SAFETY DATA SHEET

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1. Identification

* Product name Solvent Based Varnish Spray Clear

* Reference number 20601

* Company Washin Paint Co.,Ltd.

* Company address 2100-18 Kamiyoshiba Satte-shi Saitama-ken 340-0121 Japan

* Section concerned Engineering Department

* Person in change Takeyuki Kawashima

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* Product kind One-component polyurethane resin paint

* Principal use Wood paint

2. Hazards identification

[Classification]

	Category	Signal word				
Hazards	Hazard statement					
A	Category 1	Danger				
Aerosols	Extremely flammable aerosol.					
	Category 3	Warning				
Flammable liquids	flammable liquid and vapour.					
A	Not classified					
Acute toxicity Oral		·				
	Not classified					
Acute toxicity Dermal						
	Not classified					
Acute toxicity Gasas						
	Not classified					
Acute toxicity Vapours		1				
	Not classified					
Acute toxicity Mists						
	Category 2	Warning				
Skin corrosion/irritation	Causes skin irritation.					
	Not classified					
Serious eye damage/eye irritation	Troe oldcomed					
	Not classified					
Respiratory sensitization	Troe oldcomed					
	Not classified					
Skin sensitization	Troe oldcomed					
	Not classified					
Germ cell mutagenicity	Troe diagoniou					
	Not classified					
Carcinogenicity	1400 olassinoa	L				
	Not classified					
Reproductive toxicity	1400 olassinoa	L				
Specific target organ systemic toxicity	Category 3	Warning				
Single exposure	May cause respiratory irritation ;or May					
Specific target organ systemic toxicity	Category 2	Warning				
Repeated exposure	May causes damage to organs state all organs affecte					
	Not classified	,				
Aspiration hazard	Not classified					
Hazardous to aquatic environment	Category 2					
Acute	Toxic to aquatic life.	I				
Hazardous to aquatic environment	Category 2					
Chronic	Toxic to aquatic life with long lasting ef	fects.				
51.1.51.115	Classification not possible					
Hazardous to the ozone layer	Olassification flot possible					

- * If the signal word "Danger" applies, the signal word "Worning" should not appear.
- * For the details with "Specific target organ systemic toxicity", refer to "11.Toxicological information".

[Symbol]

Flame

Exclamation mark



Environment









[Precautionary statement]

(Prevention)

- * Obtain and understand special instructions before use.
- * Pressurized container: Do not pierce or burn, even after use.
- * Do not spray on an open flame or any white-hot material.
- * Keep away from ignition sources such as heat/sparks/open flame. No smoking.
- * Store container tightly and avoid release to the environment.
- * Prevent the electro static discharge. Ground a container/carrier receptacle and so on.
- * Use the tools that sparks don't come out.
- * Avoid breathing vapours/mist/spray.
- * Don't eat, drink or smoke when using this product.
- * Wear protective gloves and eye/face protection when it needs.
- * Wash hands thoroughly and gargle after handling.
- * Paint adhered cloth, paint sluge and sprayed dust have the fear of the spontaneous combustion, so be flooded them until it disposes or burns them up every time at work.

(Response)

- * In case of fire, use carbon dioxide/powder/foams for extinction.
- * If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.
- * If in eyes: Rince cautiously with water, get medical advice/attention.
- * If on skin or cloth: Wash with plenty of soap and water. Take off contaminated clothing and exchange it.
- * If skin irritation occurs, seek medical advice/attention.
- * If exposed or concerned: Get medical attention/advice.

(Strage)

- * Protect from sunlight and do not expose to temperatures exceeding 40 oC.
- * Store container tightly closed in the place which well-ventilated, cool and child doesn't reach.

(Disposal)

- * Don't dispose contents to the river and the sewage. Dispose after using them up.
- * Dispose container in accordance with local/regional/national regulation. Don't use another purpose.

