



# MURAKAMI CO., LTD.

## Safety Data Sheet

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Trade Name: Murakami T9

SDS Number: S-051J-E1

Edited : 22/July/2015

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### 1. Product Identification

Trade Name:

Murakami T9

SDS Number:

S-051J-E1

Manufacturer's Name:

Murakami Screen U.S.A., Inc.

Address:

745 Monterey Pass Road,  
Monterey Park, California, 91745 U.S.A.

Phone Number:

(323) 980-0662

FAX Number:

(323) 980-0659

Recommended use of chemicals and  
restrictions on use:

Material for screen printing.

### 2. Hazard Identification

GHS Classification:

Physical Hazards:

Explosives

Not classified

Flammable Gases

Not applicable

Flammable Aerosols

Not applicable

Oxidizing Gases

Not applicable

Gases Under Pressure

Not applicable

Flammable Liquids

Not classified

Flammable Solids

Not applicable

Self-Reactive Substances and Mixtures

Not classified

Pyrophoric Liquids

Not classified

Pyrophoric Solids

Not applicable

Self-Heating Substances and Mixtures

Not classified

Substances and mixtures, which in contact  
with water, emit flammable gases

Not classified

Oxidizing Liquids

Not classified

Oxidizing Solids

Not applicable

Organic Peroxides

Not applicable

Corrosive Metals

Classification not possible

Health Hazards:

Acute Toxicity (Oral)

Not classified

Acute Toxicity (Dermal)

Not classified

Acute Toxicity (Inhalation: Gases)

Not classified

Acute Toxicity (Inhalation: Vapours)

Not classified

Acute Toxicity (Inhalation: Dusts and Mists)

Not classified

Skin Corrosion/ Irritation

Classification not possible

Eye Damage/ Eye Irritation

Classification not possible

Respiratory Sensitization

Classification not possible

Skin Sensitization

Category 1

Germ Cell Mutagenicity

Classification not possible

Carcinogenicity

Not classified

Reproductive Toxicity

Classification not possible

Specific Organ Toxicity (Single Exposure)

Not classified

Specific Organ Toxicity (Repeated Exposure)

Not classified

Aspiration Hazard

Classification not possible

&lt;Continued&gt;



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### Environmental Hazards:

**Hazardous to the aquatic environment (Acute Toxicity)**

Classification not possible

**Hazardous to the aquatic environment (Chronic Toxicity)**

Classification not possible

**Hazardous to the ozone layer**

Classification not possible

**Pictogram and Symbol:**



**Exclamation Mark**

**Signal Word:**

Warning

**Hazard Statements:**

H317 May cause an allergic skin reaction.

H373 May cause damage to organs (respiratory organs) through prolonged or repeated exposure.

**Precautionary Statements:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling

P272 Contaminated work clothing should not be allowed out of the workplace.

P302+P352 IF ON SKIN: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

**Disposal:**

P501 Dispose of contents/container in accordance to your local/ regional/ national/ international regulations.

### 3. Composition/ Information On Ingredients

**Substances or Mixture:** Mixture

**Ingredients and Concentration Ranges:**

Chemical Name		Water	Water Based Emulsion	Acrylate Monomer	Poly Vinyl Alcohol
wt %		45 ≤ <55wt%	25 ≤ <35wt%	1 ≤ <10wt%	1 ≤ <10wt%
CAS No.		7732-18-5	Listed	Listed	9002-89-5
Global Inventories	TSCA (USA)	Listed	Listed	Listed	Listed
	ENCS (Japan)	-	Listed	Listed	Listed
	EC No. (EU)	Listed	Listed	Listed	Listed
	IECSC (China)	Listed	Listed	Listed	Listed



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**4. First Aid Measures**

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Get medical advice/ attention if you feel unwell.  
Get medical advice/ attention if experiencing respiratory symptoms.  
Cover body with blanket to warm and keep at rest.  
Perform CPR is not breathing.

**Skin Contact:** Remove/Take off all contaminated clothing immediately.  
Wash with plenty of soap and water.  
Get immediate medical advice/attention if skin irritation or rash occurs.

**Eye Contact:** Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Rinse with clean water for at least 15 minutes and then seek medical attention if necessary.  
When rinsing, open your eyelids with fingers to insure saturation of water.  
Seek medical attention if the problem persists.

