

SAMHWA PAINTS		MATERIAL SAFETY DATA SHEET	Date of Issue		2020.04.16	
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1. CHEMICAL PRODUCT INFORMATION

Product Name	STARCLEAR SC9410	Color	
Application	CLEARCOAT FOR AUTOMOTIVE REFINISH		
Hazard	Harmful / Flammable Liquid		
Manufacture	SAMHWA PAINTS IND.CO.,LTD.	Telephone NO.	82-31- 499 - 0394
Address	178, Byeolmang-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea	Department	

2. HAZARDS IDENTIFICATION

1. Classification of the substance

- ① FLAMMABLE LIQUIDS - category 3
- ② SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - category 1
- ③ EYE DAMAGE/IRRITATION - category 2 (Irritating to eye)
- ④ SKIN CORROSION/IRRITATION - category 2 (Skin irritant)
- ⑤ SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - category 1
- ⑥ REPRODUCTIVE TOXICITY - category 2

2. GHS warning label elements, including precautionary statements



① Symbol :

② Signal word : Danger

③ Hazard statements : Causes damage to organs (Specific target organ-stomach, lung, heart) through prolonged or repeated exposure
 Causes serious eye irritation
 Suspected of damaging fertility or the unborn child
 Flammable liquid and vapour
 Causes skin irritation
 (Specific target organ-stomach, lung, heart) Causes damage to organs

④ Precautionary statements :

Prevention- Do not handle until all safety precautions have been read and understood.
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/etc/ equipment.
 Obtain special instructions before use.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Keep container tightly closed.
 Take precautionary measures against static discharge.
 Do not eat, drink or smoke when using this product.
 Wash thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use only non-sparking tools.

Response- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lense, if present and easy to do. Continue rinsing
 Take off contaminated clothing and wash it before reuse.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation occurs: Get medical advice/attention.
 IF exposed: Call a POISON CENTER or doctor/physician.
 IF ON SKIN: Wash with plenty of soap and water.

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④ Precautionary statements :

- Response- Specific treatment (see on this label).
 In case of fire: Use fire extinguisher for extinction.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Get medical advice/attention if you feel unwell.
- Storage- Store in a well-ventilated place. Keep cool.
 Store locked up.
- Disposal- Dispose of contents/container to relate laws and regulations.

3.CHEMICAL COMPOSITION

Chemical Name	CAS NO.	Portion(%)	Remarks
3-Ethoxypropanoic acid ethyl ester	763-69-9	1 ~ 10%	
Acetone	67-64-1	1 ~ 10%	
Dimethyl carbonate	616-38-6	11 ~ 20%	
Xylene	1330-20-7	11 ~ 15%	
n-Butyl acetate	123-86-4	11 ~ 20%	
Styrene, n-butyl methacrylate, n-butyl acrylate, methyl methacrylate, 2-hydroxyethyl methacrylate, methacrylic acid copolymer	104318-70-9	11 ~ 20%	
Trade secrets	--	21 ~ 30%	

4.HEALTH HAZARD INFORMATION

- Eye contact
 Wash off immediately with plenty of water, also under the eyelids, for at least 20 minutes.
 Call a physician immediately.
- Skin contact
 Remove the contaminated clothes and the skin will be washed with water and soap.
 Do not use solvents.
- Inhalation
 Move to fresh air and if he/she not breathes perform artificial respiration.

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4.HEALTH HAZARD INFORMATION

Consult a physician if necessary.

4. Ingestion

Do not induce vomiting unless it is indicated by medical personnel.

Never give anything by oral tract to an unconscious. Get medical attention if symptoms appear.

5. Note to physician

Very small quantities of the product reached in lungs may be fatale. Ingestion of the product may cause chemical irritation that may diffuse to lungs and cause edema. Check carefully the victim and apply intubations in all ingestion cases for all important amounts.

5.FIRE FIGHTING MEASURES

1. Flash point : 30 °C

2. Ignition temp : Not determined

3. Upper expolosion limit / Lower explosion limit : Not determined

4. The Fire Service Act : Fourth grade 2nd.Petroleum

5. Fire extinguisher : CO2, Powder, Halogen Fire extinguisher and Sand etc.

6. Fire and explosion Method of extinguishing and equipment:

Wear suitable protective equipment Use product with caution around heat, sparks, pilot lights, static electricity, and open flame.