3. Composition/information on ingradients

Property

Mixture

Product kind One-component polyurethane resin paint

Chemical name	Weight (%)	CAS No.	Chemical structure	Notice duty
additive	0~1	_	_	_
methyl isobutyl ketone	0~1	108-10-1	C6H12O	0
ethylbenzene	0.11	100-41-4	C8H10	0
1-butanol	0~1	71-36-3	C4H9OH	0
toluene	0.23	108-88-3	C7H8	0
xylene	0.26	1330-20-7	C8H10	0
mesitylene	1.6	108-67-8	C9H12	0
n-nonane	1~5	111-84-2	C9H20	0
Light aromatic solvent naphtha	10~20	64742-95-6	_	0
mineral spirit	10~20	8052-41-3	_	0
resin	10~20	_	_	_
dimethyl ether	40~50	115-10-6	C2H6O	0
_	_	_	_	_
_	_	_	_	_
_		_	_	_

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4. First-aid measures

(When swallowing)

- * Without making vomit by force, be rested and have a medical attention.
- * The vomit doesn't make swallow. Get medical attention.

(When inhaling)

- * Do the artificial respiration in case of breathing's being irregular or stopping.
- * The vomit doesn't make swallow.
- * Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.

(When adhering to the skin)

st Wipes up quickly with cloth and washes it off sufficiently using plenty of water and soap.

Don't use organic solvent, thinner and so on.

* If you get damage or feel pain, seek medical advice/attention.

(When entering eyes)

- * Wash for more than 15 minutes with a plenty of water at once.
- * Get a medical attention as fast as possible.

5. Fire-fighting measures

(Suitable extinguishing media)

* Water (), Carbon dioxide (O), Foams (O), Powder (O), Dry sand (), Other (),

(Specific hazards arising from the chemical)

* Liquid and vapour are extremely flammable.

If they expose to heat, flame and an oxidizer, there is danger of intense fire.

- * When heated, there is a fear of intense bust of container by expansion or resolution.
- * When burning, there is possibility to make carbon monoxide occur.

(Specific extinguishing method)

- * Tell Fire Service the place and the dangerous/hazardous property.
- * Prevent outflow being in water pipe or watercourse.
- * Wear respiratory-protective-equipment and protective-glove.
- * Remove combustibles quickly from the surrounding area.
- * Uses the suitable extinguishing media.
- * Do fire fighting from the windward.
- * In preparation for a intense bust of container, do fire fighting from a safe distance.

(Special protective equipment and precautions for fire-fighters)

- * Wear respiratory-protective-equipment, chemical-defense clothes/glove/boots,/glasses/mask as occasion demands.
- 6. Accidental release measures

(Personal precautions, protective equipment and emargency prosedures)

- * Lead personnel to the windward from outflow areas.
- * Avoid the inhalation of vapour. Avoid the contact to the skin and eyes. Promote ventilation.
- * Wear protective equipments (gloves, protective mask, apron and goggles).

(Environmental precautions)

- * Prevent outflow being in water pipe or watercourse.
- * When water pipe or watercourse are polluted, contact organs concerned.

(Methods and materials for containment and cleaning up)

- * Remove ignition sources. Prohibit smoking and fire. Use the tools which don't spark.
- * Collects outflow to the container which can be shut, and move it to the safe place.
- * Prevent outflow using dry sand, earth or other imcombustible material, and make absorb residue to collect it.
- st It may use water sprayer to absorb the diffusion of vapour.
- * Dispose wastes based on the regurations concerned.

7. Handling and storage

(Handring: Technical measure)

- * Handle this based on the related laws (Industrial Safety and Health Law, Fire Defense Law, etc.).
- * Forrow the operation-standard, keep working atmosphere below TLV, promote ventilation.
- * When in working, wear antistatic work clothing, shoes.
- * Remove ignition sources, prohibit smoking and fire, Use tools which don't spark.
- * Ground equipments (transport, dip, stirring liquid) and use explosion-proof type electric equipments.
- * After handling, wash hands with soap water. It should wash work clothing separately.

(Handring: Notice)

- * Ground equipments and use explosion-proof type electric equipments.
- * Avoid contact with strong oxidizing reagent.
- * It has a fear of causing a reaction by heating, acidic material and alkaline material.
- * Use the container which has no damage, no corrosion and no breakage.
- * Gather used containers to the decided safekeeping place.

