



Material Safety Data Sheet

JUNGBU ESCHEM CO., LTD.

IDENTITY (As used on label and list)

UVICHEM CVM890SH TOP MATT(UPGRADE)

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Version :

SECTION 1. Product & Company identification

Manufacture's Name : JUNG BU ESCHM CO., LTD.

Address : 496, SHINBONG-RI, YEONIN-MYEON, ASAN-CITY, CHUNGNAM, KOREA

Phone of the company : +(82-32)676-2680

Emergency phone : +(82-32)676-2680

Product Name : UVICHEM CVM890SH TOP MATT(UPGRADE) Fax. No. : +(82-32)676-2682

SECTION 2. Composition/Information on Ingredients

Component

(Specific Chemical Identity : Common Names)

	CAS No.	Conc.% (W/W)
Ethyl Acetate	141-78-6	5 ~ 15
N-Buthyl acetate	123-86-4	5 ~ 15
MIBK	108-10-1	5 ~ 15
Photoinitiators	-	1 ~ 5
Acrylic Monomer	-	10 ~ 20
Modified Acrylic Oligomers	-	10 ~ 20
Acrylic resin	-	5 ~ 15
Additive	-	25 ~ 35
Matting Agent	-	0 ~ 1

SECTION 3. Hazards Identification



INHALATION

– May cause sore throat and difficulty breathing.

SKIN CONTACT

– may cause mild irritation.

EYE contact

– may cause redness and swelling of the eyes.

INGESTION

– may cause vomiting, diarrhea and stomach pain.

※ Other hazardous components.

– When inspirations, body temperature may be increased, breathing-difficulties, blue-skins and lung-damages may be incurred.

– Hazardous informations on product : no tests for product stability.

SECTION 4. First-Aid Measures

Skin Contact	Eye Contact	Inhalation	Ingestion
Remove contaminated clothing and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains. Get medical attention immediately.	Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains.	Remove from exposure area to fresh air immediately. Perform artificial respiration if necessary. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.	If vomiting occurs, keep head lower than hips to help prevent aspiration. Treat symptomatically and supportively.

- If abnormal bad symptoms going on, Consult immediately with the doctor.
- No food–stuffs available when unconscious patients.

- ♠ Informations for doctor.
- No specified antidote.
 - Treat symptomatically and supportively.

SECTION 5. Fire–Fighting measures

Fire & Explosion hazard				Fire extinguishing media	
<p>Medium fire hazard when exposed to heat or flame. It may be exploded when mixed vapor and air. The vapors can be exploded after moving far away from the fire-sources.</p>				<p>Remove container from fire area if you can do it without risk. Do not scatter spilled material with high-pressure water stream. Dike fire-control water for later disposal (1993 Emergency Response Guidebook, RSPA P5800.6, Guide Page 31)</p>	
Flash point	29.0℃	Explosion limit	MAX:N/A		
Ignition point	N/A		MIN:N/A		
Hazardous ingredients when burnings.	NOx, CO, SO2, etc. unknown organic/inorganic ashes.			<p>Use agents suitable for type of surrounding fire. Avoid breathing hazardous vapours, keep upwind.</p>	
Class of fire-fighting	—			Useless extinguishing agents.	—

SECTION 6. Accidental Release Measures

(1) OCCUPATIONAL SPILL

– Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into clean, dry containers for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry.

(2) WATER SPILL

– The California Safe Drinking Water and Toxic Enforcement Act of 1986 prohibits contaminating any known source of drinking water with substances known to cause cancer and/or reproductive toxicity.

(3) OTHERS

– Escape from the confined space in which leakages are incurred. When trying to come into the confined spaces, be sure about no–explosion therein.

Supply sufficient of fresh air and operates mechanical ventilations.

Where large scale of leakages, keep properly store those leaked components by sand–bags and/or building of sand–banks etc.

SECTION 7. Handling & Storage

HANDLING.	STORAGE AND PRECAUTIONS.
<ul style="list-style-type: none"> – Handle with explosion–proof equipments. – To ventilate and/or supply sufficient fresh air in order To prevent explosions by accumulated solvent–vapours. – Avoid contact with skin, eyes, mist–vapours and vapour breathing. 	<ul style="list-style-type: none"> – As this contains solvents, solvent–vapours are heavier than air and, thus, the vapours spread along with the bottom areas. – the vapours may be exploded when mix–up with airs. – To be carefully handled not To be damaged

<ul style="list-style-type: none"> – Take personal equipments as per section-8 with warning marks. – Do not take waters, foods and smokings in the storages and warehouses. – Take off all electric plugs, fire-sources and spark-sources. – Always connect earth-plug when movement of products or pouring of solvents. 	<ul style="list-style-type: none"> or turn-off and tear-off. – Do not handle fire-sources and/or smokings in the storage. – Store in a dry and cool areas, having no direct sunlights, with good ventilations. – Always employee explosion-proof type lighting equipments and fork-lifts.
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SECTION 8. Exposure Controls/Personal Protection

