



**Timesaver Lapping Compound - Yellow Label for Soft Metals
 (40N, 60N, 80N, 100N)**

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

Precautionary statement(s)

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust.
 Wash hands and face thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/clothing and eye/face protection.

If exposed or concerned: 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.

Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
 Toxic fumes may be released during a fire. Dusts may cause irritation of the mucous membranes and respiratory tract. May cause gastrointestinal irritation.

Environmental precautions:
 Avoid release to the environment. See Section 12 for more environmental information.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Crystalline silica, quartz	Quartz silica Crystallized silicon dioxide	14808-60-7	50.0
Sodium dodecylbenzenesulfonate	Sodium laurylbenzenesulfonate SDBS	25155-30-0	6.0 - 7.5

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.
- Inhalation* : If breathed in, move person into fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. If exposed or concerned: Get medical advice/attention.
- Skin contact* : Remove contaminated clothing and shoes. Wash off with warm water and soap. If exposed or concerned: 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. Flush eyes with water for at least 15 minutes. If eye irritation persists: get medical advice/attention.



Timesaver Lapping Compound - Yellow Label for Soft Metals
(40N, 60N, 80N, 100N)

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Causes damage to organs through prolonged or repeated exposure. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease). Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Carbon dioxide (CO2); Alcohol resistant foam; Dry chemical; Water.

Unsuitable extinguishing media

- : None known.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Not considered flammable. Toxic fumes may be released during a fire. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not considered flammable.

Hazardous combustion products

- : Sulfur oxides; Carbon oxides; Sodium oxides; Hydrogen sulfide

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

- : Fight fire with normal precautions from a reasonable distance. Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with the clean-up should wear the appropriate personal protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Methods and material for containment and cleaning up

- : Remove all sources of ignition. Ventilate the area. Prevent further leakage or spillage if safe to do so. Clean up promptly by scoop or vacuum. Avoid dust formation. Use approved industrial vacuum cleaner for removal. Contact the proper local authorities. Refer to Section 13 for disposal of contaminated material.



**Timesaver Lapping Compound - Yellow Label for Soft Metals
 (40N, 60N, 80N, 100N)**

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
 US CERCLA Reportable quantity (RQ): Sodium dodecylbenzenesulfonate (1000 lbs / 454 kg)

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.
 Use personal protective equipment as required. Wear eye/face protection. Use only in well-ventilated areas. Do not breathe dust. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid contact with incompatible materials. Avoid and control operations which create dust. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Conditions for safe storage

- : Store in cool/well-ventilated place. Inspect periodically for damage or leaks. Keep in a dry place. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

Incompatible materials

- : Strong oxidizing agents; Acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Crystalline silica, quartz	0.025 mg/m ³ (respirable)	N/Av	0.1 mg/m ³ (respirable) (final rule limit)	N/Av
Sodium dodecylbenzenesulfonate	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

- : Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
 In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : Where occupational exposure limits are exceeded, workers must wear a suitable, approved respirator with a N95 or HEPA filter. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection

- : Gloves impervious to the material are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Eye / face protection

- : Wear eye/face protection. Wear as appropriate: Tightly fitting safety goggles.

Other protective equipment

- : Ensure that eyewash stations and safety showers are close to the workstation location.

General hygiene considerations

- : Do not breathe dust. Avoid contact with skin, eyes and clothing. Remove soiled clothing and wash it thoroughly before reuse. Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

ãã dã ãã Á, , È ^, { æ ç [| • È { Å Å ^ Á F H È Ì Î Å Å [| • O } ^, { æ ç [| • È {



Timesaver Lapping Compound - Yellow Label for Soft Metals
(40N, 60N, 80N, 100N)

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Powder - yellow
Odor : Odorless
Odor threshold : N/Av
pH : N/Av
Melting/Freezing point : N/Av
Initial boiling point and boiling range : N/Av
Flash point : None.
Flashpoint (Method) : N/Av
Evaporation rate (BuAe = 1) : N/Av
Flammability (solid, gas) : Not considered flammable.
Lower flammable limit (% by vol.) : N/Av
Upper flammable limit (% by vol.) : N/Av
Oxidizing properties : None known.
Explosive properties : Not explosive
Vapor pressure : N/Av
Vapor density : N/Av
Relative density / Specific gravity : 2.3 [Quartz silica]
Solubility in water : insoluble
Other solubility(ies) : N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution : N/Av
Auto-ignition temperature : N/Av
Decomposition temperature : N/Av
Viscosity : N/Av
Volatiles (% by weight) : 0%
Volatile organic Compounds (VOC's) : N/Av
Absolute pressure of container : N/Av
Flame projection length : N/Av
Other physical/chemical comments : No additional information.

