ISSUED DATE : Oct. 25, 2019
REVISED DATE : Oct. 01, 2020

SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME : **SFR-2300MR-T**

IMPORTER

Name : Showa Denko Materials (America), Inc.

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SDS NUMBER : GIUS-12830-006(A)

2. HAZARDS IDENTIFICATION

【GHS classification】

PHYSICAL HAZARDS : Flammable liquids ; Category 2

HEALTH HAZARDS : Acute toxicity Oral ; Not classified
Dermal ; Not classified
Inhalation ; Category 4
Skin corrosion/irritation ; Category 2
Serious eye damage/eye irritation ; Category 2A
Respiratory sensitization ; Classification not possible
Skin sensitization ; Classification not possible
Germ cell mutagenicity ; Classification not possible
Carcinogenicity ; Classification not possible
Reproductive toxicity ; Category 1
Specific target organ toxicity – Single exposure
; Category 1 (Central nervous system)
Category 3
Specific target organ toxicity – Repeated exposure
; Category 1
(Central nervous system, Kidney, liver)
Aspiration hazard ; Classification not possible

ENVIRONMENTAL HAZARDS
: Hazardous to the aquatic environment Acute ; Category 2
Chronic ; Not classified
Hazardous to the ozone layer ; Classification not possible

【GHS label elements】

Symbols :

Signal word : Danger

Hazard statements :

- Highly flammable liquid and vapor
- Harmful if inhaled(vapor)
- Causes skin irritation
- Causes serious eye irritation
- May damage fertility or the unborn child
- Causes damage to organs (Central nervous system)
- May cause drowsiness or dizziness
- May cause respiratory irritation
- Causes damage to organs through prolonged or repeated exposure (Central nervous system, Kidney, liver)
- Toxic to aquatic life

Precautionary statements :

Prevention

- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces.-No smoking.
- Ground/Bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves and eye/face protection.
- Use only outdoors or in a well-ventilated area.
- Do not breathe mist/vapors/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.

Response

- In case of fire: Use dry chemical powder, carbon dioxide, foam, dry sand, water spray for extinction.
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical device /attention. Take off contaminated clothing and wash before reuse.
- IF IN EYES: Rinse cautiously with water for several minutes.
  Remove contact lenses, if present and easy to do. Continue rinsing.
  If eye irritation persists: Get medical advice/attention.
- If exposed: Call a POISON CENTER or doctor/physician.
- IF UNPLEASANT: Get medical advice/attention.

Storage

- Keep containers tightly closed in a cool/well-ventilated place.
- Store locked up.

Disposal

- Dispose of contents/container in according with local/regional/national/international regulations.

3. COMPOSITION／INFORMATION ON INGREDIENTS

SUBSTANCE/MIXTURE : Mixture

Chemical name	Composition (wt.%)	Chemical formula	CAS No.
Bismaleimide resin	56±5	-	Trade secret
Bismaleimide	3±2	-	Trade secret
Toluene	41±5	$C_6H_5CH_3$	108-88-3

4. FIRST-AID MEASURES

EYE CONTACT : Gently rinse the affected eyes with clean water for at least 15 minutes. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

SKIN CONTACT : Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible, cutting them off if necessary. Wash the affected area under tepid running water using a mild soap. If irritation persists, arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

INHALATION : Remove the victim from the contamination immediately to fresh air. Keep the victim warm and quiet. If breathing is weak, irregular or has stopped, open his airway, loosen his collar and belt and administer artificial respiration. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

INGESTION : Rinse mouth with clear water. Give the person one or two glasses of water. Do not give an unconscious person anything to drink. Do not make an unconscious person vomit. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

5. FIRE-FIGHTING MEASURES

SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES

: Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Large fires are best controlled by foam.
Apply water from a safe distance to cool and protect surrounding area.
Move container from fire areas if it can be done without risk.
Firefighters should wear proper protective equipment.
Evacuate non-essential personnel into surrounding area of fires.

EXTINGUISHING MEDIA

: Dry chemical powder, foam, dry sand, or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Evacuate non-essential personnel.
Shut off all sources of ignition; No flares, smoking, or flames in area.
Wear proper protective equipment.
Prevent spills from entering sewers, watercourses or low areas.
Do not wash away into shower or waterway.
For small spills, absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste containers using non-sparking tools.
For large spills, dike for later disposal.

7. HANDLING AND STORAGE

HANDLING : Make available in the work area emergency shower and eyes wash.
Avoid contact with skin or eyes.
Practice good personal hygiene after using this material, especially before eating, drinking, smoking or using the toilet.
Shut off all gas pilot and electrical (spark or hot wire) igniters and other sources of ignition during use until all vapors are gone.
See a doctor after taking the emergency measures in paragraph 4 when the disorder is felt or generated in the body.