Exposure prevention method	Personal equipment & putting method
<ul style="list-style-type: none"> – Partial ventilations and/or proper vents To be operated. – All ventilation systems/equipments To be explosion-proof ones. – Where no ample supplies of fresh air in the storages/warehouses, proper breathing apparatus To be taken. 	<p>(1) Respiratory organ protection. To put on with toxic-proof mask, air-supply masks for breathing organ protections.</p> <p>(2) Eyes protection. To always put on eye-protection glasses.</p> <p>(3) Hand protection. Always put on proper gloves for agitations and handling.</p> <p>(4) Body protection. Do not expose your hands, arms, bodies directly to vapours and polluted air.</p>
Emergency washes	<p>Do not expose your hands, arms, bodies directly to vapours and polluted air.</p> <p>It shall be very helpful for you to take skin-protection lotions on your face and neck, where used to be easily exposed.</p> <p>Do not use Vaselines made of petroleum-jelly.</p>
<ul style="list-style-type: none"> – Always stand-by emergent wash tools and equipments, Where such solvent-vapours are vaporized, and/or skins/eyes To be easily exposed To such vapours. 	

SECTION 9. Physical & Chemical Properties

(1) Appearance	liquid
(2) Odor	Irritating odor
(3) pH	N/A
(4) Solubility	N/A
(5) Boiling point	N/A
(6) Melting point	N/A
(7) Explosion	N/A
(8) Oxidation	N/A
(9) Vapor pressure	Vapors are Heavier than Air
(10) SP/GR(25℃)	0.95± 0.02
(11) Viscosity(25℃)	60±2 KU

SECTION 10. Stability & Reactivity

(1) Chemical stability	Stable at normal temperatures, pressures, and in a closed container.
(2) Materials to be avoided	Strong-acids, Strong-alkalis, Strong-oxidizers Others
(3) Hazardous decomposition	Thermal decomposition products may include toxic and hazard fumes of hydrogen chloride and oxides of carbon.

(4) Toxic components when reactions(Temp & lights)	Hazardous polymerization has not been reported to occur under normal temperatures and pressures.
SECTION 11. Disposal consideration	
<ul style="list-style-type: none"> - To abide by authority's requirements and regulations. - Don't throw into drainage and river. - To dispose the empty cans and wastes as per regulations. 	
SECTION 12. Toxicological information	
<ul style="list-style-type: none"> - May affect to liver, kidney and central nerve systems when exposed in excess of the allowable concentration. - May cause head-aches, vomiting, dizziness, tiredness and sleepiness, and rarely cause unconsciousness. - Possibly, dry-skins and non-allergy skin disease may be experienced when repeated and consecutive handling. - Some curable aches and/or irritations will be experienced when affect to eyes with liquids. 	
SECTION 13. Ecological information	
<p>(1) Environmental hazards : air-pollution, water-pollution, soil-pollution, sea-pollution.</p> <p>(2) To be careful for handling as effects to environments when leakages/disposal.</p> <p>(3) Remains and Decomposition : It does not decompose rapidly. Major components may be remained with products in the environment and some part of them may be vapourized.</p> <p>(4) Accumulations in animals and plants : may be accumulated in physical body.</p>	
SECTION 14. Transport information	
<p>United Nations classification : Class 3/ grade III / inflammability liquid</p> <p>United Nations number : 1263(paint)</p> <p>Land transportation : [Carriage container]Use carriage containers specified by Fire Defence Law.</p> <p>[Container indication]Indicate required terms such as classification number,commodity, quantity, notices, and so on of Fire Defence Law.</p> <p>[Loading method]Mixed loading with substances of Dangerous Articles 1 or 6category and which may cause disaster is strictry prohibited.Load to avoid overturn, fall or damage and make sure toprevent load collapse.</p> <p>[Others]In case of transportation by vehicles and so on, the consi-gner shall issue a yellow card to the tranporter.</p> <p>Follow clauses specifide in Law for Safety of Vessels.</p> <p>Follow clauses specifide in Aviation Law.</p>	
SECTION 15. Regulatory information	
Domestic regulations	Domestic and Foreign laws

- Product name, component and ingredients, physical effects, storages, precautions and emergent action/disposals as per "Industry Safety & Health Act" article - 39.
- Industry Safety & Health Act-41.
- Fire-Fighting Act - 4.

- [USA] - TSCA
- CERCLA Art.-103.
 - SARA #302/304/313.
 - SARA #311/312.
 - California proposal-65.

SECTION 16. Other information

- This MSDS informations are based upon the Ministry of Labour regulation No. 1966-12, Industry Safety & health Act, Fire-fighting Act and our knowledges.
- References.
 - MSDS Data : Ministry of Labour No. 96-12 of April/1996.
 - MSDS translation guideline.
 - Industry Safety Guide Book. (Ministry of labor, Dec/1994).
 - Toxic material index. (Aug/1990).
 - MSDS compiling guides. (Feb/1996).
- It requires sufficient precautions as the MSDS informations are not perfect.
- It is to be understood that the MSDS informations are only based upon to the best of our belief and knowledges and, thus, the MSDS informations are not for our undertakings of their correctness and safety.
 - As all chemical materials have latent and unconfirmed toxic components, they have to handle and/or treat with utmost keen attentions and due delicate precautions.
 - The MSDS informations are subject to change with or without prior notices.