(Storage)

- * Follow the Fire Defense Law and so on because of flammable liquid.
- * Protect from sunlight and do not expose to temperatures exceeding 40 oC.
- * Don't store this product in a humid place to prevent bust by rust.
- * Store container tightly closed in the place which well-ventilated and cool.

8. Exposure controls/personal protection

Standard control concentration, threshold limit value etc.

(Control parameters e.g. occupational exposure limit values or biological limit values)

Chemical name	Standard control concentration	Tthreshold limit value	ACGIH (TLV)	PRTR
additive	_	_	_	_
methyl isobutyl ketone	20ppm	50ppm	20ppm	_
ethylbenzene	20ppm	50ppm	20ppm	Class 1-53
1-butanol	25ppm	50ppm	20ppm	_
toluene	20ppm	50ppm	20ppm	Class 1-300
xylene	50ppm	50ppm	100ppm	Class 1-80
mesitylene	_	25ppm	25ppm	Class 1-297
n-nonane	_	200ppm	200ppm	_
Light aromatic solvent naphtha	_	_	_	_
mineral spirit	_	_	100ppm	_
resin	_	_	_	_
dimethyl ether	_	_	_	_
_	_	_	_	_
_	_	_	_	_
_	_	_	_	_

[Equipment measure]

- * Set up sealed systems or local ventilation systems.
- * Set up safe shower, bathroom and face washing near the work area, and display the position.
- * Show the signs such like "INFRAMABLES" or "NO UNAUTHORIZED ENTRY".
- * When handling flammable liquid, there needs explosion-proof type ventilation equipments/systems.

(Protection measure)

- * As occasion demands, wear following guards appropriately.
 - air-supplied respirator, air SCBA, oxygen SCBA, chemical-cartridge respirator, protective glasses, protective gloves, protective boots, protective clothing,
- * Check protective equipments regularly by the check list.
- * Don't eat, drink or smoke when using this product.
- * Wash hands with soap before eat, drink or smoke.
- * The person who showed the symptom of the asthma once should not contact this chemical because he may cause the same symptom.
- * Contact lens bring about special harm.
 - Don't use soft contact lens because it absorbs irritant and has possibility to concentrate them.
- * Wear chemical-proof type protective gloves and antistatic protective shoes.

9. Physical and chemical properties

(Content fluid Physical state : Liquid)

Colour	Transp	arent pale	e brown	Density	0.90	$g/mL(25^{\circ}C)$	Flash point	40	°C
Odour	Solve	nt odour		PH	Not corre	espond	Ignition point	210	၁
Boiling point Lo	wer	150	°C	Solbility	Not sol. I	n water	Flammability or exp	losive limit	S
Boiling point Up	per	210	°C	Partiton coe	fficient n-oc	tanol/water	Lower	1	%
Vapour pressu	ire	1000	Pa (ref.)		No data		Upper	7	%

(Propellant (dimethyl ether))

Colour	Transparent cold	orless	Density	0.66	g/mL(25°C)	Flash point	-41	°C
Odour	Chloroform like	odour	PH	Not corre	espond	Ignition point	350	°C
Boiling point	-24.8	°C	Solbility	No data		Flammability or explos	sive limit	s
			Partiton coeff	icient n-oc	tanol/water	Lower	3.4	%
Vapour pressur	e 590616	Pa (ref.)		No data		Upper	26.7	%

10. Stability and reactivity

(Chemical stability)

- * The product seems to be stable.
- * It has a possibility of the dangerous/harmful reaction.
- * It reacts to the oxidizing materials.
- * Paint adhered cloth, paint sluge and sprayed dust have the fear of spontaneous combustion when it oxidize.

(Conditions to avoid)

- * Heating, Contact with the avoidance, Ignition source.
- * Degradation product which has dangerous/hazardous property.
- * Vapour of organic solvent.
- * Heat, light, metal powder and peroxide.

