Reference: AT-SG-002-01 Date: November. 20 2012

MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

Product Name

: ASAHITACK SG1860G

Supplier Name

: ASAHI CHEMICAL SYNTHETIC CO. LTD.

Address

: 2-18-10 Nakachou, Toda-si, Saitama, 335-0012 Japan

Section in its duty

: Technical Development Dept.

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: +81-48-441-5835

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: +81-48-441-5642

2. Hazards Information

GHS Classification

Physical and Chemical Hazards

Flammable solids
Pyrophoric solids
Self-heating substance
Corrosive to metals

Classification not possibleClassification not possible

Classification not possibleClassification not possible

: Classification not possible

Health and Environmental Hazards

Acute toxicity Oral : Not classified
Acute toxicity Dermal : Not classified
Acute toxicity Inhalation Gasses : Not classified
Acute toxicity Inhalation Vapors : Not classified

Acute toxicity Inhalation Dusts : Classification not possible
Acute toxicity Inhalation Mists : Classification not possible
Skin corrosion / irritation : Classification not possible

Serious eye damage / eye irritation : Not classified

Respiratory sensitization : Classification not possible Skin sensitization : Classification not possible

Germ cell mutagenicity : Not classified

Carcinogenicity : Classification not possible Reproductive toxicity : Classification not possible

Specific target organ systemic toxicity

Single exposure : Not classified Repeated exposure : Not classified

Aspiration hazard Hazardous to the aquatic environment

Acute toxicity : Classification not possible

Chronic toxicity : Not classified

GHS Label Elements

Symbol : None Signal Word : None Hazard Statement : None

Precautionary statements

Prevention : Obtain and read an instruction manual before use.

Don't handle till read and understand all security attention.

Avoid breathing dust / fume / mist / vapor / spray.

Wear suitable protective gloves or personal protective tools

if necessary.

Use in well-ventilated area and ventilate the workshop enough.

Don't take out the polluted work-clothes from workshop.

Wash clothing when you reuse polluted clothes.

Response

Wash hands thoroughly after handling.

If adhering to the skin, wash thoroughly with soap and plenty of

water soap.

If skin irritation or a rash appeared, get medical advice /

attention.

Call doctor/physician if you feel unwell.

Storage

Store in sealable containers with key in well-ventilated place.

Disposal Dispose in accordance with local / regional / national /

international regulation.

3. Composition / information on ingredients

Chemical substance or mixture

mixture

Chemical name or generic name

Synthetic rubber system hot-melt adhesives

Ingredients and contents

Styrene block copolymer etc. 100%

[Density range of constitution ingredients (Japan)]

Constitution ingredients	Density range	Public announcement reference number	CAS Number	Remarks
Styrene block copolymer	< 10.0%	Existing	66070-59-4	Thermoplastics
Petroleum resin	20~30%	Existing	69430-35-9	Tackifier resin
Mineral oil	60~70%	Closed	Closed	Softener
Titanium oxide	< 1.0%	(1)-558	13463-67-7	Coloring agent
Carbon Black	< 0.1%	(5)-3328	1333-86-4	Coloring agent
Additive	< 1.0%	(3)-1693	6683-19-8	Antioxidant
Product (mixture)	100.0%	_	-	2=-

[Laws and regulations object ingredients (Japan)]

155		Pollutant Release	Poisonous and	
Constitution ingredients	Industrial Safety & Health	and Transfer	Deleterious	
	Act	Regulation	Substances Control	
		(PRTR)	Act	
Styrene block copolymer	Non-correspondence	Non-correspondence	Non-correspondence	
Petroleum resin	Non-correspondence	Non-correspondence	Non-correspondence	
Mineral oil	Notifiable substances No.168	Non-correspondence	Non-correspondence	
Titanium oxide	Notifiable substances	NT 1	λ7	
Carbon black	(below legal)	Non-correspondence	Non-correspondence	
Additive	Non-correspondence	Non-correspondence	Non-correspondence	

(Notice: Follow all regulations and laws in your country)

4. Emergency measures

Inhalation

: Remove to fresh air and keep at rest in a position comfortable for breathing, and then get medical advice / attention immediately. If breathing has stopped, apply artificial respiration after clothes are loosened and the respiratory airway is secured, and call the doctor immediately.

When breathing and vomiting, do a brain to the side.

Don't give anything from the mouth to the victim when not conscious.

Employ an attendant to the victim, and must not leave alone.

Skin contact : In the case of contact of the degree without the burn, wash it away with

water well and wash it with soap more, then call a doctor.

When you touched to the molten product, promptly cool off with plenty

of water, and then get medical attention.

Don't peel off forcibly when the product and clothes, etc. stick in the skin.

(Don't crush the blister, and do not peel off the skin.)

Call a doctor if you feel unwell.

Eye contact : In case of contact with eyes, rinse with plenty of water for at least 15

minutes, and get medical attention immediately.

Remove contact lenses (if worn) if easily possible, then continue rinsing. When a molten product entered to the eyes, cool enough with plenty of

water immediately, and get medical attention to the burn.

(Don't rub eyes, and open it forcibly.)

