



MATERIAL SAFETY DATA SHEET

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Effective Date: 1/1/08 Supercedes: 6/29/05

Emergency #: 405-745-2070

SECTION I. PRODUCT IDENTIFICATION

PRODUCT NAME: **SW 244-20C Water Repellent**

CHEMICAL NAME & SYNONYMS: Water Repellent - Isopropyl / Methanol Based Mixture of Silane

PROCESSORS NAME: Chemical Products Industries, Inc.
7649 S.W. 34th Street
Oklahoma City, OK 73179
Tel: (405) 745-2070

CHEMICAL FAMILY: Mixed Isopropyl / Methanol Solution of Silane

CHEMICAL FORMULA: Isopropanol/Methanol solution of silicon, oxygen, carbon and hydrogen containing chemical compounds with a basic structural unit of alkyl alkoxy silanes.

SECTION I A. HAZARDOUS COMPONENTS

<u>INGREDIENTS</u>	<u>CAS NUMBER</u>	<u>% BY WT*</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
- Alkylalkoxysilanes	confidential	20-40	n.e.	n.e.
- Isopropyl Alcohol	67-63-0	<20	400	400
- Methanol	67-56-1	<40	200 ppm (skin)	200 ppm (skin)

SECTION II. - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE:	Clear, colorless
ODOR:	Alcohol odor
BOILING POINT, 760 mm Hg:	> 148 °F
FLASH POINT, Closed Cup	> 54 °F (est)
VAPOR PRESSURE, at 100 F:	100 mm Hg @ 21.2 C
LIQUID DENSITY :	0.82 g/cc
PERCENT VOLATILE BY VOLUME:	>99 %
PERCENT VOLATILE BY WEIGHT:	>99 %
VISCOSITY	Similar to Water

SECTION III. HEALTH HAZARDS

NFPA 704 CODES: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious and 4=Severe

<u>HEALTH (BLUE)</u>	<u>FLAMMABILITY (RED)</u>	<u>REACTIVITY (YELLOW)</u>	<u>CLOTHING</u>
NFPA: 2	NFPA: 3	NFPA: 0	NFPA: G
HMIS: 2	HMIS: 3	HMIS: 0	HMIS: G

- EYE CONTACT:** Direct contact may irritate seriously with moderate to severe redness, swelling and some corneal injury lasting generally days up to a week. The primary toxic effect of methanol is exerted upon the nervous system, particularly the optic nerves. The condition can progress to permanent blindness.
- SKIN CONTACT:** A single short exposure causes moderate skin irritation, may cause defatting. Prolonged contact (24 to 48 hours) irritates seriously and may burn mildly.
- INHALATION:** Short term exposure to methanol may cause CNS depression. Causes moderate respiratory tract irritation; causes central nervous system damage. Vapor overexposure may cause drowsiness, headache, weakness, and blindness, loss of consciousness, vertigo, fatigue, and possibly death depending on exposure.
- INGESTION:** This material can enter the lungs during swallowing or vomiting and cause lung inflammation and / or damage (aspiration hazard). However, ingestion is not expected in industrial use. If swallowed, product meeting with body fluids can form methyl alcohol which may cause blindness and possibly death. Death from as little as one once has been reported.

ACUTE EFFECTS OF EXPOSURE: Refer to routes of exposure above.

CHRONIC EFFECTS OF EXPOSURE: None known.

There is no data available which address medical conditions that are generally recognized as being aggravated by exposure to this product.

This material does not contain any ingredients listed by IARC, NTP or OSHA as carcinogens, teratogens or mutagens in amounts exceeding 0.1%.

This material releases methyl alcohol upon hydrolysis. Methyl alcohol causes optic neuropathy, metabolic acidosis and respiratory depression. Signs and symptoms of overexposure include headache, blurred vision, constricted visual fields, shortness of breath, dizziness and vertigo. Ingestion of methylalcohol may lead to blindness or death.

SECTION IV. FIRST AID MEASURES

- EYE CONTACT:** In case of contact, flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing the entire surface of the eye and lids with water. Get medical attention.
- SKIN CONTACT:** Remove excess material from the skin with a waterless skin cleaner. Flush skin with plenty of water and wash well with water and soap. Remove contaminated clothing and shoes. Obtain medical attention. Wash clothing before reuse.
- INHALATION:** If inhaled, remove to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.
- INGESTION:** Never give an unconscious person anything to drink. If unconscious, treat for shock. Notify a physician or the nearest poison control center immediately. If conscious, have the person rinse his mouth with cold water. Induce vomiting (vomiting may occur naturally). If unconscious and vomiting, turn the person on his side to avoid choking. Note: Treat the same as methyl alcohol poisoning.

SECTION V. FIRE AND EXPLOSION HAZARD DATA

This product is considered a flammable liquid and is a fire hazard. It supports combustion and decomposes under fire conditions to give off toxic materials. Do not pour, spill or store near heat, spark sources, or open flames. Note: Substance is extremely volatile and can ignite by static electricity. It is highly recommended that all containers holding this liquid be grounded.

