

GPS Safety Summary

This Product Safety Summary is intended to provide a brief overview of the information on the risk assessment results of the chemical product that we manufacture based on the chemical industry's Global Product Strategy (GPS) to the general public as a social responsibility of a company that manufacture chemical substances.

This summary is not intended to provide technical information including effects on human health and the environment and details of risk assessment. In addition, it is not intended to be prepared as a document to replace a Safety Data Sheet (SDS) or a risk assessment report like a Chemical Safety Report under the REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) (REACH CSR). Although the summary is prepared based on the laws, materials, information and data that are available at the present moment, it does not provide any assurances.

SUBSTANCE NAME

Vinyl acetate (CAS No. 108-05-4)

GENERAL STATEMENT

Vinyl acetate is a colorless liquid with sweet odor and slightly irritating odor. It is mainly used as raw material for polyvinylalcohol, vinyl acetate copolymer and so on.

Vinyl acetate is a highly flammable liquid. Vinyl acetate causes harmful if inhaled, causes serious eye irritation, may cause an allergic skin reaction, suspected of causing genetic defects, suspected of causing cancer, may cause respiratory irritation and may cause damage to organs through prolonged or repeated exposure. Though vinyl acetate is toxic to aquatic life, vinyl acetate is biodegradable and low bioaccumulative.

During operations in closed process with controlled exposure, workers may be exposed to substances by skin contact or inhalation, e.g. through maintenance, sampling and equipment breakages. During transfer of substances in dedicated facilities, workers may be exposed to substances by skin contact or inhalation. This material is not used by consumers and therefore the potential for consumer exposure is low.

Wear appropriate protectors while handling the products (ex. paint and adhesive) containing vinyl acetate. Use local ventilating apparatus to assure sufficient ventilation while transferring and painting in a room. While handling vinyl acetate, manage and control its environmental concentration so that it is lower than the threshold limit value 10 ppm (TWA – time weighted average value) recommended by ACGIH (American Conference of Governmental Industrial Hygienists). Instruct workers on how to select and use the appropriate protective equipment properly and how to manage the workplace with ventilators. Do not eat, drink or smoke while using this product. Appropriate wastewater treatment, regular maintenance and inspection of the drainage should be taken in to practice.

CHEMICAL IDENTITY

Item	Contents
Generic name	Vinyl acetate
Trade name	Vinyl acetate
Chemical name	Vinyl acetate

CAS No.	108-05-4
Other numbers	Reference No. listed in the official gazettes (Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Industrial Safety and Health Act): (2)-728 EC number: 203-545-4
Molecular formula	C ₄ H ₆ O ₂
Structural formula	$\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{CH}=\text{CH}_2$
Other information	None in particular

USES AND APPLICATIONS

Main uses of our product Raw material for polyvinylalcohol, vinyl acetate copolymer and so on

PHYSICAL/CHEMICAL PROPERTIES

Appearance (physical state)	Liquid
Color	Colorless
Odor	Sweet odor, Slightly irritating odor
Specific gravity (relative density)	0.934 (20/20°C)
Melting point/boiling point	-100.2 °C/72.7 °C
Flash point	-8 °C (closed cup)
Limit of combustion or explosion	2.6 – 13.4 vol%(25°C)
Auto ignition temperature	402 °C
Vapor pressure	11.7 kPa (20°C)
Molecular weight	86.09
Water solubility	2.3 g/100 g (Solubility in Water at 20°C), 0.9 g/100g(Solubility of Water in vinyl acetate at 20°C)
Octanol-water partition coefficient	LogKow : 0.73

HEALTH EFFECTS

Effect assessment	Results (GHS ^{*1} hazard classification)
Acute toxicity (oral ingestion)	Not classified ^{*2}
Acute toxicity (inhalation)	Not applicable ^{*3} (gas) Harmful if inhaled (vapor) (Category 4) Classification not possible ^{*4} (dust/mist)
Acute toxicity (dermal)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Causes serious eye irritation (Category 2A)
Respiratory sensitization	Classification not possible
Skin sensitization	May cause an allergic skin reaction (Category 1)
Germ cell mutagenicity	Suspected of causing genetic defects (Category 2)
Carcinogenicity	Suspected of causing cancer (Category 2)

Reproductive toxicity	Not classified
Specific target organ toxicity (Single exposure)	May cause respiratory irritation (Category 3)
Specific target organ toxicity (Repeated exposure)	May cause damage to organs through prolonged or repeated exposure (Category 2)
Aspiration hazard	Classification not possible
Source/remarks	<p>^{*1} GHS: Globally Harmonized System of Classification and Labelling of Chemicals. This system enables us to classify chemicals by hazard type and degree according to globally harmonized rules.</p> <p>^{*2} Not classified: Hazardousness much lower than the lowest hazard class specified by GHS</p> <p>^{*3} Not applicable: Because the physical properties defined by GHS are not met, the chemical is not included in the target chemicals of the classification.</p> <p>^{*4} Classification not possible: The data needed for judging classification are not available at all or sufficient data are not collected for classification.</p>

