RESONAC

GPS/JIPS Safety Summary

1. PRODUCT NAME

Viscomate NP,BM Series

2. GENERAL STATEMENT

Viscomate is a polyacrylic acid-based water-soluble polymer used as a pharmaceutical (topical application) ingredient and industrial thickener. Particularly, the partially neutralized product (acrylic acid/sodium acrylate copolymer) was developed using our proprietary technology. The NP series is mainly used for poultices and cooling sheets, and is registered with the DMF in the U.S. and has an Export Designated License (IDL) in China. Viscomet is not sold for use as a food additive or feed additive.

3. CHEMICAL IDENTITY

Item	Description
Chemical or generic name	Poly(sodium)acrylate
Trade name	Viscomate NP,BM Series
Source/References	Section 3 of the SDS issued by Resonac Corporation

Composition

Product/ingredient name	%	Chemical Formula	Other No. Japan: Chemical Substances Control Law Japan: Industrial Safety and Health Act	CAS No.
Methanol	<0.3	CH_3OH	(1)-210 existing chemical substance	67-56-1
Water	≤5	H_2O	— —	7732-18-5
Polyacrylic acid partially neutralized product	≥94	$-(CH_2CHCOOX)_n-$ (X=Na, with some H)	(6)-901 existing chemical substance	9033-79-8
Acrylic acid	<1	$C_3H_4O_2$	(2)-984 existing chemical substance	79-10-7

4. USES AND APPLICATIONS

Main uses	Being hydrophilic, the substance is used as a thickening agent for various types of solutions. It is also used as a topical agent in cosmetic poultices or cooling sheets etc.

5. PHYSICAL/CHEMICAL PROPERTIES

The sodium salt of acrylic acid polymerization is a white powder at room temperature.

Appearance	Powder

Color	white
Odor	No data available
pH	5.5 – 8.0 (0.2% aqueous solution)
Melting point/Boiling point	No data available
Flammability	Non flammable
Auto-ignition temperature	430℃
Decomposition temperature	≥400℃
Solubility	Water: No data available. Over 10% of water becomes jelly and unable to handle as liquid. Other solvent: Insoluble in methanol, ethylene glycol, dimethylformamide etc.
Partition coefficient n-octanol/water (Log Pow)	No data available
Explosive limits (g/m^3)	Not dust explosive
Sources/references	Section 9 and 10 of the SDS issued by Resonac Corporation

6. HEALTH EFFECTS

Effect assessment	Results （GHS Hazard Classification）
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation: gas)	Not applicable
Acute toxicity (inhalation: vapours)	Classification not possible
Acute toxicity (inhalation: dust, mist)	Classification not possible
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation,	Category 2 Serious eye damage/eye irritation
Respiratory sensitisation	Classification not possible
Skin sensitisation	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive toxicity	Classification not possible
Specific target organ toxicity – Single exposure,	Classification not possible
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Classification not possible
Sources/references	Section 2 and 11 of SDS issued by Resonac Corporation

・ GHS (Globally Harmonized System of Classification and Labelling of Chemicals): A system that classifies chemicals according to the type and degree of hazards, labels the information, and provides safety data sheets according to globally harmonized rules.
・ Not applicable: Since the priority of physical state, chemical structure, chemical property, and hazard items used in the GHS classification procedures does not fall under the category, it is not subject to the classification for the category.
・ Not classified: Sufficient information has been obtained to implement the GHS classification, and as a result of the classification, it does not fall under any of the hazard categories specified in the GHS. It is considered to be a lower hazard.
・ Classification not possible : There is not enough information for GHS classification, and classification is not possible.

7. ENVIRONMENTAL EFFECTS

Effect assessment	Results (GHS Hazard Classification)
Hazardous to the aquatic environment, short-term (acute)	Category 3 Hazardous to the aquatic environment
Hazardous to the aquatic environment, long-term (chronic)	Classification not possible
Hazardous to the ozone layer	Classification not possible
Sources/references	Sections 2 and 12 of the SDS issued by Resonac Corporation

Environmental fate/dynamics	
Mobility in soil	Methanol: Koc=1 Acrylic acid: Koc = 43, 1
Persistence/degradability	Methanol: Biodegradability test (2 weeks) Readily biodegradable Acrylic acid: Degradability test (2 weeks) Readily biodegradable
Bioaccumulation potential	Methanol: BCF=0.01-0.51, 0.2 Acrylic acid: BCF = 3.2 (estimated as low bioaccumulation potential)
Conclusion about PBT/vPvB	The criteria for persistent bioaccumulative and toxic (PBT; remaining persistently in the environment and possessing high bioaccumulation potential and toxicity) and very persistent and very bioaccumulative (vPvB; remaining very persistently in the environment and possessing very high bioaccumulation potential) chemicals are believed to inapplicable.
Sources/references	Sections 12 of the SDS issued by Resonac Corporation

