Link-Upon Advanced Material Corporation

Material Safety Data Sheet

MSDS Number: 0858-04

24 hour Emergency Assistance: 886-2-86888999

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTITY: LINK-UPON POLYMER CRAYON

Product Code: BA001-01、BA003-18、BA003-24、BA003-31

COMPANY NAME: Link-Upon Advanced Material Corporation COMPANY ADDRESS: No.31, Gong-Sing St., Shu-Lin City,

New Taipei City, Taiwan, R.O.C.

Telephone: 886-2-86888999

Fax: 886-2-86888998

SECTION 2 PRODUCT/INGREDIENTS

INGREDIENTS	CAS No.	CONCENTRATION (wt%)
Synthetic Wax	8002-74-2	<35
Talc	14807-96-6	<59
Antioxidant/Stabilizer	26741-53-7	<0~1
Colorant		<5

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance and Odor: Solid. Slight characteristic odor of wax.

Health Hazards: Vapors and fumes from heated product or dust may cause irritation. **Physical Hazards**: The material will burn and should not present an unusual hazard during fires. Avoid smoke from fires.

Eye Contact:

Vapors and fumes from heated product may cause irritation. Solid or dusts may cause irritation or corneal injury due to mechanical action.

Skin Contact:

Contact with heated product may cause thermal burns. Repeated or prolonged contact may cause irritation.

Inhalation:

Vapors and fumes from heated product may cause irritation to nose, throat and respiratory tract. Inhalation of dust may cause irritation.

Ingestion:

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No adverse effects are expected. Swallow of large amounts may cause choking, vomit or irritation.

Aggravated Medical Conditions:

Preexisting eye, skin and respiratory tract disorders may be aggravated by exposure to this product.

Special Notes:

The material is generally low toxic. Improper handling of the material dusts may cause irritation or injury.

SECTION 4

FIRST AID MEASURES

Eyes:

Flush eyes with water while holding eyelids open.

Skin:

If contact with hot material, cool the burn area by flushing with large amounts of water. Do not attempt to remove anything from the burn area or apply burn screams or ointments. Cover the burn area loosely with a sterile dressing, if available.

Inhalation:

Move person to fresh air and call a physician. Administer oxygen if breathing is difficult.

Ingestion:

Do not induce vomiting and call a physician.

SECTION 5

FIRE FIGHTING MEASURES

Extinguishing Media:

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Fire Fighting Instructions:

The material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool fire exposed containers with water.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Spill or Leakage Management:

Shovel and sweep up or use industrial vacuum cleaner. Avoid generating dust clouds. Place in container for reclaiming or proper disposal.

SECTION 7

HANDLING AND STORAGE

Practice good housekeeping. Do not allow product to accumulate in processing area.

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Handling:

Product may accumulate static charges during transport, handling and processing. Reducing the velocity of transport will reduce charging. Equipment should provide a means for dissipating any charge that may develop. In processing, do not allow the temperature to exceed 180° C. Maintain a fire watch if 180° C is reached.

Storage:

Avoid vapors from heated products. Adequate ventilation and/or engineering controls must be employed in high temperature processing to prevent exposure to potentially toxic/irritating fumes.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls:

Adequate ventilation and/or engineering controls are required when product is heated in processing.

Personal Protection:

Eye protection: Chemical goggles, or safety glasses.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 SFR1910.134.

Types of respirator(s) to be considered in the selection process include: Air-purifying Respirator for Dusts and Mists, Supplied-Air Respirator

Skin protection: Use protective clothing which is chemical resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid Odor: Slight characteristic odor of wax

Specific gravity: 1.1-2.0 Melting point: $50-120^{\circ}$ C

Boiling point: Not applicable **Vapor pressure**: Not applicable **Vapor density**: Not applicable **Solubility in water**: Negligible

SECTION 10

REACTIVITY AND STABILITY

Stability.

The product is stable under normal temperature of storage and use.

Conditions to avoid:

Avoid contact with strong oxidizing agents. In processing, do not allow the

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Hazardous Decomposition Products:

In processing at high temperature, some degree of thermal degradation may occur. Although highly dependent on temperature and environmental conditions, a variety of decomposition products may be present from simple hydrocarbons to toxic/irritating gases (carbon monoxide and dioxide, acrolein, ketones, aldehydes). See Handling Section.

SECTION 11

TOXICOLOGICAL INFORMATION

Other information:

The material is generally low toxic. Improper handling of the material dusts may cause irritation or injury. See HAZARDS IDENTIFICATION section.

SECTION 12

ECOLOGICAL INFORMATION

This section will be updated as ecological reviews are completed.

