Act	Acetone: Hazardous Substance List
	Toluene: Hazardous Substance List
	Tetraethylorthosilicate: Hazardous Substance List
	Methyltrichlorosilane: Hazardous Substance List
Non-Regional	
IARC Monographs, List of Classifications	Toluene: Group 3

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation compliant with HazCom 2012 format, all sections have been updated to include new information. Please review SDS with care.

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References:

Existing Safety Data Sheet (SDS). EU Data: Existing ECHA registration(s) for and Harmonised Classification(s) for Acetone (CAS# 67-64-1), Toluene (CAS# 108-88-3), Tetraethylorthosilicate (CAS# 78-10-4) and Methyltrichlorosilane (CAS# 75-79-6).

GHS Classification of the substance or mixture	Classification Procedure
Flammable Liquid, Category 2	Flash Point [Closed cup] Test Result/ Boiling Point (°C)
Aspiration hazard, Category 1	Estimated Viscosity
Skin corrosion/irritation, Category 2	Threshold Calculation
Eye Irritation, Category 2	Threshold Calculation
Specific target organ toxicity — single exposure, Category 3	Threshold Calculation
Specific target organ toxicity — single exposure, Category 3	Threshold Calculation
Reproductive toxicity, Category 2	Threshold Calculation
Specific target organ toxicity — repeated exposure, Category 2	Threshold Calculation

LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists
BEI: Biological Exposure Indices (ACGIH)
IARC: International Agency for Research on Cancer
Irr: Irritation
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: The Occupational Safety & Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PEL: Permissible exposure limit

REL: Recommended exposure limit
SCL: Specific Concentration Limit
Skin^o: Risk of overexposure via dermal contact
STEL: Short Term Exposure Limit
TLV: Threshold Limit value
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
URT: Upper respiratory tract
vPvB: very Persistent and very Bioaccumulative

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Disclaimers

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