**Ingestion:** Rinse mouth. Do not induce vomiting.  
Get immediate medical advice/attention.  
Do not give unconscious person anything to drink.  
If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.  
Do not induce vomiting.

**Protection for personnel administering first aid:**

Wear protective equipment if necessary.

**5. Firefighting Measures**

**Extinguishing Media:**

**Suitable Extinguishing Media:**

Fire-extinguishing powder, fire-lighting foam, carbon dioxide, sand water spray.

**Unsuitable Extinguishing Media:**

Straight stream water.

**Specific hazards arising from the product:**

When exposed to high temperatures, this product may generate dangerous decompositions such as nitrogen oxides, carbon monoxide, carbon dioxide, and sulfur dioxide.

**Specific Extinguishing Measures:**

Cut off the combustion source to the origin of fire and extinguish by using the appropriate fire extinguishing media. Fire fighting measures should be done from windward as much as possible. Take appropriate measures to disallow substances that may affect the environment from being dispersed by the drainage. Remove all containers as possible to a safe place promptly. If not possible to remove, cool down the area. Work from windward and use respiratory equipment if necessary.

**Special Protective Equipment and Precautions:**

Cut off the combustion source to the origin of fire and extinguish by using extinguishing media. Combustion/Flue gases generate carbon monoxide and etc. To avoid the fire from spreading, cool surrounding area with water spray. Extinguish from windward and avoid inhaling any harmful gases. Use respiratory equipment if necessary. Extinguish from the windward where the gases do not accumulate and prevent the leakage from spreading. Wear appropriate protective wear (heat-proof) including air respirators.

**6. Accidental Release Measures****Personal Precautions, Protective Equipment and Emergency Procedures:**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective equipment (boots, gloves, and glasses) to prevent contact with skin. Remove ignition sources in the area and work from windward. Clean up immediately when it spills on the floor or any surface. (the floor surface becomes slippery). Prohibit entry other than related personnel. Ventilate released area. Do not touch and/or walk in the spills. The worker wears an appropriate protective equipment, and avoids eyes, the skin contacts, and inhalation. (refer to item 8) Provide adequate ventilation if indoors. Cordon off the area and prevent entry of non-related personnel. Work from windward and remove personnel downwind of the area. Wear appropriate protective equipment to prevent contact with skin and inhaling fumes. Remove ignition sources in the area promptly. Prepare fire extinguishing equipment in case of ignition.

**Environmental Precautions:**

Avoid releasing to the environment. Collect spillage. Do not empty into drain. If it is mixed with wastewater, drain it after the activated sludge process. Be careful not to influence living organisms and water quality in the environment by products released into rivers and any type of body of water. Contact local authorities if it is flowing into rivers or any type of body of water as necessary. Be careful not to influence the environment by products released into rivers or any type of body of water. If the pollution of water pipes or waterways occur, contact relevant organizations. Clean the area and avoid entry into plumbing system. Be careful not to drain or release untreated waste water into the environment.

**Methods and Materials For Recovery and Neutralization:**

Contain the flow path with blankets or sand bags and collect into an appropriate container for large spills. Gather and collect into a container for small spills. Prevent the inflow into drains, sewer, basement, or enclosed areas. Clean spills frequently as there is danger of slipping on remnants. Remove all ignition sources. Smoking, open flame or ignition sources are not allowed in the area. Contain with consideration to safety. Collect into open container by absorbing with cloths, rags, sand or etc. and then rinse with plenty of water. Clean the spilled area with a cloth or a rag. Wear appropriate protective equipment throughout the process.



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**7. Handling and Storage:**

Relevant regulations shall be subject to where this product will be handled and stored.

**Handling:**

Work in accordance with the Occupational Safety and Health Act and related laws and regulations.

Keep the concentration below the allowed limit.

Avoid inhalation and contact.

Wear protection if risk of exposure occurs.

Use only in well-ventilated area.

Avoid smoking, open flames, heat and sources of ignition.

Always cleanse with soap and water after handling.

Determine proper procedures for compliance.

Seal container after use.

Avoid leakage, overflow, dispersal and generating steam without any good reason.

Avoid improper handling like tipping over, dropping, strong impact to or dragging the container.