Flammable vapors may accumulate in the container headspace.

Vapors are heavier than air and may travel along the ground, be moved by ventilation systems, settle in pits or low areas, and be ignited by ignition sources distant from the handling point. To prevent fire or explosion from static accumulation and discharge, effectively ground the material transfer system.

As in any fire, prevent human exposure to fire, smoke, fumes, or products of combustion. Evacuate non-essential personnel from the fire area. Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Use carbon dioxide, dry chemical or foam type extinguishing media.

Use water spray to cool non-involved containers.

SECTION VI. SPILL, LEAK & DISPOSAL PROCEDURES

Eliminate all ignition sources. Control the source of the spill if it is safe to do so.

Dike area to contain spill and to prevent entry into sewers or waterways.

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices (refer to SECTION VIII: INDUSTRIAL HYGIENE).

Absorb spill with sand or Fuller's earth. Sweep up and place in an appropriate chemical waste container. Flush spill area with water. Observe all local, state, and federal laws and regulations regarding disposal, spill, cleanup, removal, or discharge.

SECTION VII. HANDLING AND STORAGE

Store in a cool, dry, well ventilated area. Keep away from heat, sparks and open flame. Never use welding or cutting torch on or near any container (even empty) as an explosion can occur. Care should be taken to prevent moisture condensation in the container. Keep container closed and store away from water or moisture.

Open container with care. Flammable vapors may be present in the container headspace.

SECTION VIII. PERSONAL PROTECTION

Appropriate personal protective equipment necessary to prevent contact should be worn. Ventilation that keeps the organic vapor concentration below 400 ppm is recommended. For concentrations up to 1,000 ppm, wear a NIOSH/MSHA approved respirator in accordance with OSHA standard 29 CFR 1910, 134 for organic vapors. Up to 5,000 ppm, wear a full-face organic vapor respirator or full face supplied air respirator. Greater than 5,000 ppm, fire fighting or unknown concentrations, wear self-contained breathing apparatus with positive pressure. Eye protection, resistant clothing and resistant boots should be worn where spills or splashing can occur. Chemical proof goggles are recommended. Gloves of impervious materials (Silver Shield (R), 4H (R), nitrile, neoprene or other material resistant to alcohol) are recommended. Wash contaminated clothing before reuse. An eye wash station should be available.

SECTION IX. STABILITY AND REACTIVITY

SW 244-20C may react with silica in concrete and masonry in the presence of ultraviolet light and moisture forming bonds with the substrate and produces methyl alcohol in normal use. The alcohol evaporates - avoid breathing the vapor. The silane content of the mixture will react with bases, acids and oxidizers producing heat, polymers and oxidation by-products. Vaporization of small quantities of solvent controls any heat released. Atomization, vaporization or combustion forms aerosols which can carry silane containing materials, carbon oxides and silicon dioxide into the atmosphere. Hazardous polymerization will not occur.

Non corrosive to materials commonly used in the construction of process equipment, storage and shipping containers.

Methanol has an explosive reaction with chloroform + sodium methoxide and diethyl zinc. Methanol has a violent reaction with alkyl aluminum salts, acetyl bromide, chloroform, sodium hydroxide, cyanuric chloride, nitric acid, etc.

Avoid contact with strong oxidizing agents.

Stable at ambient temperatures and atmospheric pressure.

HAZARDOUS/THERMAL DECOMPOSITION PRODUCTS: SiO₂, CO, CO₂, formaldehyde and various hydrocarbon fragments.

SECTION X. TOXICOLOGICAL INFORMATION

The alcohols are flammable, and have acute and chronic health hazards. The OSHA PEL and ACGIH TLV is 400 ppm for the isopropanol. The solvent vapors are harmful if inhaled and may cause delayed lung injury. In a confined area, the high vapor pressure of the solvent can generate harmful concentrations. Inhalation can cause nervous system depression. The solvent is an aspiration hazard if swallowed - it can enter the lungs and cause damage. The active ingredients, silanes, are known to be a mild eye and upper respiratory irritant. The OSHA PEL and ACGIH TLV has not been established for silanes; however, the low vapor pressure of silane containing materials in SW 244-20™ should produce air concentrations below expected exposure limits. The LD₅₀ for the silanes has not been determined, but should be relatively high based upon typical silicone toxicity. Do not take internally, avoid breathing mist and minimize eye and skin contact.

HEALTH HAZARD CATEGORIES: None of the product's ingredients are found on any lists of carcinogenic or banned chemical agents or materials generated by them.

INDUSTRIAL HYGIENE: The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them nonhazardous before maintenance and repair activities are performed.

ENGINEERING CONTROLS: When the need for engineering controls is indicated by the conditions under which the product is used, one or more of the following techniques may be selected to limit employee exposure: general ventilation, local exhaust ventilation, enclosure of confinement of the operation, and/or process isolation with remote control operation.

INGESTION: Open containers of food and beverages should be kept away from areas where the product is used or stored. Eating, drinking, smoking, and application of cosmetics should be prohibited in areas where the product is being used. Before eating, hands and face should be washed to remove residual contamination.

