

GLOBAL PRODUCT STRATEGY SAFETY SUMMARY

RHEODOL TW-L106

This document is a high-level summary provides usage of chemical substances and safety information to the general public. It is not intended to replace the Safety Data Sheet, which is available from suppliers and should be referred to for full details of recommended safety procedures for each type of use. It is not intended to replace or supersede manufacturer's instructions and warnings for their consumer products containing this substance.

1. Substance Identity

Brand Name: RHEODOL TW-L106

Chemical Name: Polyoxyethylene (4) sorbitan monolaurate

CAS Number: 9005-64-5

2. Uses and Applications

RHEODOL TW-L106 is a nonionic surfactant.

For the industrial use, RHEODOL TW-L106 is used as a textile emulsifier and as a plastic processing agent.

3. Physical/Chemical Properties

RHEODOL TW-L106 has no identified physicochemical hazards.

Property	Value
Physical state	Liquid
Color	Yellow
Odour	Slight characteristic odor
pH	6 - 8 (5 % solution)
Density	1.08 g/mL (20 °C) (68 °F) 1.073 g/mL (30 °C) (86 °F) 1.066 g/mL (40 °C) (104 °F)

Freezing point	7.5 °C (45.5 °F)
Boiling point	No information available
Flash point	231 °C (448 °F) (Cleveland open cup)
Flammability	No information available
Explosive properties	No information available
Self - ignition temperature	No information available
Vapour pressure	No information available
Water solubility	Gel
Octanol - water partition coefficient (log K _{ow})	No information available
Viscosity	930 mPa·s (20 °C) (68 °F) 470 mPa·s (30 °C) (86 °F) 240 mPa·s (40 °C) (104 °F)

4. Human Health Safety Assessment

Based on the available data, Undiluted solution of RHEODOL TW-L106 causes weak skin irritation.

Effect Assessment	Result
Acute Toxicity oral/dermal	No acute toxicity after oral/dermal exposure in practical use. The substance does not cause damage to any organs following single exposure.
Irritation skin/eye	Based on the available data, Undiluted substance causes weak skin irritation. Unlikely to cause eye irritation.
Sensitization	Based on the available data, unlikely to cause allergic skin reaction.
Toxicity after repeated exposure	Unlikely to cause any toxic effects through prolonged or repeated oral exposure in practical use.
Mutagenicity	Based on the available data, unlikely to cause genetic defects.
Carcinogenicity	Based on the available data, unlikely to cause cancer.
Toxicity for reproduction	Based on the available data, unlikely to be damaging to fertility or the unborn child.

5. Environmental Safety Assessment

The test results with fish, aquatic invertebrates and algae suggest that RHEODOL TW-L106 could cause harmfulness to aquatic organisms. However, RHEODOL TW-L106 is unlikely to persist in the environment because of showing the readily biodegradation. RHEODOL TW-L106 does not bioaccumulate in the food chain.

Effect Assessment	Result
Aquatic Toxicity	Based on the available data, likely to cause a harmfulness to aquatic organisms.
Biodegradation	Readily biodegradable.
PBT/vPvB conclusion	Not persistent in the environment, not bioaccumulating in organisms and not toxic nor very persistent and very bioaccumulating.

6. Exposure

Consumer

RHEODOL TW-L106 is used mainly as an emulsifier for industrial use. It is considered that exposure to consumers hardly occurs.

Worker

The exposure can occur either in RHEODOL TW-L106 manufacturing facilities or in the various industrial facilities when RHEODOL TW-L106 is used. Those workers in industrial operations during maintenance, sampling, testing, or other procedures could be exposed with RHEODOL TW-L106. Only qualified and trained workers handle the undiluted substance. The manufacturing facilities offer thorough training program for employees and appropriate work processes, as well as safety equipment (goggles and gloves) in place to prevent an unnecessary exposure. Safety showers and eye-wash stations are accessible nearby. Workers are required to be trained in accordance with the safety measures in the Safety Data Sheet.

Environment

Since this substance is used extensively, it is discharged to waste water treatment plants from industrial sites such as manufacturing, preparation, handling, storage. However, the substance is readily biodegradable, so that it is removed efficiently in waste water treatment plants. The substance is biologically degraded in the surface water and is rapidly removed even if it is remained slightly in the waste water. Hence, the chronic exposure to aquatic organisms of the substance is unlikely to occur. Furthermore, the substance does not accumulate in the food chain, so that there is no concern of human exposure through environmental pathway.

7. Risk management recommendations

When you use the substance, make sure to be measured the adequate ventilation. Always use appropriate chemical-resistant gloves to protect your hands and skin and always wear eye protection equipment. Do not eat, drink or smoke where the substance is handled, processed or stored. Wash hands and skin after contact with the substance. When the substance attaches to skin (or hair), wash with a large amount of water and soap. When it causes your skin irritation, consult doctor (medical diagnosis/therapy). If the substance gets into your eyes, rinse your eyes thoroughly for several minutes. If you wear contact lens, and you can take it off easily, take it off and continue to rinse your eyes. If eye irritation persists, get medical help.

Waste water containing the substance must be passed the waste water treatment plants in order to remove the substance. No specific measures are needed, because it is not expected to be released into the air.

8. Regulatory Information / Classification and Labelling

Under GHS classification chemical substances are classified in hazards for physical properties, human health and environment. The hazard information for industrial products are transmitted via specific labels and Safety Data Sheet. GHS offers the standardization for hazard communication. The subjects who could be assumed to be exposed to the substance, workers, consumers, transport workers, and emergency responders, can better understand the hazards of the chemicals in use through the transmission.

Labeling according to UN GHS

UN GHS is the basis for country specific GHS labeling.

RHEODOL TW-L106 may be assigned to following GHS classification.

Classification and Labeling Information

Aquatic Acute 3

Hazard Statements:

H402: Harmful to aquatic life

The laws of manufacturing, sale, transport, use and disposal are different among countries or areas. Details are referred to Safety Data Sheet provided by the supplier.

9. Conclusion

RHEODOL TW-L106 could cause harmfulness to aquatic organisms. However, RHEODOL TW-L106 is unlikely to persist in the environment because of showing the readily biodegradation. RHEODOL TW-L106 is not applicable to PBT/vPvB. When handling the substance, workers should follow the standard safety measures and refer to the Safety Data Sheet. RHEODOL TW-L106 is used mainly as an emulsifier for industrial use. It is considered that exposure to consumers hardly occurs.

10. Contact information within company

For further information on this substance or product safety summaries in general, please contact:

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Additional information can be found at a chemical risk assessment support portal provided by the Japan Chemical Industry Associations, found at <https://www.jcia-bigdr.jp/jcia-bigdr/en/top>.

11. Glossary

Acute Toxicity	Adverse effects that result from a single exposure
Sensitization	Inducibility of allergy
Genotoxicity	Effects to induce gene mutations
Carcinogenicity	Action influence to cause a cancer
Toxicity for Reproduction	Adverse effects for teratogenicity, embryotoxicity, and reproductivity
Biodegradation	Biological degradation of a substance in environments
PBT (Persistent, Bioaccumulative and Toxic)	Substances that are environmentally persistent, bioaccumulative, and toxic
vPvB (Very Persistent and Very Bioaccumulative)	Substances with high persistence in the environment and high accumulation in ecology
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazard	Hazardous property for human health or environments

12. Date of issue

December 1, 2022