Wash hands thoroughly and rinse mouth after handling.

Do not eat, drink or smoke when using this product.

Do not carry contaminated gloves and protective equipment into rest/ break areas.

Prohibit entry to work areas other than related personnel.

Collect used containers in a defined/ fixed area.

Use containers that are not damaged, corroded or cracked.

Use local exhaust ventilation systems indoors work areas.

Wear proper protective equipment to avoid inhalation and contact with eyes and skin.

**Storage:**

Store in a well-ventilated area.

Protect from sunlight (Ultra Violet-light).

Keep container tightly closed.

Keep cool.

Store in a dark light-safe area.

Do not freeze.



**8. Exposure Controls/ Personal Protection**

**Management Density:** Not specified

**Exposure Limit Values:**

**Engineering Measures:** In the case of indoor use, contain at the source or install a local exhaust system. Provide safety shower and eye/ hand wash stations and identify the area clearly. Contain at the source and install a local exhaust system if dust is generated.

**Personal Protective Equipment:** Wear following protective equipment as necessary and accordingly. Inspect equipment on a regular basis by using a protective equipment maintenance chart.

**Respiratory Protection:** Supplied air respirator, air/ oxygen breathing apparatus, organic vapor gas mask.

**Eye Protection:** Wearing protective glasses is preferred.

**Hand Protection:** Wearing gloves that organic solvents or chemicals do not penetrate is preferred.

**Skin Protection:** Wearing protective clothing (long sleeve uniform) that organic solvent or the chemical do not infiltrate easily is preferred.

**9. Physical and Chemical Properties**

**Appearance (Physical State, Color, Etc):**

<b>Physical State:</b>	Aqueous Solution
<b>Color:</b>	Red
<b>Odor:</b>	Mild
<b>pH:</b>	4.0 - 6.0
<b>Melting Point/ Freezing Point:</b>	Aprox. 0°C
<b>Initial Boiling Point and Boiling Range:</b>	Aprox. 100°C
<b>Relative Density:</b>	Aprox. 1 mg/cm <sup>3</sup>
<b>Solubility:</b>	dispersable, soluble

**10. Stability and Reactivity**

**Reactivity:** Decomposes upon heating and produces carbon dioxide and carbon monoxide.

**Chemical Stability:** Stable under normal conditions.

**Conditions to avoid:** Sunlight, heat, open flame, high temperatures, sparks, static electricity other sources of ignition.

**Incompatible Materials:** Incompatible with acid, alkali, amines and is prohibited to mix with.



**Hazardous Decomposition Products:**

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) gas might be generated by combustion. Vapor from organic solvents.

**11. Toxicological Information**

**Acute Toxicity (Oral):**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 5. Oral, rat LD<sub>50</sub>=2,900 mg/kg

**Poly Vinyl Alcohol**

Not classified. Oral, rat LD<sub>50</sub>>2,000 mg/kg

**Acrylate Monomer**

Category 4. Oral, rat LD<sub>50</sub>=686 mg/kg

**Acute Toxicity (Transdermal):**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 5. Dermal, rbt LD<sub>50</sub>=2,335 mg/kg

**Poly Vinyl Alcohol**

Not classified. Dermal, rat LD<sub>50</sub>>2,000 mg/kg

**Acrylate Monomer**

Category 5. Dermal, rat LD<sub>50</sub>=2,000 mg/kg

**Acute Toxicity (Inhalation):**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 4. Inhalation, rat LD<sub>50</sub>=11.4 mg/L/4hr

**Skin Corrosion/ Irritation:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 3. May cause irritation if left on skin.

**Poly Vinyl Alcohol**

Corrosivity/ stimulation to the skin is hardly recognized.

**Serious Eye Damage/ Irritation:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 2 A. Causes serious eye damage.

**Poly Vinyl Alcohol**

Irritation to the skin is hardly recognized.

**Acrylate Monomer**

No eye irritation. OECD Test Guideline 405, rabbit: By analogy with a comparable substance.

**Respiratory Sensitization:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

No information available.

**Skin Sensitization:**

**Information on product:**

No information available, Category 1 based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 1

**Acrylate Monomer**

No information available.



**Germ Cell Mutagenicity:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

No information available.

