MATERIAL SAFETY DATA SHEET

Product Identification and Company Information

1.1 **Product Identification**

Trade Name: Goggle Cleaner TV-330,TV-331,TEC52,TEC52A,TEC52R

Product Classification: Cleaner Major Application: Goggle Cleaner

2. Company Information

Manufacturer: Toyoriken Co., Ltd

Address: 3075-11 Shimasu, Itako-City, Ibaragi-Pref. Department in Charge: Quality control section

Phone Number: 0299(64)6011 FAX Number: 0299(64)6015

Emergency Contact: Toyoriken Co., Ltd

Issued Date: February 21, 2006 Revised Date: June 14, 2013

3. Composition & Information on Ingredients

Single or Mixed Components: Mixture

Ingredients & Contents

Name of Ingredients	Content wt%	CAS No.	Registration under Chemical Substances Control Law	Registration under Occupational Safety and Health Act	Registration under Pollutant Release and Transfer Register (PRTR) Law	Registration under Poisonous & Deleterious Substances Control Law
Anionic Surfactant	Lees than 1	Registered	Registered	Not applicable	Not applicable	Not applicable
Nonionic Surfactant	Less than 3	Registered	Registered	Not applicable	Not applicable	Not applicable
Water-Soluble Polymer	Less than 1	Registered	Registered	Not applicable	Not applicable	Not applicable
Antiseptic Substance	Trace	Not Disclosed	Not Disclosed	Not applicable	Not applicable	Not applicable
Acetate Salt	Trace	Not Disclosed	Not Disclosed	Not applicable	Not applicable	Not applicable
Fragrance	Trace	Not Disclosed	Not Disclosed	Not applicable	Not applicable	Not applicable
Purified Water	96 or less	7732-18-5	Not applicable	Not applicable	Not applicable	Not applicable

Japanese Chemical Substances Control Law: Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (Reference Number in Gazetted List in Japan)

Occupational Safety and Health Act: Article 57-2, Section 1Government designated substance, CAS No.

PRTR (Law concerning Pollutant Release and Transfer Register): Registered number of designated chemical substance under Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof.

Poisonous and Deleterious Substances Control Law: Designated chemical substance in the Poisonous & Deleterious substances control law.

4. Summary of Hazards & Harms

Most important hazard:

Classification of chemical substance:

Substance does not fall under the category of any specification.

Summary of harms:

Inhalation and drinking not allowed. Hazard caused by this chemical substance can be mainly caused by anionic surfactant or nonionic surfactant.

Contact to eyes: No irritation

Contact to skin: No irritation

Accidental drinking: Not allowed

Adverse impact to environment:

Discharge of large volume of crude liquid into rivers, lakes or ponds may cause the negative impact to environments.

Information about hazards or harms:

No useful information available until now.

5. First Aid Procedures

Although this product does not show specific hazards or harms, following procedures are recommended to take as a precautionary measure.

Eye contact: Immediately flush eyes with water more than 15 minutes. During washing eyes, pick

eye-lids to make wide open and wash throughout eye-balls and corner of eye-lids. If irritation or something unusual still continues, immediately seek medical attention.

Skin contact: Though this product has no specific hazards nor harms, wash contacted area with

water as a precautionary procedure. If irritation continues, seek medical attention.

Inhalation: In case of inhaling large volume of mist, immediately remove to fresh air and lay

quiet while keeping body temperature. If breathing seems difficult to continue, loosen wearing clothes and fittings such as necktie, belt, waist-band and start artificial respiration. In case of irregular breathing rhythm, feeling nauseous or not recovered,

immediately seek medical attention.

Ingestion: Gargle mouth with water and take a large volume of water to induce vomiting and

seek medical attention. If unconscious, do not give anything to eat.

6. Fire Fighting Measures

Extinguishing media:	water[\bigcirc], carbon dioxide gas[\circ	1 foam[\circ	l nowder[\cap	1

Dry sand[O], Others[]

Fire fighting measures: (1) Remove combustible material scattered around.

(2) Fire fighting starts from windward.

(3) Use water or extinguish agent for fire fighting large scale.

Protection of fire fighters: Wear proper protective gear (protective glove, protective mask, safety glasses).

7. Accidental Release Measures

- (1) Remove source to ignite or combustible material out of leaking area.
- (2) Prepare proper extinguishing equipment.
- (3) Prepare proper protective gear (protective glove, protective mask, safety glasses, protective apron and others)
- (4) In case of small volume: absorb released chemicals with sawdust, earth and sand, paper and recover it into empty cans. Then wash out surrounding area with plenty of water. Do not discharge washed water into the ground nor drainage conduit.
- (5) In case of large volume: Stop runoff with sand bags and recover spills into empty containers using pumps.
 - Then wash out surrounding area with plenty of water. Do not discharge washed water into the ground nor drainage conduit.
- (6) In case of releasing occur inside room, open doors and windows to allow ventilation good enough.
- (7) Pay enough attention not to release into rivers or public drainage.
- (8) Dispose industrial wastes complying to applicable regulation.