11. Toxicological information

Chemical name	Acute toxicity					
Chemical name	Oral	Dermal	Gasas	Vapours		
additive	Classification not possible	Classification not possible	Not applicable	Classification not possible		
methyl isobutyl ketone	Not classified	Not classified	Not applicable	Category 3		
ethylbenzene	Not classified	Not classified	Not applicable	Category 4		
1-butanol	Not classified	Not classified	Not applicable	Classification not possible		
toluene	Not classified	Not classified	Not applicable	Category 4		
xylene	Not classified	Category 4	Not applicable	Not classified		
mesitylene	Not classified	Classification not possible	Not applicable	Classification not possible		
n-nonane	Classification not possible	Classification not possible	Not applicable	Category 4		
Light aromatic solvent naphtha	Not classified	Classification not possible	Not applicable	Classification not possible		
mineral spirit	Not classified	Classification not possible	Not applicable	Classification not possible		
resin	Not classified	Not classified	Not applicable	Not classified		
dimethyl ether	Classification not possible	Classification not possible	Not classified	Not applicable		
_	-	-	-	_		
_	-	-	-	_		
_	-	-	-	_		

Chemical name	Acute toxicity Mists	Skin corrosion/ irritation	Serious eye damage/ eye irritation	Respiratory sensitization
additive	Classification not possible	Classification not possible	Classification not possible	Classification not possible
methyl isobutyl ketone	Classification not possible	Not classified	Category 2B	Classification not possible
ethylbenzene	Classification not possible	Not classified	Category 2B	Classification not possible
1-butanol	Classification not possible	Category 2	Category 2A	Classification not possible
toluene	Classification not possible	Category 2	Category 2B	Classification not possible
xylene	Classification not possible	Category 2	Category 2	Classification not possible
mesitylene	Not classified	Category 2	Category 2B	Classification not possible
n-nonane	Not classified	Category 2	Category 2B	Classification not possible
Light aromatic solvent naphtha	Classification not possible	Classification not possible	Classification not possible	Classification not possible
mineral spirit	Classification not possible	Category 2	Not classified	Classification not possible
resin	Not classified	Not classified	Not classified	Not classified
dimethyl ether	Not applicable	Classification not possible	Classification not possible	Classification not possible
_	-	-	-	-
_	-	-	-	-
_	-	-	-	-

Chemical name	Skin sensitization	Germ cell mutagenicity	Carcinogenicity	Reproductive toxicity
additive	Classification not possible	Classification not possible	Classification not possible	Classification not possible
methyl isobutyl ketone	Classification not possible	Classification not possible	Category 2	Classification not possible
ethylbenzene	Classification not possible	Not classified	Category 2	Category 1B
1-butanol	Classification not possible	Classification not possible	Classification not possible	Classification not possible
toluene	Not classified	Not classified	Not classified	Category 1A
xylene	Classification not possible	Not classified	Not classified	Category 1B
mesitylene	Classification not possible	Classification not possible	Classification not possible	Classification not possible
n-nonane	Classification not possible	Classification not possible	Classification not possible	Classification not possible
Light aromatic solvent naphtha	Classification not possible	Classification not possible	Classification not possible	Classification not possible
mineral spirit	Not classified	Not classified	Classification not possible	Not classified
resin	Not classified	Not classified	Not classified	Not classified
dimethyl ether	Classification not possible	Classification not possible	Classification not possible	Classification not possible
_	-	-	-	-
_	-	-	-	-
_	_	-	-	-

Chemical name	Specific target organ system	ic toxicity	— Aspiration hazard
Onemical name	Single exposure	Repeated exposure	Aspiration nazaru
additive	Classification not possible	Classification not possible	Classification not possible
methyl isobutyl ketone	Category 3	Category 1	Classification not possible
ethylbenzene	Category 3	Category 2	Category 1
1-butanol	Category 3	Category 1	Classification not possible
toluene	Category 1, 3	Category 1	Category 1
xylene	Category 1, 3	Category 1	Category 1
mesitylene	Category 3	Category 1	Category 1
n-nonane	Category 2, 3	Classification not possible	Category 1
Light aromatic solvent naphtha	Classification not possible	Classification not possible	Classification not possible
mineral spirit	Category 3	Category 2	Category 1
resin	Not classified	Not classified	Not classified
dimethyl ether	Category 3	Classification not possible	Classification not possible
_	_	-	-
_	-	-	-
_	-	-	-

^{*} Hazards information is peculiar to the chemicals. It doesn't change according to the content.