**Poly Vinyl Alcohol**

Negative mutagenicity test using bacteria.

**Carcinogenicity:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Categoría 2. A3/ACGIH (2001), Group 2B/IARC (1995).

**Poly Vinyl Alcohol**

Rat tests in the past show no carcinogenicity.

**Reproductive Toxicity:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Acrylate Monomer**

No information available.

**STOT - Single Exposure:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

**Water Based Emulsion**

Category 3 (respiratory tract irritation).

**STOT - Repeated Exposure:**

**Information on product:**

No information available. Not classified based on the calculation.

**Aspiration Hazard:**

**Information on product:**

No information available. Not classified based on the calculation.

**Information on ingredients:**

No information available.

**12. Ecological Information**

**Ecotoxicity:**

**Information on product:**

No information available.

**Information on ingredients:**

**Water Based Emulsion**

Category 2. Fish (*Oryzias latipes* var) LC50=2.39mg/L/96h  
River contamination may cause fishes to die of breathing difficulties by the adhesion of resin in the emulsion.

**Acrylate Monomer**

No information available.

**Persistence and degradability:**

**Information on product:**

No information available.

**Information on ingredients:**

**Poly Vinyl Alcohol**

Biodegradation is carried out by sludge containing pseudomonas.  
Classified as a "Substance determined to have very little or no bioaccumulation."

**Bioaccumulative Potential:**

**Information on product:**

No information available.

**Information on ingredients:**

**Water Based Emulsion**

The existing chemical substance safety check result classifies as a substance determined to have very little or no bioaccumulation.



**Mobility in soil:**

**Information on product:** No information available.

**Information on ingredients:** No information available.

**Other Adverse Effects:**

**Information on product:** The product is not allowed to run into the drain or waterways.

**Information on ingredients:** No information available.

**13. Disposal Considerations**

Dispose of contents/ container in accordance with local /regional /national /international regulations.

**14. Transport Information**

Avoid direct sunlight during transportation. Confirm the container has no damage, corrosion, leakage before transportation. Take measures to prevent the load from tipping, falling and damages.

Verify the container has no leaks when transporting and take preventative measure when loading so that the cargo does not tip, fall or get damaged during transit.

**UN Classification:**

Not applicable

**UN Number:**

Not applicable

**UN Proper Shipping Name:**

Not applicable

**Transport Hazard Class(es):**

Not applicable

**Packaging Group:**

Not applicable

**Environmental Hazards (Marine Pollutant):**

Not applicable

**Land Transport ADR / RID:**

Not applicable

**Maritime Transport IMDG:**

Not applicable

**Air Transport ICAO and IATA:**

Not applicable

**15. Regulatory Information**

The product must be used, stored and transported in accordance with local/ regional/ national/ international regulations.

**Japanese laws and regulations that apply:**

**Waste Pollution Control Law**

**Waste Disposal and Public Cleaning Law:**

Industrial Waste

**Japanese laws and regulations that do not apply:**

Pollutant Release and Transfer Register Law (PRTR Law)

Industrial Safety and Health Law

Poisonous and Deleterious Substances Control Law

Air Pollution Control Law

Fire Service Law

Chemical Substances Control Law

Ship Safety Law

Civil Aeronautics Act

Marine Pollution Prevention Law (Sea Water Protection Law)

**Law of U.S.A.:**

**California Proposition 65 List (February 8, 2013):**

Not listed

**State of Pennsylvania Right-to-Know (December 8, 2012):**

Not listed

**Massachusetts Toxic and Hazardous Substance List (2011):**

Not listed

**State of New Jersey Right-to-Know (August 2, 2010):**

Not listed



**MURAKAMI CO.,LTD.**

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### 16. Other Information

#### Handling of described contents:

The information contained herein is given in good faith and accurate to the best of our knowledge. No warranty is given, expressed, or implied.

The product must not be used for any purposes other than those specified under heading 1 without first obtaining written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a gurantee of its properties.

Moreover, it is likely to be revised based on a revision of the law and a new finding.

This product is developed for geenral industry. Please use it after confirming safety in your company for special applications.

#### Reference Citations:

Raw material company submitting SDS

The Chemical Daily Co., Ltd. "2011 version 15911 chemical products" (2011)