Safety Data Sheet

Conforms to JIS Z 7253 : 2019

1. Chemicals and Company Information

Chemical name	AV Adhesive 88 (low-viscosity quick-drying up)
SDS No.	No.D-004
Supplier name	Asahi Yukizai Corporation
Address	2-5955, Nakanose-cho Nobeoka-city Miyazaki-pref. Japan 882-8688
Phone number	+81-982-35-9374 (EHS Management Department Valve & Piping Systems Division)
Fax number	+81-982-35-9358 (EHS Management Department Valve & Piping Systems Division)
Emergency phone number	+81-982-35-9374
Manufacturer	Konishi Co., Ltd.
Recommended use and restrictions on use	Adhesive for PVC pipes. Use only as specified.

2. Hazards Identification

GHS classification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity (oral)	Category 4
	Acute toxicity (dermal)	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Skin sensitization	Category 1
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity (single exposure)	Category 1 (central nervous system, respiratory system)
	Specific target organ toxicity (single exposure)	Category 2 (kidneys)
	Specific target organ toxicity (single exposure)	Category 3 (Narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (Respiratory tract irritation)
	Specific target organ toxicity (repeated exposure)	Category 1 (liver, respiratory system, central nervous system, bone, nervous system)

The hazard class classified as "No classification" and "Classification not possible" has not been indicated.

Hazard Pictograms (GHS JP)

GHS02 GHS07 GHS08

Signal word (GHS JP) Danger

Hazard statement (GHS JP)

H225 : Highly flammable liquid and vapor
H302+H312 : Harmful if swallowed or in contact with skin.
H315 : Causes skin irritation
H317 : May cause allergic skin reactions.
H319 : Causes serious eye irritation
H335 : May cause respiratory irritation.
H336 : May cause drowsiness or dizziness.
H341 : Suspected of causing genetic defects.
H351 : Suspected of causing cancer
H361 : Suspected of causing adverse effects on fertility or the unborn child.
H370 : Causes damage to organs (central nervous system, respiratory system).
H371 : May cause damage to organs (kidneys).
H372 : Causes damage to organs (liver, respiratory system, central nervous system, bone, nervous system) through prolonged or repeated exposure.

Precautionary statement (GHS JP)

Prevention precautionary statements

P201 : Obtain special instructions before use.
P202 : Do not handle until all safety precautions have been read and understood.
P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 : Keep container tightly closed.
P240 : Ground and bond container and receiving equipment.
P241 : Use explosion-proof electrical/ventilating/lighting equipment.
P242 : Use only non-sparking tools.
P243 : Take action to prevent static discharges.
P260 : Do not breathe mist/vapours/spray.
P261 : Avoid breathing mist/vapours/spray.
P264 : Wash hands, forearms and face thoroughly after handling.
P270 : Do not eat, drink or smoke when using this product.
P271 : Use only outdoors or in a well-ventilated area.
P272 : Contaminated work clothing should not be allowed out of the workplace.
P280 : Wear protective gloves.

Response Precautionary Statements

P301+P312 : IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352 : IF ON SKIN: Wash with plenty of water.
P303+P361+P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing.Rinse skin with water .
P304+P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing
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+P311 : IF exposed or concerned: Call a POISON CENTER or doctor.

P308+P313 : IF exposed or concerned: Get medical advice/attention.
P312 : Call a POISON CENTER or doctor if you feel unwell.
P314 : Get medical advice/attention if you feel unwell.
P321 : Specific treatment (see supplemental first aid instruction on this label).
P330 : Rinse mouth.
P332+P313 : If skin irritation occurs: Get medical advice/attention.
P333+P313 : If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 : If eye irritation persists: Get medical advice/attention.
P362+P364 : Take off contaminated clothing and wash it before reuse.
P370+P378 : In case of fire : Use appropriate extinguishant for extinction.

Storage precautionary statements
P403+P233 : Store in a well-ventilated place. Keep container tightly closed.
P403+P235 : Store in a well-ventilated place. Keep cool.
P405 : Store locked up.

Disposal precautionary statements
P501 : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Overview expected state of emergency
Organic solvent poisoning may be caused.

3. Composition / Information on Ingredients

Distinction of substance or mixture Mixture

Generic name Vinyl chloride resin adhesive

Name	Concentration	Formula	CAS No.
Cyclohexanone	40-50%	$C_6H_{10}O$	108-94-1
Tetrahydrofuran	30-40%	C_4H_8O	109-99-9
Methyl ethyl ketone	10-20%	$CH_3CH_2COCH_3$	78-93-3
Oxirane,2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-	<1%	C21H24O4	1675-54-3

4. First-aid Measures

First-aid measures

First-aid measures after inhalation
Remove person to fresh air and keep comfortable for breathing.
If you feel unwell, seek medical advice.