Due to vapor is heavier than air, keep the distance from the ignition source pour into the fresh air.

Remove promptly flammable material. Put out a fire at once with prepared fire extinguisher.

7. Hazardous materials in combustion:

Could be generated complexed mixture like solid and gas containing CO, SO2 etc.

Unidentified organic and inorganic compound.

8. Extinguishing method which must not used for safety : Not applicable

6.ACCIDENTAL RELEASE MEASURES

1. Personal precautions

Evacuate useless personnel, isolate the heat and flame sources, ventilate and wet the area if is possible.

All personnel must be protected against vapours inhalation and against skin and eyes contact.

2. Methods for cleaning up

Absorb with dry earth, sand or other non-combustible material and precede according decontamination regulation.

Recovered product will be stored in metallic drums with removable lid or metallic containers, which will be sent to incineration.

3. Environmental precautions

Do not let the product to reach water, drain and earth. Prevent the extending in soil.

Prevent entry into sewers, basements or confined areas; dike if needed

7.HANDLING AND STORAGE

1. Handling

Avoid contact with skin or eyes. Use only up well-ventilated areas.

Avoid breathing vapor. Do not take internally. Take precautionary measures against static is charges.

2. Storage

The product must be kept in original container tightly closed. Store between 5~35°C in dry, well-ventilated place away from source of heat, ignition and direct sunlight.

Solvent vapours are heavier than air and spread along floors. Vapours may form explosive mixtures. No smoking.

3. Other precautions

Emergency showers and eye wash stations should be readily accessible.

Adhere to work practice rules established by government regulations

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8.EXPOSURE CONTROLS/PERSONAL PROTECTION

1. Exposure limit values

Chemical Name	Cas No	Interior provision	ACGIH
3-Ethoxypropanoic acid ethyl ester	763-69-9	No data	No data
Acetone	67-64-1	TWA : 500 ppm 1188 mg/m ³ STEL : 750 ppm 1782 mg/m ³	TWA 500 ppm
Dimethyl carbonate	616-38-6	No data	No data
Xylene	1330-20-7	TWA : 100 ppm 435 mg/m ³ STEL : 150 ppm 655 mg/m ³	TWA 100 ppm
n-Butyl acetate	123-86-4	TWA : 150 ppm 710 mg/m ³ STEL : 200 ppm 950 mg/m ³	TWA 150 ppm
Styrene, n-butyl methacrylate, n-butyl acrylate, methyl methacrylate, 2-hydroxyethyl methacrylate, methacrylic acid	104318-70-9	No data	No data
Other(Technical secrets)	-	No data	No data

2. Environmental exposure control

Technical conditions regarding atmosphere protection. Determination of pollutants emission produced by stationary sources rules.

3. Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

4. Eye protection: Wear eye/face protection such as chemical goggles or face shield

5. Hand protection: For prolonged or repeated contact use solvent protective gloves. Barrier reams may help to protect the exposed areas of hand. However they should not be applied once exposure has occurred. Hand should be washed after contact

6. Skin protection: Personnel should wear protective clothing and antistatic footwear.

7. Additional: Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water

9.PHYSICAL AND CHEMICAL PROPERTIES

1. Appearance : colorless and transparent liqu

2. Odor : solvent specific

3. pH : Not applicable

4. Solubility : Water-insoluble

5. Boiling point : No data

6. Melting point : No data

7. Explosive properties : No data

8. Oxidising properties : No data

9. Vapor pressure :No data

10. Specifice gravity : 0.981

11. Partition coefficient : No data

12. Vapor density : No data

13. Viscosity(25℃) : 16s5(FC#4)

14. Molecular weight : No data

10.STABLITY AND REACTIVITY

1. Chemical stability

The product is stable if is kept in original recipient and according with recommendation.

2. Condition to avoid

Avoid all possible sources of heat, electrostatic discharges, ignition(spark or flame).

Avoid storage at temperature higher than 35℃ and direct exposure in the sunlight.

3. Materials to avoid

Strong oxidative substances, strong acid, and alkaline solutions may give exothermic reactions in contact with this product.

