SAFETY DATA SHEET

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1. Identification

* Product name Water-Soluble Luster Varnish Spray

* Reference number 20701

* 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 Water-soluble resin paint

* Principal use Wood paint

2. Hazards identification

[Classification]

Hazards	Category	Signal word				
Hazarus	Hazard statement					
Aerosols	Category 1	Danger				
Aerosois	Extremely flammable aerosol.	Extremely flammable aerosol.				
[]	Category 2	Danger				
Flammable liquids	Highly flammable liquid and vapour.	·				
A	Not classified					
Acute toxicity Oral		,				
A	Not classified					
Acute toxicity Dermal						
	Not classified					
Acute toxicity Gasas						
	Not classified					
Acute toxicity Vapours						
	Not classified					
Acute toxicity Mists	THOSE GLASSITION	I				
	Not classified					
Skin corrosion/irritation	Not classified					
	Category 2	Warning				
Serious eye damage/eye irritation	Causes serious eye irritation.	warning				
	Not classified					
Respiratory sensitization	NOT Classified					
	N I I 'C' I	1				
Skin sensitization	Not classified					
	N I I 'C' I	1				
Germ cell mutagenicity	Not classified					
	N					
Carcinogenicity	Not classified					
		1				
Reproductive toxicity	Category 2	Warning				
· ·	Suspected of damaging fertility or the					
Specific target organ systemic toxicity	Category 1	Danger				
Single exposure	Causes damage to organs or state all	organs affected if known.				
Specific target organ systemic toxicity	Category 1	Danger				
Repeated exposure	Causes damage to organs state all organs affected	d, if known through prolonged or repeated exposure.				
Aspiration hazard	Not classified					
Aspiration nazaru						
Hazardous to aquatic environment	Not classified					
Acute						
Hazardous to aquatic environment	Not classified					
Chronic		·				
	Classification not possible					
Hazardous to the ozone layer		I				

- * 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











[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.

(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

Water-soluble resin paint

Chemical name	Weight (%)	CAS No.	Chemical structure	Notice duty
additive	0~1	_	_	_
1-butanol	1~5	71-36-3	C4H9OH	0
water	5~10	7732-18-5	H2O	_
resin	5 ~ 10	_	_	_
2-propanol	20~30	67-63-0	СЗН7ОН	0
dimethyl ether	60~70	115-10-6	C2H6O	0
_	_	_	_	_
_	_	_	_	_
_	_	_	_	_
_		_	_	_

20701

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)

 $\begin{tabular}{ll} \star Wipes up quickly with cloth and washes it off sufficiently using plenty of water and soap. \\ \end{tabular}$

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.
- * 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	_	_	_	_
1-butanol	25ppm	50ppm	20ppm	_
water	_	_	_	_
resin	_	_	_	_
2-propanol	200ppm	400ppm	200ppm	_
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	Trans	parent col	orless	Density	0.88	$g/mL(25^{\circ}C)$	Flash point	17	°C
Odour	Solve	ent odour		PH	Not corre	espond	Ignition point	350	Ωຶ
Boiling point Lo	wer	82	°C	Solbility	Sol. In wa	ater	Flammability or exp	losive limit	s
Boiling point Up	per	118	°C	Partiton co	efficient n-oc	tanol/water	Lower	1.5	%
Vapour press	ure	4266	Pa (ref.)		No data		Upper	12	%

(Propellant (dimethyl ether))

(1 repending (dimedify editor / /								
Colour	Transparent cold	orless	Density	0.66	$g/mL(25^{\circ}C)$	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 exp	olosive limit	s
			Partiton co	Partiton coefficient n-octanol/water		Lower	3.4	%
Vapour pressure 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.
- * No other reactions were informed.

(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	Acute toxicity					
Orientical name	Oral	Dermal	Gasas	Vapours			
additive	Classification not possible	Classification not possible	Not applicable	Classification not possible			
1-butanol	Not classified	Not classified	Not applicable	Classification not possible			
water	Not classified	Not classified	Not applicable	Not classified			
resin	Not classified	Not classified	Not applicable	Not classified			
2-propanol	Not classified	Not classified	Not applicable	Not classified			
dimethyl ether	Classification not possible	Classification not possible	Not classified	Not applicable			
_	-	-	-	-			
_	-	-	-	-			
_	-	-	-	_			
_	_	-	-	_			

Chemical name	Acute toxicity	Skin corrosion/		Respiratory
	Mists	irritation	eye irritation	sensitization
additive	Classification not possible	Classification not possible	Classification not possible	Classification not possible
1-butanol	Classification not possible	Category 2	Category 2A	Classification not possible
water	Not classified	Not classified	Not classified	Not classified
resin	Not classified	Not classified	Not classified	Not classified
2-propanol	Classification not possible	Not classified	Category 2	Classification not possible
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
1-butanol	Classification not possible	Classification not possible	Classification not possible	Classification not possible
water	Not classified	Not classified	Not classified	Not classified
resin	Not classified	Not classified	Not classified	Not classified
2-propanol	Classification not possible	Classification not possible	Classification not possible	Category 2
dimethyl ether	Classification not possible	Classification not possible	Classification not possible	Classification not possible
_	_	_	_	-
_	_	_	_	-
_	_	_	_	-
_	-	_	_	-

Chemical name	Specific target organ system	Specific target organ systemic toxicity		
Onemical name	Single exposure	Repeated exposure	Aspiration hazard	
additive	Classification not possible	Classification not possible	Classification not possible	
1-butanol	Category 3	Category 1	Classification not possible	
water	Not classified	Not classified	Not classified	
resin	Not classified	Not classified	Not classified	
2-propanol	Category 1, 3	Category 1, 2	Classification not possible	
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	Hazardous to aquatic environment				
Gnemical name	Acute	Chronic	Ozone layer			
additive	Classification not possible	Classification not possible	Classification not possible			
1-butanol	Not classified	Not classified	Classification not possible			
water	Not classified	Not classified	Classification not possible			
resin	Not classified	Not classified	Classification not possible			
2-propanol	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

* Creature accumulation characteristics

* Movement degree in the soil

There are not data as a mixture.

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 4-1 Water-soluble Danger class II

(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 Flammable liquid

Ordinance on the Prevention of Organic Solvent Poisoning

Class-2

Ordinance on Prevention of Lead Poisoning

Ordinance on Prevention of Hazards due to Specified Chemical Substances

Not applicable

* Pollutant Release and Transfer Register Law Not listed

* Poisonous and Deleterious Substances Control Law Not applicable

* Fire Defense Law
Annex class 4-1 Water-soluble

* Ship Safety Law
Dangerous goods (High pressure gas)

* Offensive Odor Control Low Not 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.