ENVIRONMENTAL EFFECTS

Effect assessment	Results (GHS hazard classification)
Hazardous to the aquatic environment (acute)	Toxic to aquatic life (Category 2)
Hazardous to the aquatic environment (chronic)	Not classified
Environmental fate/dynamics	Results
Transfer in the environment	Low volatility from water and low soil absorption.
Biodegradability	Biodegradability is reported to be readily biodegradable.
Bioaccumulation	Bioaccumulation is estimated to be low.
Conclusion of PBT/vPvB	Not judged to be PBT* and vPvB**.
	*PBT: Persistent, bioaccumulative and toxic (Remaining in the environment and having high bioaccumulative and strong toxic properties)
	**vPvB: very Persistent and very Bioaccumulative (Readily remaining in the environment and having very high bioaccumulative property)

EXPOSURE

Details	No.	Potential exposure in the process of use of our products (exposure route)
Occupational exposure	1-1	During operations in closed process with controlled exposure, workers may be exposed to substances by skin contact or inhalation, e.g. through maintenance, sampling and equipment breakages. During transfer of substances in dedicated facilities, workers may be exposed to substances by skin contact or inhalation.
Consumer exposure	2-1	This material is not used by consumers and therefore the potential for consumer exposure is low.
Environmental exposure	3-1	May be released primarily into the air and water environment from manufacturing processes of substances in industries. Used in industry as monomer of thermoplastic production and may be released primarily into the air and water environment.
Note		If there is the potential for exposure in the other uses, take appropriate measures in reference to the risk management recommends.

RISK MANAGEMENT RECOMMENDATIONS

Details	No.	Management recommendations based on our risk assessment results
Occupational exposure	1-1	Wear appropriate protectors while handling the products (ex. paint and adhesive) containing vinyl acetate. Use local ventilating apparatus to assure sufficient ventilation while transferring and painting in a room. While handling vinyl acetate, manage and control its environmental concentration so that it is lower than the threshold limit value 10 ppm (TWA – time weighted average value) recommended by ACGIH (American Conference of Industrial Hygienists) . Instruct workers on how to select and use the appropriate protective equipment properly and how to manage the workplace with ventilators. Do not eat, drink or smoke while using this product.
Consumer exposure	2-1	None
Environmental exposure	3-1	Appropriate wastewater treatment, regular maintenance and inspection of the drainage should be taken in to practice.
Other warnings		None

STATE AGENCY REVIEW

Assessment document	Review condition
OECD HPV	http://esis.jrc.ec.europa.eu/doc/risk_assessment/REPORT/vinylacetatereport059.pdf
NITE Chemical Substances Hazard Assessment Report / Initial Risk Assessment Report	http://www.safe.nite.go.jp/japan/sougou/data/pdf/risk/pdf_hyouka_syo/102riskdoc.pdf
MOE Initial Environmental Risk Assessment Report	http://www.env.go.jp/chemi/report/h15-01/pdf/chap01/03-3/02/06.pdf http://www.env.go.jp/chemi/report/h15-01/pdf/chap01/02-2/08.pdf
REACH Registered substances information	http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9a90f3-faa1-6aae-e044-00144f67d249/DISS-9d9a90f3-faa1-6aae-e044-00144f67d249_DISS-9d9a90f3-faa1-6aae-e044-00144f67d249.html

REGULATORY INFORMATION / LABELLING INFORMATION

Main regulatory information

Law	Regulatory condition
UN Class	3
UN Number	1301
Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof	PRTR Class 1 Substances (Cabinet Order No. 134)
Act on the Evaluation of Chemical	Priority Assessment Chemicals List (No. 28)

Substances and Regulation of Their Manufacture, etc.	
Industrial Safety and Health Act	Inflammable substances in appended. Table 1-4 of the Order for Enforcement of the Industrial Safety and Health Act Article. 28-3, 57-2 Enforcement Order Art. 18-2, App. 9 (Notifiable Substances for which delivering SDS, No. 180)
Fire Service Act	Hazardous Materials Class 4, Petroleum, Non-aqueous, Hazard Class II
Act for the Prevention of Marine Pollution and Maritime Disasters	Marine Pollutants in the Case of Bulk Transportation (Class Y) Hazardous substances in appended. Table 1-4
Act on Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes	Article. 2-1-1
Civil Aeronautics Act	Flammable liquid
Ship Safety Act	
Act on Port Regulations	Flammable liquid
Poisonous and Deleterious Substances Control Act	Not applicable
Foreign Exchange and Foreign Trade Act	Import Trade Control Order, Article. 4-1-2 Export Trade Control Order, appended. Table 2

Labelling information
Pictograms or symbols



Signal Word

Danger

Hazard statements

H225: Highly flammable liquid and vapor
H317: May cause an allergic skin reaction
H319: Causes skin irritation
H332: Causes serious eye irritation
H335: May cause respiratory irritation
H341: Suspected of causing genetic defects
H351: Suspected of causing cancer
H373: May cause damage to organs through prolonged or repeated exposure
H401: Toxic to aquatic life

CONTACT INFORMATION WITHIN COMPANY

Company name	The Nippon Synthetic Chemical Industry Co., Ltd.
Address	2-4,Komatsubara-cho, Kita-ku, Osaka, Japan
Department/person in charge	Basic products segment
TEL/FAX	+81-6-7711-5430, +81-6-7711-5452

DATE OF ISSUE / REVISION, ADDITIONAL INFORMATION

Ver. 1 : Issued on 10th March, 2015 (JP revised version 1: issued on October 2, 2014)

Revised : None

Special remarks: None