4. Hazardous decomposition products

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10. STABILITY AND REACTIVITY

Thermo oxidative decomposition gives carbon monoxide, carbon dioxide, nitrogen oxides and a dense smoke, which contain other unidentified decomposition products. If this product is heated up to its decomposition temperature may lead to explosion.

11. TOXICOLOGICAL INFORMATION

1. Toxicity Information

Chemical Name	LD50.Oral	LD50.Skin	LD50.Inhalation (gas)	LD50.Inhalation (vapour)	LD50.Inhalation (mist)
3-Ethoxypropanoic acid ethyl ester	LD50 = 3200 mg/kg Rat	LD50 = 10000 mg/kg rabbit	No data	No data	No data
Acetone	LD50 = 5280 mg/kg Rat (EHC(1990)).	LD50 = 12870 mg/kg rabbit	Steam LC50 = 32000 ppm Rat	Steam LC50 = 32000 ppm Rat	Steam LC50 = 32000 ppm Rat
Dimethyl carbonate	LD50 = 13000 mg/kg Rat	LD50 = 5000 mg/kg Rabbit	LC50 = 140 mg/ℓ 4 hr Rat	LC50 = 140 mg/ℓ 4 hr Rat	LC50 = 140 mg/ℓ 4 hr Rat
Xylene	LD50 4300 mg/kg Rat	LD50 4350 mg/kg Rabbit	LC50 47653 mg/ℓ 4 hr rat	LC50 47653 mg/ℓ 4 hr rat	Steam LC50 6700 ppm 4 hr Rat
n-Butyl acetate	LD50 = 13100 mg/kg Rat	LD50 > 17600 mg/kg Rabbit	LD50 > 21.1 mg/kg Rat	LD50 > 21.1 mg/kg Rat	LD50 > 21.1 mg/kg Rat
Styrene, n-butyl methacrylate, n-butyl acrylate, methyl methacrylate,	No data	No data	No data	No data	No data
Other(Technical secrets)	No data	No data	No data	No data	No data

12. ECOLOGICAL INFORMATION

1. Ecological Information

Chemical Name	LC50.fish	LC50.water fleas	LC50.algae
3-Ethoxypropanoic acid ethyl ester	LC50 = 88 mg/ℓ 96 hr Pimephales	LC50 = 970 mg/ℓ 48 hr Daphnia magna	No data
Acetone	LC50 > 100 mg/ℓ 96 hr	No data	No data
Dimethyl carbonate	No data	No data	No data
Xylene	LC50 3.3 mg/ℓ 96 hr	LC50 190 mg/ℓ 96 hr	No data
n-Butyl acetate	LC50 = 62 mg/ℓ 96 hr	LC50 = 32 mg/ℓ 48 hr	No data
Styrene, n-butyl methacrylate, n-butyl acrylate, methyl methacrylate, 2-hy	No data	No data	No data
Other(Technical secrets)	No data	No data	No data

2. Soil mobility : Not known

3. Persistence and degradability

There is no specific data available on the product itself. The product should not be allowed to enter drains or watercourses or be deposited where they can affect ground or surface waters.

4. Potential bioaccumulation : Be possible.

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13.DISPOSAL CONSIDERATION

1. Relevant insurance of legislation
Dispose of in accordance with local regulations
2. Waste removal measures
Waste must be disposed of in accordance with state and local environmental regulations.
3. Direction for the waste disposal
Preferred options for disposal are recycling, incineration with energy recovery, and landfill.

14.TRANSPORT INFORMATION

1. Classification by shipping transportaiton dangerous substance and regulation of storage :
2. Direction for transport
The product must be kept in original container tightly closed and transport at normal temperature.
3. International Martitie Dangerous Goods Code
U.N Number : 1263
Shipping name : Paint
Hazard class : 3
Packing group : 3
4. Marine pollutant : Not Applicable
5. Special precautions for user related to transport or transportation measures
 - Ems FIRE SCHEDULE : F-E
 - EmS SPILLAGE SCHEDULE : S-E

15.REGULATORY INFORMATION

1. Article of KOREA OCCUPATIONAL SAFETY _HEALTY AGENCY : Not determined.
2. Article of Harmful Chemical Substance : Not applicable
3. Classify of The Fire Service Act : Fourth grade 2nd.Petroleum

16.OTHER INFORMATION

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the data of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release is not to be considered a warranty or quality specification

The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

This information is based on technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.