Guangdong Sanvo Chemical Industry Technology Limited

Safety Data Sheet

1. Identification of Chemicals and Manufacturer

English name of chemical: **Line Marking Paint**

Product code: P

Manufacturer: Guangdong Sanvo Chemical Industry Technology Limited

Address: Dacen Industrial Park, Huangpu Town, Zhongshan City ,Guangdong Province, China

Postal Code: 528429. CHINA

Telephone: 0760-28163797

Company Emergency telephone number:0532-83889090

Fax number: 0760-28163118

E-mail address: sanvo@sanvo.com

Recommended use: Suitable for marking and identification of outdoor scenes. Such as roads, parking lots, stadiums, entertainment venues, warehouses, factory workshops and other workshops where various width and color markings are sprayed. It can be used for marking on the surface of asphalt, concrete, wood, metal and other materials.

2. Hazards Identification

Extremely flammable aerosol; Pressurized container: May burst when heated; Cause serious eye irritation; May cause drowsiness or dizziness.

GHS-classification

Physical hazards	**Aerosols**	**Category 1**
Health hazards	**Acute Toxicity (Oral)**	**Category 4**
	Skin Corrosion/Irritation	**Category 2**
	Eye Irritation Category	**Category 2A**
	Reproductive Toxicity	**Category 2**
	Specific target organ toxicity - single exposure	**Category 3 (narcotic effects)**
	Specific target organ toxicity - repeated exposure	**Category 2**

Other hazards which do not result in classification **Not classified.**

Label elements

Pictograms

GHS-labeling

Signal word Danger

Hazard statement	Extremely flammable aerosol; Pressurized container: May burst when heated; Cause serious eye irritation; May cause drowsiness or dizziness.
Precautionary statement	Keep away from heat, fire and high temperature. When using, it is necessary to eliminate static electricity, avoid inhalation of volatile gases and skin contact, wear a gas mask and wash with soap and water after use.
Precaution	Keep away from heat, sparks, open flames, hot surfaces and use tools that do not produce sparks. Keep container tightly closed. Take measures to prevent static electricity. Use explosion-proof electrical appliances. Wear protective gloves, protective glasses, and protective face shields. Thoroughly clean the penetrating contact area after operation. Eating, drinking or smoking is not allowed in the workplace.
Response	the leakage source should be cut off first, and the personnel in the leakage pollution area should be quickly evacuated to the safety area, and the isolation should be carried out strictly. Restrict access and eliminate all sources of ignition.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	see section 13
Main symptoms	Steam irritates eyes, skin and mucous membrane, and has anesthetic effect on central nervous system.Long term exposure to high concentration steam will cause excessive fatigue, dyspnea, nausea, headache, tachycardia and other phenomena. At the same time, it has degreasing effect on skin, causing dryness, desquamation and chaps.
Emergency summary	Move to place full of fresh air, wash or shower with water, and ask for medical treatment.

3. Component/ Composition Information

Substance/mixture Mixture

Chemical Entity	CAS No.	Proportion（%）
Acrylic resin	25035-69-2	15～30%
Ethylene glycol butyl ether	111-76-2	0.1～2%
Acetone	67-64-1	1～10%
Ethyl acetate	141-78-6	1～10%
Butyl acetate	123-86-4	1～10%
Propylene glycol methyl ether acetate	108-65-6	1～5%
Methyl isobutyl ketone	108-10-1	1～5%
Cyclohexane	110-82-7	1～5%
DME	115-10-6	20～40%

4. First aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Drink plenty of warm water to induce vomiting and seek medical advice. Call a physician or poison control center immediately.

5. Fire-fighting measures

Extinguishing media	Foam. Powder. Carbon dioxide (CO2) or sand to extinguish the fire. Extinguishing with water is invalid.
Specific hazards	Dangerous flammable products.
Special fire fighting procedures	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
Extinguishing method	First cut off the fuel source and evacuate the personnel. Spray water can keep the container cool, use extinguishing agent from the wind direction downward.
Special protective equipment for fire personnel	Wear a positive pressure self-contained breathing apparatus and a protective suit to protect the whole face.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedure

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Clean-up methods and materials and containment measures	Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Storage

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls / Personal Protection

Maximum permissible concentration in China:

MAC (mg/m3): 400[acetone]:300[ethyl acetate]:300[Butyl acetate]:100[Propylene Glycol Methyl Ether Acetate]:100[cyclohexane]:100[ethylene glycol butyl ether]:400[Methyl isobutyl ketone].

Engineering measures:

The production process is closed and fully ventilated. Provide safety shower and eyewash equipment.

Respiratory protection:

When the concentration in the air exceeds the standard, filter-type respirators should be worn. It is recommended to wear an air respirator during emergency rescue or evacuation.

Hand protection:

Wear rubber and oil resistant gloves.

Eye protection:

Wear chemical safety glasses.

Skin and body protection:

Wear anti-static overalls.

