Product Name: TI-22 Stain Liquid MSDS No TI-22 Stain Liquid (J2005-G2)E, Ver1.2

Revised: 1st April, 2012

1.IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name/designation TI-22 STAIN LIQUID

1.2 Relevant identified uses of the substance or mixture and uses advised

Relevant identified uses Dental Material
Uses advised against No information
1.3 Details of the supplier of the safety data sheet

· Manufacturer:

Kuraray Noritake Dental Inc.

300 Higashiyama, Miyoshi-cho, Miyoshi, Aichi 470-0293, Japan

Supplier:

For US

Kuraray America, Inc.

33 Maiden Lane, 6th Floor, New York, NY 10038 U.S.A.

Phone: 800-879-1676 Fax: 888-700-5200

Website: www.kuraraydental.com

For Europe

Kuraray Europe GmbH

Philipp-Reis-Str. 4, 65795 Hattersheim am Main, Germany Phone: +49 (0)69 305 35 840 Fax: +49 (0)69 305 35 640

E-mail: dental@kurarav.de

For Other countries

Kuraray Noritake Dental Inc.

2.HAZARDS IDENTIFICATION

2.1 Classification of the substance

GHS classification

Eye Irrit. 2B H320 Repr. 2 H361 STOT SE 3 H335,H336

2.2 Label elements

Hazard pictograms



Signal word:

Warning

Hazard statements:

H320 Causes eye irritation.

H335 May cause respiratory irriation.

H336 May cause drowsiness or dizziness.

H361 Suspected of damaging fertility or the unborn child.

Precautionary statements:

P201 Obtain special instructions before use.

P202 Do not handle until at safety precautions have been read and understood.

Information department: Supplier

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

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective glove/protective clothing/eye protection/face protection.

P281 Use Personal protective equipment as required.

P304+P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breat hing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 If exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER or doctor/Physician If you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

3.COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Chemical name: Ethyleneglycolmonophenyl ether

CAS No.: 122-99-6

3.2 Hazardous ingredients:

Ī	CAS No.	EC-No.	MITI-No.	% (w/w)	name	Remark
	122-99-6	204-589-7	3-558,7-78, 9-1277	100	Ethyleneglycolmonophenyl ether	

^{*}Substance classified by the manufacture.

4.FIRST AID MEASURES

4.1 Description of first aid measure

General notes Get immediate medical advice/attention.

If on skin Wash with plenty soap and water.

If inhaled Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If swallowed Call a POISON CENTER or doctor/physician if you feel unwell.

If in eyes Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

Notes for the doctor Pass on all available product information. 4.2 Most important symptoms and effects, both acute and delayed.

No information

4.3 Indication of immediate medical attention and special treatment needed.

No information

5.FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Water-spray, CO₂, powder, sand or foam, etc.

Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unusable extinguishing media

No information available.

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5.2 Special hazards arising from the substance or mixture

Hazardous combustion products There is a possibility that the gas with stimulation or toxicity is produced depending on the kind of a fire.

5.3 Advice for fire-fighters

If it is not very dangerous, move containers from a fire in the surrounding area.

During extinction, wear a suitable heat-resistant protective suits against chemicals and self contained breathing apparatus.

Extinguish fire by pouring or spreading extinguishing media on the origin of a fire.

Extinguish fire from windward side as much as possible.

Extinguish fire by the method of covering tightly or suffocation is preferable.

Even after extinction, cool down containers by using plenty of water.

6.ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency

Protective equipment Operators wear suitable protective equipment refer to section 8 and avoid inhalation and contact with eyes and skin.

Removal of ignition sources, provision of sufficient ventilation, control of dust

Remove every source of ignition immediately. (Prohibit smoking, using sparks and flames nearby this product.) Ventilate for exhaust to keep concentration in air below a limit of exposure.

Emergency procedures Isolate this product immediately and keep proper distance to every direction as released area.

> Stop leakage, if it is not dangerous. Isolate this product immediately and keep proper distance to every direction as released area.

Indicate that only authorized people can enter. Do not touch released product and walk on it.

For emergency responders

Wear a chemical protective clothing.

6.2 Environmental Precautions

Prevent inflow into ditches, sinks, basements or closed places. Take notice not to discharge this product to rivers etc. and not to affect environment.

6.3 Methods and material for containment and cleaning up

For containment Keep container tightly closed.

For cleaning up If the amount of leakage is small, absorb it by dried sand, soil, sawdust and waste

paper and collect it into a tightly covered container made of metal.

Other information No information

6.4 Reference to other sections See section 8 and 13.

6.5 Additional information No information.

7.HANDLING AND STORAGE

7.1 Precautions for safe handling

Information on safe handing

Take measure against equipments written in section 8 and wear protective equipment.

Exhaust locally and ventilate totally as written in section 8.

To prevent handling of incompatible substances or mixtures

Avoid contact with incompatible materials. Please refer to section 10.

To minimize the release to the environment

Take notice not to discharge this product to rivers etc. and not to affect environment.

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Advice on general occupational hygiene

Obtain Instructions before using this product.

Do not handle products until you have read and understood every instruction for safety.

To prevent exposure, wear protective during operation.

Watch out for fire.

Prohibit using heated substances, sparks and fire on the periphery of this product.

Ventilate for exhaust to keep concentration in air below a limit of exposure.

Avoid inhaling dust and fume.

Do not touch, inhale or swallow this product.

Do not take polluted work clothes out of workshops.

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

Use this product only outside or well ventilated area.

Wash hands well after handling this product.

Avoid emitting this product to environment.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Store in dried and properly ventilated place.

