MATERIAL SAFETY DATA SHEET

Section 1: Identity and Manufacturer's Information			
Manufacturer's Name	Miyaki Co.,Ltd.		
Head Office	1-2-23-1105 Otemono Chuoku Fukuoka 810-0074 Japan		
Phone	81-92-713-0001	Phone	81-92-713-0001
Laboratory	1341 Ueki Suemachi Kasuyagun Fukuoka 811-2112 Japan		
Phone	81-92-937-3008	Phone	81-92-937-3008
URL	www.miyaki.com	URL	www.miyaki.com

Section 2: Product Identification

Product Name : *DA VINCI*MSDS Number : MS3014
Date of Prepared : 03/21/2007

Classification of a single product and a mixture : Mixture

General Name: Silicone Coating Remover

An ingredient & a content: Sodium Hydroxide(less than 5%), Potassium Hydroxide(less than 5%), ISOPROPANOL,

Surface-active agent, Additive, Thickener, Water

The U.N. classification and the U.N. number: Sodium Hydroxide Class: 8(9.2) UN: 1824

Potassium Hydroxide Class: 8 UN: 1813

ISOPROPANOL Class-3: UN: 1993

Section 3: Hazards Identification (As Sodium Hydroxide concentrated)

Emergency Overview: POISON! DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

《Potential Health Effects》

Inhalation: Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appears days after exposure.

Skin Contact: Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Eye Contact: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

Section 4: First-Aid Measure (As Sodium Hydroxide concentrated)

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Section 5: Fire-Fighting Measure

Fire: Not considered to be a fire hazard. Hot or molten material can react violently with water.

Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Fire-extinguishing agent: Powder, carbon dioxide, an alcoholic [-proof] bubble

Section 6: Accidental Release Measure

- •The circumference is surrounded with a rope etc. and entry of people is forbidden.
- •In an indoor case, it ventilates enough.
- •The thing used as the neighboring source of ignition is removed promptly.
- In the case of work, a suitable protection implement (rubber or a vinyl glove, a protection mask, an apron, goggles) is worn.
- •When influence may be done to a citizen, a related government office and a supplier are contacted.
- •When the leakage is little, after making a towel etc. absorb, in being abundant in a container, in it, the surroundings are enclosed with sand, the ground, etc., and it prevents an outflow in it, and collects as much as possible in it.
- •It flows into a sewer, river ocean space, etc. and bends and needs it is careful
- •The rule of an area is followed when it reveals underwater.

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Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage: Store in a cool, dry area. Store in a tightly closed container. Keep away from strong acids. Keep away from water. Keep away from metals.

Keep out of reach of children.

Section 8: Exposure Prevention Equipment

Airborne Exposure Limits: Sodium Hydroxide concentrated

- OSHA Permissible Exposure Limit (PEL): 2mg/m² (Ceiling)
- ACGIH Threshold Limit Value (TLV): $2mg/m^2$ (Ceiling)

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area. The partial exhaust is prepared.

Section 9: Physical / Chemical Characteristics

Appearance: Colorless, fuming liquid.

Odor: ISOPROPANOL Odor

 $\begin{array}{l} \textbf{Specific gravity (density)}: 1.05 \ (30^\circ\!\!\!C) \\ \textbf{Solubility}: It mixes with water completely. \end{array}$

Hydrogen-ion density: 13-14 (25°C)

Section 10: Stability and Reactivity (As Sodium Hydroxide concentrated)

Stability: Stable under ordinary conditions of use and storage. Very hygroscopic. Can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

Hazardous Polymerization: Will not occur.

Incompatibilities: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may causes violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.

Conditions to Avoid Moisture, dusting and incompatibles.

Section 11: Toxicological Information

Irritation data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe; investigated as a mutagen.

Ingredient CAS No
Sodium Hydroxide (1310-73-2)
Potassium Hydroxide (1310-58-3)
Water (7732-18-5)

Section 12: Ecological Information (As Sodium Hydroxide concentrated)

Environmental Fate: No information found. **Environmental Toxicity:** No information found.

Section 13: Disposal Consideration

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options.
 State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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Section 14: Transport Information

Common matter: On the occasion of conveyance, it confirms that there is no leak in a container, it loads so that there may not be a fall and fall damage, and prevention of collapse of cargo piles is ensured.

The publication of notes on handling and storage is followed.

When it corresponds to Fire Service Law, labor security and hygiene law, and a poison highly poisonous substance method, the transportation method set to each applicable law is followed.

Fire and direct rays are avoided.

Marine transportation: The place set to Law for Safety of Vessels is followed.

Air transportation: The place set to the Aviation Act is followed.

The U.N. classification and the U.N. number : Sodium Hydroxide Class : 8 UN : 1824

Potassium Hydroxide Class: 8 UN: 1813

ISOPROPANOL Class-3: UN: 1993

Packing Group: III

Section 15: Regulatory Information (In Japan)

Safety hygiene method : Existing chemical Law for Safety of Vessels : Corrosive substance

Aviation law: Corrosive substance

Section 16: Other Information

The reference of written contents: Up to a guarantee-of-quality room

Based on the information acquired at present, about the danger detrimental nature of a product, since the above information is not enough, mind.

Especially in special handling, notes need consideration for the usual handling.

Values, such as a content and physical character, should be reference values among written contents, and since it is not a guarantee value, mind.

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