8. Precautions for Handling and Storage

Handling

- (1) Do not mix with other chemicals.
- (2) Stopper tightly after use.
- (3) Do not use other than intended objectives.

Storage

- (1) Stopper tightly not to leak liquid.
- (2) Avoid storage under direct sun light or high temperature and high humidity.
- (3) Avoid the storage from freezing.

9. Exposure Control and Personal Protection

Facility Management: Not specifically required.

Protective Equipment:

Eye protection: Wear side shields safety glasses or goggles.

Respiratory protection: Wear protective masks as required.

Skin protection: Wear protective gloves and protective aprons as required.

10. Physical and Chemical Properties

Appearance: Colorless and transparent liquid.

Odor: Slightly scented smell Specific gravity: 1.00 (20°C)

Solubility in water: Easy to dissolve in water

pH: 6.5 (20°C)

11. Stability and Reactivity

Flash point: None

Explosive limit: (Lower limit) None, (Upper limit) None

Oxidizing property: None Ignition point: None

Stability: Chemically stable

Self-reactivity: Non-explosive

Reactivity: None

Other hazardous information: No useful information available.

12. Toxicological Information

Toxicity of component and Controlled Exposure Concentration

Name of	Controlled	ACGIH	IARC	Other Toxicity	
Component	Concentration	(TLV-C)	IARC	Ouler Toxicity	
Anionic	No set value	No available	No set value	No available	
Surfactant	No set value	information	No set value	information	
Nonionic	No set realise	No 224 l	Ma ast sales	No available	
Surfactant	No set value	No set value	No set value	information	

Anionic Surfactant:

Irritation (skin, eye): Not irritative

Sensitization: Guinea pig GPMT Method: Negative

Guinea pig Buehier Method: Negative

Acute toxicity (LD₅₀): >2000mg/kg

Mutagenicity: Ames Test

(salmonella TA98,TA100. Escherichia coli WPtry-): Negative

Other Toxicity: No information available

Nonionic Surfactant:

Irritation (skin, eye): Not irritative

Acute toxicity (LD₅₀): Rat oral 36700 μL/kg (Polysorbate20 data)

Sensitization: No available information
Chronic toxicity: No available information

Mutagenicity: Ames Test

(salmonella TA98,TA100. Escherichia coli WP2uvrA): Negative

Reproductive toxicity: No information available
Other Toxicity: No information available

13. Environmental Impact Information

Anionic Surfactant:

Degradability: BOD (Biodegradability): 96.7% (after 21days) (C12-14POE Sodium

 $\begin{array}{ll} Alkyl \; Sulfate) \\ BOD_5 & 0.25 g/g \\ COD \; (Cr) & 0.70 g/g \end{array}$

Accumulation: No data available

Toxicity to fish: Rainbow trout LC₅₀: 75mg/L

Nonionic Surfactant:

Degradability: No data available
Accumulation: No data available
Toxicity to fish: No data available

14. Disposal Considerations

(1) Wastes such as waste liquid or waste containers shall be treated under subcontract with licensed industrial waste disposers.

- (2) Washing water to clean containers or manufacturing equipments shall not be discharged without proper pretreatment.
- (3) Waste disposal by-produced in the waste water treatment process shall be treated or sub-contacted complying to regulations and laws responsible for waste treatment and its cleaning.

15. Transportation Information

Overland Shipment: Subjected to the "Precautions for Handling and Storage"

Marine Transportation: Subjected to the "Ship Safety Act"

Air Transportation: Subjected to the "Civil Aeronautics Act"

Caution: Make sure containers are not leaking before transportation, and being

loaded in a manner preventing cargos from falling, dropping or damaging

and free from collapsing completely.

16. Regulatory Information

Fire and Disaster Management Act:

Occupational Safety and Health Act:

Not applicable
Poisonous Deleterious Substances Control Law:

Not Applicable
PRTR(Law concerning Pollutant Release and Transfer Register):

Not applicable

17. Other Information and Reference Literature

Revised Preparation Guide MSDS "Japan Auto Chemical Industry Association"

The handbook of solvent "Kodansha"

13197 pieces of chemical products "The Chemical Daily"

* Disclaimer

MSDS was prepared to provide reference information to users of product to secure safe handling of hazardous & harmful chemical product.

In this context, user of product shall use this MSDS in its own responsibility with good understanding of requirement of appropriate handling of product responding to individual varied conditions and circumstances.

Accordingly any and all data included in this MSDS are not warranties or guarantees by Toyoriken Co., LTD. and please pay enough attention when product is used and handled.