9. Physical and chemical properties

Appearance

Physical state	Liquid
Form	Aerosol.
Colour	colored viscous liquid.
Odour：	Pungent aroma of aromatic hydrocarbons
PH value：	Not available.
Melting point/freezing point (℃)	Not available.
Boiling point (℃)	Not available.
Initial boiling point (℃)	Not available.
Boiling range (℃)	Not available.
Flash point (℃)	Not available.
Lower Explosive limit [%(V/V)]	1.35% Methyl Isobutyl Ketone 2.0% Ethyl Acetate 1.2% Butyl Acetate 1.2% Cyclohexane 1.1% Ethylene Glycol Butyl Ether 1.5% Propylene Glycol Methyl Ether Acetate 2.5% Acetone
Upper Explosive limit [%(V/V)]	7.5% Methyl Isobutyl Ketone 11.5% Ethyl Acetate 7.5% Butyl Acetate 8.4% Cyclohexane 10.6% Ethylene Glycol Butyl Ether 7% Propylene Glycol Methyl Ether Acetate 13% Acetone
Vapor Pressure (kpa)	Not available.
Ralative Vapor density (air = 1)	Not available.
Relative density (water = 1)	1.00 to 1.20
Solubility	Insoluble in water, miscible in most organic solvents such as esters, aromatics, and chloroform, with strong solubility.
N - octanol/water distribution coefficient	Not available.
Auto-ignition temperature	Not available.

10. Stability and reactivity

Reactivity	This product is stable. Under normal storage and use conditions, it will not react or polymerize.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks, direct sunlight.

Incompatible materials	Oxidizing agent, strong acid, strong base.
Hazardous decomposition products	Carbon monoxide, carbon dioxide.

11. Toxicological information

No toxicological information is available. The following are the main hazardous components of this product, for reference only.

Toxicological data of main harmful component - Methyl isobutyl ketone:

Acute toxicity: LD50: 2080mg/kg (rat oral)

LD50: 32720mg/m³, 4 hours (rat inhalation)

Irritation: Rabbit eyes 40mg, severe irritation. Rabbit skin: 500mg/24 hours, moderate irritation.

Toxicity data of the main harmful component - Ethyl acetate:

Acute toxicity: LD50: 5620mg/kg (rat oral)

LD50: 5760mg/m³, 8 hours (rat inhalation)

Subacute and chronic toxicity: It has an anesthetic effect. Its vapor irritates the eyes, skin and mucous membranes, causing turbidity of the cornea. High-concentration vapor can cause liver and kidney congestion. If a large amount is continuously inhaled, acute pulmonary edema may occur.

Severe toxic reaction: if people inhale 800ppm, they will have symptoms; if people inhale 400ppm for a short time, the eyes, nose and throat will be irritating.

Mutagenic type: deletion and non-segregation of sex chromosomes.

Toxicity data of the main harmful component - Acetone:

Acute toxicity: LD50: 5800mg/kg (rat oral), 20000 mg/kg (rabbit skin); LC50: no data.

Subacute and chronic toxicity: rats inhaled 7.22g/m^3, 8 hours/day, 20 months, no pathological changes.

Irritation: Rabbit eyes: 3950μg, severe irritation. Rabbit percutaneous open irritation test: 395mg, mild irritation.

Mutagenicity: Cytogenetic analysis: Saccharomyces cerevisiae 200mmol/tube. Loss and non-separation of sex chromosomes: mice inhaled 12mg/L.

Toxicity data of the main harmful component - Cyclohexane:

Acute toxicity: Acute toxicity: LD50: 12705mg/kg (oral for rats)

Subacute and chronic toxicity: rabbits inhale 65g/m³, 6 hours/day, 2 weeks; 44g/m³, 6 hours/day, 2 weeks; 32g/m³, 6 hours/day, 5 weeks. There were 3/4, 1/4, and 3/4 deaths respectively.

Mutagenicity: DNA damage,Escherichia coli 10mol/L.

Toxicity data of the main harmful component - Ethylene glycol butyl ether:

Acute toxicity: Inhalation, high vapor concentration, will irritate the eyes and respiratory tract, causing headache or dizziness; skin, frequent contact will cause discomfort, low toxicity and dermatitis; will be toxic; may cause liver and kidney damage; mistakenly Food, low toxicity, irritating to the mouth, throat and stomach, can cause disorder or damage to the esophagus system. Eye contact will make the eyes uncomfortable. If not treated in time, it will damage the eye tissues.

Subacute and chronic toxicity: Inhalation or excessive skin contact can cause blood and kidney damage.

Toxicity data of the main harmful component - propylene glycol methyl ether acetate:

Acute toxicity: Ingestion: The toxicity of ingestion is very low. Oral LD50 for female rats: 8532mg/kg. Swallowing a

small amount accidentally or under normal operating conditions will not cause harm, and swallowing a large amount may cause harm. Skin: Rabbit percutaneous absorption LD50:>5000 mg/kg. Long-term skin contact with larger doses may cause drowsiness. Inhalation: No adverse effects from a single exposure to vapour.