8. EXPOSURE

Detals	Exposure potentials through main uses
Occupational exposures	When handling powders of the substance under normal temperatures, workers could be exposed through oral ingestion, contact with the skin, or inhalation if dust is generated during mixing/blending, measuring, packing, unpacking and other processes involving the substance. The substance could irritate respiratory tracts when its high-density dusts are inhaled, and could also affect the eyes and skin in the event of direct contact. There is the potential for exposure through oral, dermal or inhalation by workers engaged in maintenance, sampling, filling, and discharging tasks, and at times of equipment failure, in batch and other processes.
Consumer exposures	Sodium salt of acrylic acid polymerization is used as a source material for medical and pharmaceutical products (mainly external preparations) as well as cosmetic products, and an industrial thickening agent. The possibility that consumers could be exposed through oral, dermal or inhalation is believed to be low. However, respiratory tracts could be irritated if its high-density dusts are inhaled, and the eyes and skin could also be affected upon direct contact.
Environmental exposures	There is the potential for discharge of the substance mainly into the air and aquatic environment from the manufacturing and usage processes. Although environmental exposure is possible, no

	specific environmental effects have been observed as mentioned in Section 7 Environmental Effects.
Precautions	If there is a possibility of exposure in other uses, take appropriate measures with reference to recommended risk management measures.

9. RISK MANAGEMENT RECOMMENDATIONS

Recommended risk management measures can minimize risks to workers, consumers, and the environment from Section 8 exposure scenarios.

Detals	Risk management recommendations
Worker	Technical measures: Carry out exhaust ventilation in order to keep a concentration of the substance in the air below the exposure limit value. Install eyewash fountains and safety showers at manufacturing places where the product is stored or handled.
	Local and general ventilation: It is required to manage and control an environmental concentration of the substance to keep it below the following recommended value by installing local ventilation and others at manufacturing places or places using the substance.
	Occupational exposure limits: The Japan Society for Occupational Health (2022) recommends ″inhalable dust: 2 mg/m3 ″ and ″total dust: 8 mg/m3 (Class 3 dust)″ as the recommended values of allowable concentration in the work environment. ・Methanol: Controlled concentration 200ppm, Japan Society for Occupational Health Permissible concentration 200ppm (260mg/m3) (Skin), ACGIH (American Conference of Governmental Industrial Hygienists) TLV-TWA (time weighted average value) 200ppm, STEL (short time exposure limit) 250ppm, (Skin) ・Acrylic acid: ACGIH TLV-TWA 200m, (Skin) Manage and control the system so that it stays below these values.
	Protective equipment: When working, wear a dust-proof respirator or simple dust mask as respiratory protection, rubber protective gloves as hand protection, appropriate eye protection, and normal work clothes as skin and body protection.
	Precautions: The operation manager should educate operators about the selection of appropriate protective equipment, proper usage method, and control method of the work site.
Consumer	It is believed that end-products, which are commercially distributed, could not contain powders. However, if they do, take a precaution not to inhale carelessly their dusts and not to be largely exposed to their dusts on skin.
Environment	In order to prevent environmental exposures, implement preventive measures against leakage into rivers, water channels, and sewerage trenches, and pay attention to the daily management and handling of the substance.

Special notes (emergency measures in case of leakage, etc.)	In the case that the substance is in powdery form, wear appropriate protective gear and collect the substance as powder by using a broom or vacuum cleaner. If the substance turns into a liquid with high viscosity after absorbing water, wear disposable rubber gloves and other protective gear when collecting it. Further, in the case of a liquid with low viscosity, wear protective gear and collect it by absorbing with a waste cloth or paper towel.
Precautions	For normal handling, emergency response, disposal, and transportation control measures, refer to sections 4, 5, 6, 7, 8, 13, and 14 of the SDS issued by Resonac Corporation.