First-aid measures after skin contact
Immediately call a POISON CENTER/doctor.
Gently wash with plenty of soap and water.
Take off immediately all contaminated clothing.
Rinse skin with water/shower.

First-aid measures after eye contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion
Rinse mouth.
Immediately call a POISON CENTER/doctor.
Do not induce vomiting.

Personal Protection in First Aid and Measures
Do not attempt to take action without suitable protective equipment.

5. Fire fighting Measures

Suitable extinguishing media Dry chemical, CO2, or regular foam, Sand/earth
Unsuitable extinguishing media Do not use a heavy water stream,Water

Fire Hazards Extremely flammable liquid and vapour.
Firefighting instructions I In case of fire: stop leak if safe to do so.
Fight fire from safe distance and protected location.

Personal protection (Emergency response) Compressed air/oxygen apparatus,
Fire-resistant protective clothing

6. Accidental release Measures

Personal precautions, protective equipment and emergency procedures

Non-emergency responder

Protective equipment Do not attempt to take action without suitable protective equipment.

Emergency procedures Avoid contact with skin and eyes.
Ventilate spillage area.
Do not touch or walk on the spilled product.
Prohibit unauthorized entry into the area.

Environmental precautions

Environmental precautions Prevent entry to sewers and public waters.
Do not allow to enter drains or water courses.
Do not allow product to spread into the environment.

Methods and Equipment for Containment and Cleaning up

For containment For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
Stop leak without risks if possible.

Methods for cleaning up Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.
Absorb spilled material with sand or earth.
Ground all equipment used to handle leakage.

7. Handling and storage

Handling

Technical measures Provide local ventilations and a full ventilation system as described in "Section 8".
Provide ventilation system and Use necessary personal protective equipment as described in "Section 8".

Precautions for safe handling Do not get in eyes, on skin, or on clothing.
Do not breathe dust/fumes/gas/mist/vapours/spray.
Ensure good ventilation of the work station.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
No open flame, No static electricity.
Refer to "Section 10".

Hygiene measures Always wash hands after handling the product.

Storage precautionary statements

Storage conditions Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight. Keep container tightly closed.

Storage temperature 2-40 ℃

8. Exposure controls / Personal protection equipment

Cyclohexanone (108-94-1)	
Exposure limits (JSOH)	100 mg/m³
Exposure limits (JSOH)	25 ppm
MHLW Administration Level	20 ppm

Tetrahydrofuran (109-99-9)	
Exposure limits (JSOH)	148 mg/m³
Exposure limits (JSOH)	50 ppm
MHLW Administration Level	50 ppm

Methyl ethyl ketone (78-93-3)	
Exposure limits (JSOH)	590 mg/m³
Exposure limits (JSOH)	200 ppm
MHLW Administration Level	200 ppm

Appropriate engineering controls Ensure that there is a suitable ventilation system, Use local exhaust ventilation system.

Hand protection Wear impermeable protective gloves. The following points should be considered in selecting protective gloves.
Set the time of use that can be afforded for the work with reference to the impermeability class, etc. described in the instruction manual, and use protective gloves within the set time.

Eye protection Wear appropriate eye protection (glasses, glasses with side plates, goggles).

Skin and body protection Wear long-sleeved work clothes and, if necessary, impermeable protective clothing and protective boots.The following points should be considered when selecting protective clothing and protective boots.
Set the time of use that can be afforded for the work with reference to the impermeability class, etc. described in the instruction manual, and use protective gloves within the set time.

Respiratory protection Wear appropriate respiratory protection for the situation. Consider wearing an air-supplied mask when handling high-concentration chemicals. Consider wearing respiratory protective equipment (gas mask, etc.) if workers are exposed to gas or vapor.
The following points should be considered when selecting a gas mask. Do not use where oxygen concentration is less than 18%. When using a gas mask in an environment where workers are exposed to dust, use a gas mask with dust prevention function. Gas masks should have passed a type examination provided for registered agency for type examinations and structure suitable for work. At that time, refer to the data described in the instruction manual, etc.