STORAGE : Keep container tightly closed.
Store container in a cool, dry, well-ventilated location.
Keep away from all possible sources of ignition.
Protect from moisture. Keep away from any possible contact with water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure control : Use this product only in a totally enclosed systems or local exhaust ventilation.
Make available in the work area emergency shower and eyes washer.

Exposure guidelines : ACGIH-TLV ; TWA 20 ppm, (Toluene)
TWA: Time-Weighted Average

Engineering measure : Do not use in area without adequate ventilation and local exhaust ventilation

Personal protection equipment :

- Respiratory protection: Industrial canister gas masks, supplied-air respirator
- Eye protection: Safety goggles, full face shield
- Skin protection: Chemical - resistant gloves, impervious boots and apron or full-body suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Brown transparent liquid
ODOR	: Irritant and characteristic odor
FLASH POINT	: 4°C
SPECIFIC GRAVITY	: 0.95±0.05 (20°C)
SOLUBILTY IN WATER	: Insoluble

(Reference) (Toluene)

Boiling point	: 111°C
Melting point	: -95°C
Flash point	: 4°C
Auto-ignition temperature	: 480°C
Explosion limit (in air, vol.%)	: 1.1-7.1
Vapor pressure	: 3.8kPa (25°C)
Vapor density (air=1)	: 3.1
Specific gravity	: 0.87
Solubility in water	: Insoluble

Octanol/Water partition coefficient (log Pow) : 2.69

10. STABILITY AND REACTIVITY

STABILITY : Stable under normal condition of use and storage.

HAZARDOUS REACTIONS :

- Strong oxidizing agents and peroxides.
- Carbon monoxide and various kinds of hydrocarbon.
- May occur at elevated temperatures or in contact with strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : INHALATION ; LC_{50}(rat) 4800ppm/4h (Toluene)
ORAL ; LD_{50}(rat) 4800mg/kg (Toluene)[1]
SKIN ; LD_{50}(rabbit) 14100mg/kg (Toluene) [3]

LC_{50}: 50% lethal concentration, LD_{50}: 50% lethal dose

Irritation onto the skin : Draize test of 20mg/24h by rabbit Moderate (Toluene)

Serious eye damage/eye irritation : Draize test of 2mg/24h by rabbit Severe

Respiratory sensitization and skin sensitization :

Toluene has no sensitization by maximization test used the guinea pig.

Germ cell mutagenicity : Toluene is negative by in vivo mutation test.

Carcinogenicity : IRAC Group 3(Toluene)
ACGIH A4(Toluene)
EPA I(Toluene)

Reproductive toxicity : Toluene and Styrene may damage the unborn child.

Specific target organ toxicity – Single exposure :

Toluene is confirmed adverse effects to Central nervous system. Toluene may cause respiratory irritation and may cause drowsiness and dizziness by narcotic effects.

Specific target organ toxicity – Repeated exposure :

Toluene is confirmed adverse effects to Central nervous system, Liver and Kidney through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

Biodegradability : Toluene and Styrene are good biodegradable.

Biodegradability by BOD : 123% (Toluene)

Eco-toxicity: Toluene is toxic to aquatic life.

Oryzias latipes	; LC_{50}(96h)	25mg/l(Toluene)
Rainbow trout	; LC_{50}(96h)	6.3mg/l(Toluene)
Brine shrimp	; EC_{50}(96h)	3.5mg/l(Toluene)
Daphnia magna	; EC_{50}(48h)	4.1mg/l(Toluene)

LC_{50}: 50% lethal concentration, EC_{50}: 50% effective concentration

13. DISPOSAL CONSIDERATIONS

Follow all regulations in your country or region.

Do not dump into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

UN Number : UN 1866

Proper shipping name : RESIN SOLUTION flammable

UN Class : Class 3
Packaging group : Ⅱ
Follow all regulation in your country.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA Status : Registered, Active

16. OTHER INFORMATION

REFERENCES

1) TLVs and BEIs (ACGIH 2017)
2) International Chemical Safety Card (WHO/FAO/UNEP)
3) GHS classification data base in National Institute of Technology and Evaluation, Japan
4) Registry of Toxic Effects of Chemical Substances. (CCOHS 2011)
5) Carcinogenic evaluation of Chemical Substances and classification standard. (ver.7) (JETOC)
6) Chemical Risk Information Platform. (National Institute of Technology and Evaluation, Japan)
7) IUCLID Chemical Data sheet (European chemical Substances Information System)

REVISION SUMMARY

Oct. 25, 2019	First version (GIUS-12830-006)
Oct. 01, 2020	Second version (GIUS-12830-006(A))

For further information or inquiries, please consult

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