10. STATE AGENCY REVIEW

Hazard assessment	Situations of review
International Chemical Safety Cards	International Chemical Safety Card Methanol https://www.ilo.org/dyn/icsc/showcard.display?p_lang=ja&p_card_id=0057&p_version=2 Acrylic acid https://www.ilo.org/dyn/icsc/showcard.display?p_lang=ja&p_card_id=0688&p_version=2
OECD HPV	High production volume chemical testing program Methanol, Acrylic acid https://hpvchemicals.oecd.org/UI/Search.aspx
NITE-CHRIP(NITE Chemical Risk Information Platform)	https://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput
GHS Classification Results by the Japanese Government	Sodium salt of acrylic acid polymerization https://www.nite.go.jp/chem/ghs/15-mhlw-0134.html Methanol https://www.nite.go.jp/chem/ghs/09-mhlw-2012.html Acrylic acid https://www.nite.go.jp/chem/ghs/14-mhlw-2001.html

11. REGULATORY INFORMATION／GHS CLASSIFICATION AND LABELLING INFORMATION

Regulatory information only in Japan

Applicable laws	Regulatory situations
Act on the Regulation of Manufacture and Evaluation of Chemical Substances	Priority assessment chemical substances(Article 2-5 of the Act) sodium salt of acrylic acid polymerization methanol acrylic acid
Industrial Safety and Health Act	Working environment assessment standard (Article 65-2, Paragraph 1 of the Act) methanol Dangerous or Harmful Substances Subject to Be Indicated their Dangerous Articles and Harmful Substances Whose Names, etc. Should Be Notified(Article 57-2 of the Act, Article 18-2 item(ⅰ) and item(ⅱ) appended Table No. 9 of the Enforcement Order)

	methanol(Cabinet Order Number : 560)
Poisonous and Deleterious Substances Control Act	Not applicable
Water Pollution Prevention Act	Designated substances(Article 2, Paragraph 4 of the Act, Article 3-3 of the Enforcement Order) acrylic acid
Fire Service Act	Not applicable(Non-hazardous materials)
Air Pollution Control Act	Specified Substances (Article 17, Paragraph 1 of the Law, Article 10 of the Cabinet Order) methanol Volatile organic compound, Article 2 paragraph 4 of the Act (Notification from the Ministry of the Environment to Prefectures) volatile organic compound
Act on Prevention of Marine Pollution and Maritime Disaster	Hazardous liquid substances (Class Y substances) (appended Table 1 of the Enforcement Ordinance) methanol acrylic acid
Act on Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes(Basel Law)	Hazardous substances contained in waste(Article 2 paragraph 1 item 1-a of the Act, June 18, 2018 Ordinance of the Ministry of the Environment No. 12) Substances containing organic solvents listed in (a) Substances containing organic solvents other than those listed in (a) or (b)
Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement and Transfer Register / PRTR)	Not applicable
Labor Standards Act	Occupational disease chemicals (Article 75, paragraph 2 of the Act, Enforcement Ordinance Article 35, Appended Table 1-2, Item (4)-1) methyl alcohol
Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices	Pharmaceutical Excipients : Listed in Japanese pharmaceutical excipients Japanese Standards of Quasi-drug Ingredients: Listed in the ingredient list and additive list
UN classification	Not applicable

Hazards	Classification results (hazard information)
Health hazards	Serious eye damage/eye irritation Category 2
Environmental hazards	Hazardous to the aquatic environment, short-term (acute) Category 3

Labelling Information	
Hazard pictograms (GHS)	
Signal word (GHS)	warning
Hazard statements (GHS)	Causes serious eye irritation. (H319) Harmful to aquatic life (H402)

12. CONTACT INFORMATION

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13. DATE OF ISSUE / REVISION, ADDITIONAL INFORMATION

Date of issue: September 30, 2013

Revisions:

Date of revision	Revised section	Revised item	Version
October 31, 2023	2, 3, 7, 9, 10, 12, 13.	update to the latest information	rev.2

The contents are based on the safety data sheet (SDS) revised on July 1, 2023.

Special instructions:

Scope of application: Applies to Viscomate NP-600, NP-700, NP-800, BM-70, and P-NH.

14. DISCLAIMER

The safety summary is part of the effort for the voluntary management of chemical substance in the chemical industry (GPS/JIPS: Japan Initiative of Product Stewardship). The purpose of the safety summary is to provide information on the safe handling of the product as an overview and not to provide professional information, such as the risk evaluation process and its impact on human health and the environment. This document is not meant to serve as an alternative to risk evaluation, such as a Safety Data Sheet (SDS) or a Chemical Safety Report (CSR). This safety summary is being written as accurately as possible based on data such as laws, materials, and information available at the time of publication, but it does not include all data. It does not guarantee anything.