9. Physical and Chemical Properties

Physical state Liquid

Appearance Liquid

Colour Colorless translucent

Odour Petroleum odor

pH No data available

Melting point No data available

Freezing point No data available

Boiling point No data available

Flash point	-14 °C Adopt minimum flash point
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability	No data available
Explosive limits (vol %)	No data available
Vapour pressure	No data available
Relative vapour density at 20° C	≧1 (air = 1)
Relative density	No data available
Density	0.97 g/cm³
Relative gas density	No data available
Solubility	Insoluble in water. Soluble in organic solvents.
Partition coefficient n-octanol/ water (Log Pow)	No data available
Viscosity, dynamic	200 - 700 mPa・s
Measured Temperature	20 °C
Viscosity, kinematic	No data available
Particle size	No data available
Particle size distribution	No data available
Particle shape	No data available
Particle aspect ratio	No data available
Particle specific surface area	No data available

10. Stability and Reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Stable under normal conditions of use.
Conditions to avoid	Not specifically applicable.
Incompatible materials	Oxidizing agent.
Hazardous decomposition products	Carbon monoxide.

11. Toxicological Information

Acute toxicity (oral)	Harmful if swallowed
Acute toxicity (dermal)	Harmful when in contact with skin
Acute toxicity (inhalation)	classification not possible (gas) classification not possible (Vapour) classification not possible (dust, mist)

ATE JP (oral)	1205.314 mg/kg bodyweight
ATE JP (dermal)	1209.203 mg/kg bodyweight

Cyclohexanone (108-94-1)	
LD50 oral	800 mg/kg
LD50 dermal	947 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	32.1 mg/l/4h

LC50 Inhalation - Rat (Vapours)	9.8 mg/l/4h
Tetrahydrofuran (109-99-9)	
LD50 oral	1650 mg/kg
LC50 Inhalation - Rat (Vapours)	53.6 mg/l/4
Methyl ethyl ketone(MEK) (78-93-3)	
LD50 oral	2737 mg/kg
LD50 dermal	6480 mg/kg
LC50 Inhalation - Rat (Vapours)	34.5 mg/l/4h
Oxirane,2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis- (1675-54-3)	
LD50 oral	22736 mg/kg
LD50 dermal	23200 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization classification not possible

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Suspected of causing genetic defects.Aspiration hazard

Carcinogenicity Suspected of causing cancer.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

STOT-single exposure Causes damage to organs (central nervous system, respiratory system).
May cause damage to organs (kidneys).
May cause drowsiness or dizziness.
May cause respiratory irritation.

STOT-repeated exposure Causes damage to organs (liver, respiratory system, central nervous system, bone, nervous system) through prolonged or repeated exposure.

Aspiration hazard No classification

12. Environmental Impact Information

Ecology - general Dangerous for the environment if discharged into watercourses.

Hazardous to the aquatic environment, short–term (acute) classification not possible

Hazardous to the aquatic environment, long–term (chronic) classification not possible

Cyclohexanone (108-94-1)	
LC50 - Fish [1]	527 mg/l
EC50 - Crustacea [1]	800 mg/l
Tetrahydrofuran (109-99-9)	
LC50 - Fish [1]	2160 mg/l
EC50 - Crustacea [1]	5930 mg/l
NOEC chronic fish	216 mg/l
Methyl ethyl ketone(MEK) (78-93-3)	
NOEC chronic algae	93 mg/l
Oxirane,2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis- (1675-54-3)	
EC50 - Crustacea [1]	1.7 mg/l
AV Adhesive 88	
Persistence and degradability	No data available

Bioaccumulative potential	No data available
Mobility in soil	No data available

Ozone classification not possible

13. Disposal Considerations

Residual Waste

If you would like to dispose of this chemical, you should properly dispose of this by yourself or ask qualified specific agents dispose of this according to related legislations and local regulations.If you would like to ask the agents dispose of this chemical, you should provide sufficient information on dangerousness and hazard of this chemical.

Contaminated Container and Packaging

Container should be recycled after cleaning or if you would like to dispose of container of this chemical, you should properly dispose of this by yourself or ask qualified specific agents dispose of this according to related legislations and local regulations. If you would like to ask the agents dispose of this container, you should provide sufficient information on dangerousness and hazard of this chemical in this container and information on ingredient and notice of container.

14. Transport Information

International regulations

Road transport (UN RTDG)	Marine transport (IMDG)	Air transport (IATA)
UN No.		
1133	**1133**	**1133**
UN official product name		
Adhesives	**ADHESIVES**	**Adhesives**
Classification of dangerous goods for transportation		
3	**3**	**3**
		
Packing group		
II	**II**	**II**
Environmental hazards		
Dangerous for the environment : No	**Dangerous for the environment : No** **Marine pollutant : No**	**Dangerous for the environment : No**

Marine Pollutants No

Special transport precautions Please refer to "Section 7" in detail,
Under loading, containers must be carefully handled to prevent damage of containers and must be fixed them tightly to prevent falling of containers.

15. Regulatory Information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

NOTICE : This SDS was made out as English translated version of the SDS based on the Japanese laws and regulations. Therefore, it was not applicable to the domestic distribution in the importing country.