Ingestion : If conscious, give plenty of water or milk to drink, and get immediately

medical attention.(show this container or label)

Concise information on the most important symptom

: The vapor occurring at the time of heating, stimulates eyes, a nose, a throat, respiratory organs and a mucous membrane.

The vapor occurring at the time of heating, causes symptoms such as unpleasantness, a headache, and a lacrimation.

If the molten product touched any body part, a serious burn is caused.

Protection of a person taking a first-aid measure

: Wear appropriate protective equipment, when there are a possibility of coming in contact with the molten product and a possibility of inhaling vapor.

Special instructions for the doctor

: Wear appropriate protective equipment, when there are a possibility of coming in contact with the molten product and a possibility of inhaling vapor.

5. Fire-fighting measures

Fire extinguisher: Powder fire extinguishing medicine, bubble fire extinguishing medicine, CO₂, sand, water(a large quantity of water), etc.

Fire extinguisher that are not suitable

: Don't use cylinder shape water, because it might expand a fire.

Specific dangerous hazardous property at a fire

: Carbon dioxide, carbon monoxide, in addition, nitrogen oxide-based gas, and hazardous gases or vapors may evolve on burning.

Specific fire extinguishing method

: Perform the fire extinguishing work from windward.

It is noted enough that cylinder shape water scatters the hot water or the molten products, and has possibility of the burn.

In this case, it is effective to intercept air by using the fire foam. Stop the supply of combustion source immediately, and water the equipments of surroundings and it cools off.

Prohibit people except the parties concerned from entering around the fire occurrence place, and let them evacuate to the safe place.

Perform an appropriate measures so that the material which has an influence on environment should not flow out by watering for fire extinguishing.

Protection for firefighters

: On the occasion of fire extinguishing work, wear complete protective clothing, perform a step of the prevention of burn, and perform fire fighting from windward.

Because toxic gas may be generated, wear a tool for an appropriate breath protection (a gas mask for organic gas or self-contained breathing apparatus).

6. Accidental release measures

Personal precaution

: Stretch a rope around leaking, and prohibit peoples other than persons concerned from entering in the zone.

Evacuate all non essential personnel from the area

immediately.

Wear the appropriate protection equipment, and perform the

collecting work from windward.

When the molten product leaked, allow the product to cool/

solidify and remove as a solid.

Perform enough ventilation till collection is over.

Environmental precaution

: Do appropriate measures to inform the leakage to neighboring resident, because there is a possibility of feeling the smell

unpleasantly according to the person.

Prevent the leaking dispersion of the material to the outside, the outflow to the river, drainage, and the drainage trench, and

infiltration to the soil.

Moreover, make efforts to collect the whole quantity when

flowing out.

Recovery method

: If the molten product leaked, cool off and solidify.

And then collect it as a solid state in sealable containers.

Prevention of secondary hazards

: Remove all sources of ignition from the circumference immediately.

7. Handling and storage precaution

Handling:

Technical measures

Fire attention.

Use special melting equipment and coating equipment.

Don't heat product directly by the fire etc..

Near a handling place, install the equipment to cool, to wash

a hand, a face and a body, and to gargle in emergency. Wear the protective equipment when there is a possibility of

inhalation or contact to the skin.

Perform the handling at a good place of the ventilation, and also perform the ventilation of the workshop enough.

Install a local exhaust or the total exhaust if necessary.

Safe handling advice

Do not handle until reading and understanding all the safety attention.

Don't treat the containers violently to lead to damage. Avoid breathing vapors and fumes from the molten product at heating.

Perform the handling in the outdoors as much as possible from windward.

After handling, wash a hand, a face and a body well, and also gargle.

Prohibit the entry to the handling places other than the person concerned.

Storage:

Technical measures

Keep it in the inventory location of "Designated flammable good"

Seal it up so that garbage and water do not enter, and keep it. Store in a well-ventilated, cool and dark place away from fire sources and high temperature objects.

Avoid the direct sunshine because the direct sunshine may decrease the performance of the product remarkably.

Packaging materials

The wrapping material which prevent moisture absorption, electrostatic outbreak and the package which is hard to destroy are desirable, if possible.

8. Exposure controls / personal protection

Management density

: No information is available.

Permissible Exposure Limit: (as Permissible Exposure Limit for constitution ingredients)

	Permissible Exposure Limit		
Constitution ingredients	Japan Association on Industrial Health	ACGIH	
Styrene block copolymer	No information is available	No information is available	
Petroleum resin	No information is available	No information is available	
Mineral oil	3m g/m³ (mineral oil mist)	TWA 5mg/ m³ (mineral oil mist)	
Titanium oxide	4mg/ m³ (Total dust)	TWA 10mg/ m ³	
Carbon black	4mg/ m ³ (Total dust)	TWA 3.5mg/ m ³	
Additive	No information is available	No information is available	

Note: Total dust is referred to the standard value of "the 3rd kind dust".

Equipment measures

In mixing and molding work, it is desirable to use sealing up-type melting equipment.

Install a local exhaust or the total exhaust, if necessary. Near a handling place, install the equipment to cool, to wash a hand, a face and a body, and to gargle in emergency.