Toxicity data of the main harmful component - butyl acetate:

Acute toxicity: LD5013100mg/kg (oral for rats); LC509480mg/kg (oral for rats); human inhalation of 3300ppmx is short-lived, which will cause obvious irritation to eyes and nose; human inhalation of 200~300ppmx is short-lived and mildly irritating to eyes and nose . Irritation: Rabbit percutaneous open irritation test: 500mg, mild irritation.

Subacute and chronic toxicity: cat inhalation 4200ppm, 6 hours/day, 6 days, weakness, weight loss, mild blood changes.

Hazardous characteristics: flammable, its vapor and air can form an explosive mixture. Exposure to open flames and high heat can cause combustion and explosion. It can react with oxidants. Its vapor is heavier than air and can spread to a considerable distance in a lower place, and it will cause backflame in case of an open flame.

12. Ecological information

Environmental impact and ecotoxicity:

Environmental destruction and distribution: It may cause pollution to the air and water bodies, and has low toxicity to fish and mammals.

Persistence and degradation: Volatile components can be photolyzed, and steam residues can be slowly oxidized and degraded by organisms and microorganisms.

Toxic: It has low toxicity and biochemical enrichment potential, preventing the growth of organisms and microorganisms.

13. Disposal considerations

Nature of waste: Hazardous waste.

Disposal methods: Refer to the local regulations of the country, turn the can upside down, press down the nozzle in the old newspaper or waste bin until the residual gas is removed. The manufacturer should decide the appropriate disposal classification and method according to the disposal time.

Discard precautions: Operators should wear appropriate personal protective equipment.

14. Transport information

CNDG

UN number: 1950

UN proper shipping name: Aerosols, flammable, (each not exceeding 1 L capacity)

Transport hazard class(es)

Class **2.1**

Subsidiary risk **-**

Label(s) **2.1**

Packing group **-**

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number: UN1950

UN proper shipping name : Aerosols, flammable, Limited Quantity

Transport hazard class(es): Aerosols, flammable, Limited Quantity

Class **2.1**

Subsidiary risk **-**

Label(s) **2.1**

Packing group : Not applicable.

Environmental hazards: No

ERG Code: 10L

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft:

Allowed with restrictions.

Cargo aircraft only: Allowed with restrictions.

IMDG

UN number: UN1950

UN proper shipping name: Aerosols, flammable, Limited Quantity

Transport hazard class(es)

Class **2.1**

Subsidiary risk **-**

Label(s) **2.1**

Packing group : Not applicable.

Environmental hazards

Marine pollutant: : No

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

Transportation precautions: During transportation, the transportation vehicles should be equipped with corresponding types and quantities of fire-fighting equipment and leakage emergency treatment equipment. It is best to transport them sooner or later in summer. Wet packaging with oxidants, strong acids, strong alkalis, and edible chemicals is strictly prohibited. Avoid exposure to the sun, rain, and high temperature during transportation. Stay away from fire, heat sources, and high-temperature areas during stopovers. It is forbidden to use mechanical equipment and tools that easily generate sparks for loading and unloading. When transporting by road, you must follow the prescribed route and do not stop in residential areas and densely populated areas. It is forbidden to drop off during railway transportation. It is strictly forbidden to transport in bulk by wooden ships or cement ships.

15. Regulatory information

Regulatory information:

Regulations on the safety management of hazardous chemicals (order 344 of the state council)

Measures for the administration of hazardous chemicals registration (order No. 35 of the state economic and trade commission)

Regulations on the registration and administration of hazardous chemicals in Guangdong province (Guangdong economic and trade security [2003] No. 80)

Regulations on the safe use of chemicals in the workplace ([1996] No. 423 issued by the department of labor)

Relevant provisions are made for the production, operation, storage, transportation, use and disposal of hazardous chemicals.

The substance is classified as Class 2.1 flammable liquid in the Catalogue of Hazardous Chemicals (State Administration of Work Safety).

16. Other information

Literary reference

1. Global uniform classification and labelling of chemicals (second revision), 2007

2. Model regulations for the transport of dangerous goods ,2015

3. International maritime dangerous goods (edition 34-08)

4. Technical manual for hazardous chemical safety, Chemical industry press, 1997

5. Regulations on the safety management of hazardous chemicals, 2011

6. Dangerous goods list (GB12268-2012)

7. Classification and code of dangerous goods (GB6944-2012)

8. Compilation of technical specification for hazardous chemical safety (GB16483-2000)

9.Classification and marking of common hazardous chemicals (GB13690-92)

Professional training: personnel engaged in the handling or transportation of dangerous goods must receive training on the content of requirements related to the handling or transportation of dangerous goods, general knowledge or familiarity training, specific functional training and safety training, etc.

Issued: Jun 4, 2021

Drafting Department: Aerosol Research Institute of Guangdong Sanvo Chemical Industry Technology Limited.

Data Audit Unit: Guangdong Sanvo Chemical Industry Technology Limited.

Version: 2.0