Install equipments for lighting and ventilation which are necessary for handling and storing dangerous goods in a storage place.

Packaging materials

If containers are stipulated in transportation regulations of containers United Nations.

Requirements for storage rooms and vessels

Store apart from dangerous substance to mix and touch.

Seal a container and store it in a well ventilated and cool place.

It is preferable to store a container in a locked place.

Further Information on storage conditions

No information

7.3 Specific end use(s)

Recommendations

No information

Industrial sector specific solutions

No information

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

No Information

8.2 Exposure controls

Appropriate engineering controls

When the mists are generated, the ignition source is made to seal up, and the exhaust device is installed.

Install ventilation facility if dust and fume occurs during hot heated processes.

Personal protection equipment

Eye and face protection : Use appropriate protectors for eyes.

Skin protection

Hand protection : Use appropriate protective gloves.

Body protection : Use appropriate protective clothes and masks if necessary.

Other protection : -

Respiratory protection : Wear appropriate respiratory protection.

Thermal hazards : -

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9.PHYSICAL AND CHEMICAL PROPERTIES

Physical state, shape and colors etc. No data Odor No data pH No data Melting point/coagulation point $14^{\circ}C$ Boiling point $245.2^{\circ}C$ Flash point 250° Explosive range No data

Vapor pressure 0.00975mmHg(20)

 $\begin{array}{lll} \mbox{Vapor density(air=1)} & \mbox{No data} \\ \mbox{Relative density (density)} & \mbox{1.102(22/4°C)} \\ \mbox{Solubility} & \mbox{2.67g/100mL} \end{array}$

Partition coefficient: octanol/ water

Auto-ignition temperature

Decomposition temperature

Limit value of odor

Vaporization speed (butyl acetate=1)

Combustion Characteristics (solid and gas) No data

Viscosity

No data

10.STABILITY AND REACTIVITY

10.1 Reactivity

Not in particular.

10.2 Chemical Stability

Stable, if it is use and a storage method described in this MSDS.

10.3 Possibility of hazardous reactions

Not in particular

10.4 Conditions to avoid

Not in particular.

10.5 Incompatible materials

No data.

10.6 Hazardous decomposition product

No data.

11.TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

No information available

11.2 Skin corrosion/irritation

Not classified.

11.3 Serious eye damage/irritation

Causes eye irritation.

As Ethyleneglycolmonophenyl ether

Eye Irrit. 2B by NITE

11.4 Respiratory or skin sensitization

Not classified.

11.5 Germ cell mutagenicity

Not classified.

11.6 Carcinogenicity

Not classified.

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11.7 Reproductive toxicity

Suspected of damaging fertility or the unborn child.

As Ethyleneglycolmonophenyl ether

Repr. 2 by NITE

11.8 STOT-single exposure

May cause respiratory irriation.

May cause drowsiness or dizziness.

As Ethyleneglycolmonophenyl ether

STOT SE 3 by NITE.

11.9 STOT-repeated exposure

No information available

11.10 Aspiration hazard

No information available

12.ECOLOGICAL INFORMATION

12.1 Toxicity

No information available

12.2 Persistence and degradability

No information available

12.3 Bioaccumulative potential

No information available

12.4 Mobility in soil

No information available

12.5 Other adverse effects

No information

13.DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product/ Packaging disposal In disposal, follow relevant regulations and standards of municipalities.

If industrial waste disposer permitted by governors or regional public

organization handle disposition, commit it to them.

If you commit a disposal of waste, notify sufficiently disposer of risk and

harmfulness beforehand.

Clean and recycle containers or dispose them properly based on relative

regulations and standards of municipalities.

When empty containers are disposed, its content must be removed

completely.

Waste treatment options

Dispose of waste according to applicable local, state, federal laws and

regulations.

Sewage disposal options

Do not discharge to a water source.

Other disposal recommendations No information

13.2 Additional information

No information

14.TRANSPORT INFORMATION

Road/Rail(ADR/RID) Not subject to ADR/RID.

Sea transport (IMDG) Not subject to IMDG code.

Air transport (IATA) Not Subject to IATA regulations.

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15.REGULATORY INFORMATION

This MSDS is according to Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Use in accordance with local/regional/national/international regulations.

16.OTHER INFORMATION

16.1 Indication of changes and preparation date
Preparation date 3rd May, 2011
Revised 3rd May, 2011

16.2 Abbreviations and acronyms

ACGIH American Conference of Governmental Industrial Hygienists

ATE Acute Toxicity Estimate

CAS No. Chemical Abstract Service number EC No. EINECS and ELINCS Number

EINECS European Inventory of Existing Commercial Substances

ELINCS European List of notified Chemical Substances

GHS Globally Harmonized System
LC50 Lethal concentration, 50%
LD50 Median Lethal Dose

MSDS Material Safety Data Sheet

MITI No. Ministry of International Trade and Industry Number NITE National Institute of Technology and Evaluation

OEL Occupational Exposure Limit
STOT Specific Target Organ Toxicity

(STOT) RE Repeated Exposure (STOT) SE Single Exposure

TWA Time Weighted Average

16.3 Key literature references and sources for data

The result of classification of substance by NITE Japan. (http://www.safe.nite.go.jp/ghs/list.html)

16.4 Handling of information given in this MSDS

Information given in this MSDS may be insufficient for not all records and references were investigated. Its content can be changed due to release of new data and correction of conventional theories. Therefore, when you use this MSDS for an important decision, it is recommended to check its content by running tests or to study its references carefully. We also do not guarantee the number about the content, physical or chemical properties. Notes are applicable to normal handling and care must be taken in case of special handling.