SKIN CONTACT: Skin contact should be minimized through the use of gloves and suitable long-sleeved clothing selected with regard for use condition exposure potential.

EYE CONTACT: Eye contact should be avoided through the use of chemical safety glasses, goggles, or a full face respiratory shield selected with regard for use condition exposure potential.

INHALATION: If the product is used under conditions which generate airborne contamination, these processing operations should be carried out in open, well-ventilated areas, or in enclosed areas equipped with local exhaust ventilation. If adequate ventilation is not available, employees should be provided with appropriate, approved, air-purifying or supplied-air respirators selected in accordance with NIOSH guidelines.

EXPOSURE LIMITS: Exposure limits for its hazardous components, if any, are listed in Section 1A on page one.

NOTE: Respiratory protection is recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels, or in the event of a spill or other emergency situation.

Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coating Association.

LDLo Human:.....143 mg/kg; Eye, Pul, GIT

LD50 Mouse:.....7300 mg/kg

LC50 Rat:.....64,000 ppm/4 hours
 LC50 Goldfish:.....250 ppm /11 hours

SECTION XI. ECOLOGICAL INFORMATION

Do not allow SW 244-20C to enter soil or drains. Methanol is harmful to aquatic life

SECTION XII. DISPOSAL CONSIDERATIONS

Small quantities may be handled by evaporating the solvent in a hood and then the remaining material disposed in appropriate land fills. Disposal of large quantities should be through a licensed disposal company. Utilize a permitted hazardous waste disposal site or industrial waste disposal site as appropriate. Consider recycling or incineration.

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act (RCRA).

NOTE: State and local regulations may be more stringent than those under RCRA.

If this product becomes a waste, it is considered a hazardous waste due to its ignitability.

Dispose of empty containers according to any applicable regulations under the Resource Conservation and Recovery Act (RCRA). NOTE: State and local regulations may be more stringent than those under RCRA.

Empty containers may contain residual material. Do not reuse containers unless properly reconditioned.

SECTION XIII. TRANSPORT INFORMATION

DOT:	PROPER SHIPPING NAME	FLAMMABLE LIQUIDS n.o.s. (ISOPROPANOL, METHANOL)
	UN#	1993
	CLASS	3
	PACKAGING GROUP	II
	PRIMARY LABEL	Flammable liquid
	PLACKARD	Yes
	HAZARD	Flammable

SECTION XIV. REGULATORY INFORMATION

STATUS ON SUBSTANCE LIST:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations.

Trade Secrets are indicated by "TS" OSHA: This product is considered hazardous under criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200

 FEDERAL EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substance equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

SW-244-20C WATER REPELLENT MSDS

requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submissions of annual report of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
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This product does not contain toxic chemicals at levels which require reporting under the statute.

Toxic Substances Control Act (TSCA) STATUS:

The ingredients of this product are on the TSCA inventory.

STATE RIGHT -TO-KNOW

CALIFORNIA Proposition 65

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

MASSACHUSETTS Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	HAZARDOUS SUBSTANCES (=> 1%) UPPER BOUND CONCENTRATION %
Isopropyl	67-63-0	100

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

Components present in the is product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	HAZARDOUS SUBSTANCES (=> 1%) UPPER BOUND CONCENTRATION %
Isopropanol/Methyl Alcohol	67-63-0	100

CALIFORNIA SCAQMD RULE 443.1 VOC'S:

VOC >600 g/l;

OTHER REGULATORY INFORMATION :

EPA Hazard Categories: Immediate Health, Delayed Health, and Fire.

NOTE ----

The opinions expressed herein are those of qualified experts within Union Carbide. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of the use of the product are not under the control of Union Carbide, it is the user's obligation to determine conditions of safe use of the product.

REVISED SECTION:

Section IV: FIRE AND EXPLOSION HAZARD DATA

Section V: HEALTH HAZARD DATA

Section IX: PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

PRODUCT: 43062

F NUMBER: C01101

SECTION XV. OTHER INFORMATION

n.e. = Not established; n.a. = Not applicable/ not available; n.d. = Not determined; TLV = Threshold Limit Value; PEL = Permissible Exposure Limit; OSHA = Occupational Safety and Health Administration; ACGIH = American Conference of Governmental Industrial Hygienists; LEL = Lower Explosive Limit; UEL = Upper Explosive Limit; ppm = parts per million; TSCA = Toxic Substances Control Act; SARA = Superfund Amendments and Reauthorization Act; Dot = Department of Transportation.

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APPROVED BY: _____

DATE: 1/1/08

SUPERCEDES: 6/29/05

All terms and abbreviations have been defined in various government publications, or are standard chemical terms used by IUPAC.

The data and recommendations herein are based upon our research and the research of others, and are believed to be accurate. However, no warranty or guarantee of their accuracy is made; and the products are distributed without warranty, expressed or implied, including the limited warranties of merchantability of fitness for particular purpose.

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