SECTION 10. STABILITY AND REACTIVITY

- Reactivity : Not normally reactive.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Hazardous polymerization does not occur.
Conditions to avoid : Do not use in areas without adequate ventilation. Direct sources of heat. Avoid contact with incompatible materials.
Incompatible materials : Strong oxidizing agents; Acids.
Hazardous decomposition products : None known, refer to hazardous combustion products in Section 5.



Timesaver Lapping Compound - Yellow Label for Soft Metals
(40N, 60N, 80N, 100N)

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May cause irritation to the nose, throat and upper respiratory tract. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.

Sign and symptoms eyes

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Potential Chronic Health Effects

- : Prolonged inhalation may cause adverse lung effects with symptoms including coughing, mucous production and difficulty breathing.

Mutagenicity

- : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Carcinogenicity - Category 1. May cause cancer. Contains crystalline silica. Crystalline silica is classified as carcinogenic by IARC (Group 1), the ACGIH (Category A2) and the NTP (Group 1 - Known human carcinogen).

Reproductive effects & Teratogenicity

- : This product is not expected to cause reproductive or developmental effects.

Sensitization to material

- : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific target organ toxicity, repeated exposure - Category 1. Causes damage to organs through prolonged or repeated exposure. Contains: Crystalline silica, quartz. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease). Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.

Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.

Synergistic materials

- : None known or reported by the manufacturer.



**Timesaver Lapping Compound - Yellow Label for Soft Metals
 (40N, 60N, 80N, 100N)**

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

Toxicological data : Not classified for acute toxicity based on available data. The calculated ATE values for this mixture are:
 ATE oral = 14 400 mg/kg

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh. rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Crystalline silica, quartz	N/Av	N/Av	N/Av
Sodium dodecylbenzenesulfonate	N/Av	1080 - 1980 mg/kg	> 2000 mg/kg (No mortality)

Other important toxicological hazards
 : None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : The ecological characteristics of this product have not been fully investigated. There is no data available for this product. The following ingredient(s) may be harmful to aquatic life:
 Sodium dodecylbenzenesulfonate.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	None.
Sodium dodecylbenzenesulfonate	25155-30-0	3.2 mg/L (Fathead minnow)	3.965 - 9.198 mg/L (30 days) (QSAR)	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	None.
Sodium dodecylbenzenesulfonate	25155-30-0	4.8 mg/L (Daphnia magna)	1.65 mg/L	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	None.
Sodium dodecylbenzenesulfonate	25155-30-0	65.4 mg/L/72hr (Green algae)	7.9 mg/L/72hr (Read-across)	None.

Persistence and degradability
 : The product itself has not been tested.
 The following ingredients are considered to be readily biodegradable: Sodium dodecylbenzenesulfonate.



**Timesaver Lapping Compound - Yellow Label for Soft Metals
 (40N, 60N, 80N, 100N)**

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Crystalline silica, quartz	14808-60-7	Yes	None.	None.	No	N/Ap
Sodium dodecylbenzenesulfonate	25155-30-0	Yes	1000 lb/ 454 kg	None.	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Crystalline silica, quartz	14808-60-7	Yes	Cancer	No	Yes	Yes	Yes	Yes	Yes
Sodium dodecylbenzenesulfonate	25155-30-0	No	N/Ap	Yes	Yes	No	Yes	Yes	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product does not contain any substances listed on the NPRI.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Crystalline silica, quartz	14808-60-7	238-878-4	Present	Present	(1)-548	KE-29983	Present	HSR003125
Sodium dodecylbenzenesulfonate	25155-30-0	246-680-4	Present	Present	(3)-1949; (3)-1906; (3)-1884	KE-12954	Present	HSR003161



Micro Surface Corporation
 270 Hillsdale Avenue
 San Jose, CA, U.S.A.
 95136
 Telephone: (408) 723-0700

**Timesaver Lapping Compound - Yellow Label for Soft Metals
 (40N, 60N, 80N, 100N)**

SDS Preparation Date (mm/dd/yyyy): 08/21/2015

Page 11 of 11

SAFETY DATA SHEET

Preparation Date (mm/dd/yyyy)

: 08/21/2015

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p>Prepared for: Micro Surface Corporation 270 Hillsdale Avenue San Jose, CA, U.S.A. 95136 Telephone: (408) 723-0700 Please direct all enquiries to Micro Surface Corporation.</p>	
<p>Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Micro Surface Corporation and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Micro Surface Corporation expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Micro Surface Corporation.

END OF DOCUMENT