Personal protection equipment

Respiratory protection : Breathing protection when handling the molten product,

Such as gas mask for organic gas, dust protective mask and

Supply air mask, etc.

Hand protection : Heat-insulting gloves when handling the molten product.

Eye protection : Safety goggles when handling the molten product.

Skin and body protection: Heat protective suits when handling the molten product.

Hygiene measures : Wash hands and gargle after handling.

9. Physical and chemical properties

Physical state

Shape : Solid
Color : Gray
Odor : It is
PH : No data

The specific temperature/temperature range where a physical state changes

Boiling point and : No data

Boiling range

Softening point : $119 \pm 5 \,^{\circ}\mathrm{C}$ Decomposition temperature : No data
Flash point : No data
Ignition point : No data
Explosion range : No data
Vapor pressure : No data
Vapor density : No data

Density : $0.90 \pm 0.06 (g/cm^3)$ Solubility : Not soluble in water

10. Stability and reactivity

Stability : Stable in normal conditions.

But the performance of the product may change by heat and

Sunshine.

Hazardous reaction potential: Stable. No self reactivity.

Condition to avoid : Avoid all sources of ignition, direct sunshine, water and

excessive heat.

Incompatible products : No information

Hazardous decomposition products

: Carbon dioxide, carbon monoxide and other poisonous gas.

11. Toxicological information

(1) Acute toxicity

(Oral) : (Styrene block copolymer) rat LD50>2000mg/kg

(mineral oil) rat LD50>5000mg/kg (Titanium oxide) rat LD50>10000mg/kg

(Dermal) rat LD50>2000mg/kg

(Titanium oxide) rat LD50>10000mg/kg

(Inhalation:gas,vapor) No information (Inhalation:mist,dust) No information

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(2) Skin corrosion / stimulativeness

: No information

(3) Serious eye damage / stimulativeness to eyes

: (Titanium oxide) Category 2

Not classified

(4) Respiratory organs sensitization

: No information

(5) Skin sensitization : No information(6) Germ cell mutagenicity : No information

(7) Carcinogenicity : (Carbon black) Category 2

Not classified

(8) Reproductive toxicity : No information

(9) Specific target organ / systemic toxicology

Single exposure : (Titanium oxide) Category 3

Not classified

Repetitive exposure: (Titanium oxide Carbon black) Category 1

Not classified

(10) Aspiration respiratory organs hazard

: No information

12. Ecological information

(1) Hazardous to the aquatic environment-acute toxicity : No information

(2) Hazardous to the aquatic environment-chronic toxicity : (Titanium oxide) Category 4

Not classified

13. Disposal considerations

Residual waste : Dispose in accordance with the current local

regulations in the own country.

Dispose after completely cooling off, if waste is

a high temperature.

Contaminated containers or packing : Dispose of an empty container after completely

removing contents.

Dispose in accordance with the current local

regulations in the own country.

14. Transport information

UN classification: : Not the dangerous materials of the United Nations definition.

Domestic regulation : Follow the mode of transportation established in applied laws

and ordinances in the own country.

Specific safety measures and a condition of the transportation (in Japan)

: Fire attention.

Transport it by the container and the loading method according to regulations of "Fire Service Act", because it corresponds to

"Designated flammable goods" of this law.

Confirm that there are not the damage, corrosion and a leak of

the container before the transportation.

Avoid the direct sunshine, and keep the water wet, and the water getting wet and pouring water and the high temperature are assumed to be strict prohibition, and also keep dry.

15. Regulatory information

Take the application of the laws and ordinances of the own country.

In Japan:

PRTR(Pollutant Release and Transfer Regulation)

: Non-correspondence

Industrial Safety Control Act

: Article 57-2 Notifiable substances: Mineral oil (No. 168)

Poisonous and Deleterious Substances Control Act

: Non-correspondence

Fire Service Act : Article 9-4 Designated flammable goods (Synthetic resins)

(more than 3,000kg)

Waste Management and Public Cleaning Act

: Article 2 (Waste plastics)

16. Other information

Literature references:

- (1) Japan Industrial Safety & Health Association:
 - "Training text of the MSDS making technique of the mixture by the GHS correspondence"
- (2) Japan Advanced Information Center of Safety & Health:
 - "GHS model label and MSDS information"
- (3) Japan Paint Manufacturers Association:
 - "Model MSDS · model label case book (for mixtures)"
- (4) MSDS of the raw material maker

Note:

This information is based on the knowledge that we own now.

All statements, information and data given herein are believed to be accurate and reliable but are presented without guaranty and responsibility.

An unknown danger and hazardous property are thought by all chemical products, and moreover, the information and the evaluation of danger and the hazardous property have a possibility necessarily not enough, so, close attention is necessary for handling.

Please use safety measures suitable for a use after enforcement in the case of the special handling, because the mentioned instructions are things for the normal handling.

This MSDS may be revised due to new information, the revision of the law, the review of contents and other reasons..

Please dispose of old MSDS, when received a revised edition of this MSDS.

The reference of mention contents:

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