12. Ecological information

Chemical name	Hazardous to aquatic envi	ronment		
Chemical name	Acute	Chronic	Ozone layer	
additive	Classification not possible	Classification not possible	Classification not possible	
methyl isobutyl ketone	Not classified	Not classified	Classification not possible	
ethylbenzene	Category 1	Category 2	Classification not possible	
1-butanol	Not classified	Not classified	Classification not possible	
toluene	Category 2	Category 3	Classification not possible	
xylene	Category 2	Category 2	Classification not possible	
mesitylene	Category 2	Category 2	Classification not possible	
n-nonane	Category 1	Category 1	Classification not possible	
Light aromatic solvent naphtha	Classification not possible	Classification not possible	Classification not possible	
mineral spirit	Category 1	Category 1	Classification not possible	
resin	Not classified	Not classified	Classification not possible	
dimethyl ether	Not classified	Not classified	Classification not possible	
_	-	-	-	
_	-	-	-	
_	-	-	-	

* Hazards information is peculiar to the chemicals. It doesn't change according to the content.

* Residual property/resolvability

There are not data as a mixture.

* Creature accumulation characteristics

There are not data as a mixture.

f * Movement degree in the soil

There are not data as a mixture.

13. Disposal consideration

- * Requests disposal to the agency who has solid-waste-treatment license.
- * Even if all the ingredient was used, there is a fear of bust, when this product is entered into the fire.
- * When disposing container, dispose after removing a content fully.
- * Take care of fire and aspiration of mist when degassing.
- * Dispose of contents/container in accordance with local/regional/national regulation.

14. Transport information

(National regulation)

* UN number 1950 * Guideline number 126

* Land transportation Follow the transporting way to be specified in the Industrial Safety and Health Law.

Fire Defense Law and so on.

* Air transportation Under current laws, aerosols do not allow of air transportation.

* Marine transpotation Follow the transporting way to be specified in the Ship Safety Law.

* Fire Defense Law Annex class 4-2 Danger class

(International regulation)

* UN number 1950

* UN classification Class 2 AEROSOLS

(Special precautions)

- * In case of transportation, carry "transportation notice" or "Yellow Card".
- * Confirm container tightly closed and no leaking before transportation.
- * In case of transportation, fix a container tightly and do not expose to temperatures exceeding 40°C.

15. Regulatory information

* Industrial Safety and Health Law

Dangerous goods

Ordinance on the Prevention of Organic Solvent Poisoning

Ordinance on Prevention of Lead Poisoning

Ordinance on Prevention of Hazards due to Specified Chemical Substances

Not applicable

* Pollutant Release and Transfer Register Law

* Poisonous and Deleterious Substances Control Law

* Fire Defense Law

Annex class 4-2

* Ship Safety Law Dangerous goods (High pressure gas)

* Offensive Odor Control Low Listed

16. Other information

(Main reference)

- * National Institute of Tecnology and Evaluation Opend data
- * Japan Paint Manufacturers Association

Raw material data base

The guide book for the creating SDS and label [mixture (paint)] Second edition Model MSDS and label samples [mixture (paint)]

* Japan Industrial Safety and Health Association

The OJT text for the MSDS of mixture (chemicals) by GHS compatible

- * "YOZAI Pocket Book"
- * "KIKEN BOSAI KYUKYU BINRAN"
- * International Chemical Safety Cards (ICSC)
- * SDS of raw materials

(Notice)

- * This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.
- * It should not therefore be construed as guaranteeing any specific property of the product.
- * In case of use, set a safe conditions for handling.
- * All chemicals have possibility of unknown hazards, so it needs a due attention for handling.
- * Applicable scope of this document is only in Japan.