SECTION 13

DISPOSAL CONSIDERATIONS

General Recommendations:

The product is easy to recycle. If the product becomes a waste, it will not be a hazardous waste. Place in an appropriate disposal facility in compliance with local regulations.

SECTION 14

TRANSPORT INFORMATION

Department of Transportation Classification:

The product is not regulated by D.O.T.

SECTION 15

OTHER INFORMATION

Revision No.: 3

Revision Date: 26 August, 2020

Special Notes:

The information contained herein is based on the data available to us and is believed to be correct. However, Link-Upon makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Link-Upon assumes no responsibility for injury from the use of the product described herein.

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Link-Upon Advanced Material Corporation

Material Safety Data Sheet

MSDS Number: 0858-01-03

24 hour Emergency Assistance: 886-2-286888999

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTITY: LINK-UPON THERMOPLASTIC ELASTOMER ERASER

Product Code: AA001-0770 AA001-1170 AA002-0170 AA002-0375 AA002-3475

AA002-4672 AA003-1670 AA003-2070 AA006-0170 AA006-0270

AA009-3476-1 AA009-3578-1 AP001-1078 AP001-1280 AP001-1675 AP001-2372 APHB02S-8782 PB001-1875 LC001-0373 FL11-0927D AA002-4875 AA002-6175

COMPANY NAME: Link-Upon Advanced Material Corporation

COMPANY ADDRESS: No. 31, Gong-Sing St., Shu-Lin City, Taipei County,

Taiwan, R.O.C.

Telephone: 886-2-86888999

Fax: 886-2-86888998

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PRODUCT/INGREDIENTS

INGREDIENTS	CAS No.	CONCENTRATION(wt%)
Styrene-Diene-Styrene Block Copolymers	9003-55-8	<12
Polyolefin	9002-88-4	<3
White Mineral Oil	8042-47-5	<4
Calcium Carbonate	471-34-1	<60
Pigment		> 2
Stabilizer		> 1

SECTION 3

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance and Odor: Solid. Generally odorless.

Health Hazards: Polymer compounding product with no unusual emergency

concerns.

Physical Hazards: The material will burn and should not present an unusual hazard

During fires. Avoid smoke from fires.

Eye Contact:

Product is practically not irritating to the eyes.

Skin Contact:

Product is practically not irritating to the skin.

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Inhalation:

Product is generally not expected to cause irritation to the nose, throat and respiratory tract.

Ingestion:

Product is generally considered to have a low order of acute oral toxicity.

Aggravated Medical Conditions:

Preexisting eye, skin and respiratory tract disorders may be aggravated by exposure to this product.

Special Notes:

The material is essentially non-toxic and not irritating. If material dusts are generated they could scratch the eyes and cause minor irritation to the respiratory tract.

SECTION 4

FIRST AID MEASURES

Skin:

If contact with hot material, cool the burn area by flushing with large amounts of water. Do not attempt to remove anything from the burn area or apply burn screams or ointments. Cover the burn area loosely with a sterile dressing, if available.

Eyes:

Flushes eyes with water while holding eyelids open.

SECTION 5

FIRE FIGHTING MEASURES

Extinguishing Media:

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Fire Fighting Instructions:

The material will not burn unless preheated. Do not enter confined fire space without full bunker gear(helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool fire exposed containers with water.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Spill or Leakage Management:

Shovel and sweep up or use industrial vacuum cleaner. Avoid generating dust clouds. Place in container for reclaiming or proper disposal.

SECTION 7

HANDLING AND STORAGE

Practice good housekeeping. Do not allow product to accumulate in processing area.

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Handling:

Product may accumulate static charges during transport, handling and processing. Reducing the velocity of transport will reduce charging. Equipment should provide a means for dissipating any charge that may develop. In processing, do not allow the temperature to exceed 250°C. Maintain a fire watch if 250°C is reached.

Storage:

Avoid vapors from heated products. Adequate ventilation and/or engineering controls must be employed in high temperature processing to prevent exposure to potentially toxic/irritating fumes.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls:

Adequate ventilation and/or engineering controls are required when product is heated in processing.

Personal Protection:

Eye protection: Chemical goggles, or safety glasses.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 SFR1910.134.

Types of respirator(s) to be considered in the selection process include:

Air-purifying Respirator for Dusts and Mists, Supplied-Air Respirator

Skin protection: Use protective clothing which is chemical resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: SolidOdor: Generally odorlessSpecific gravity: 1.35-1.95Melting point: 130-150℃Boiling point: Not applicableVapor pressure: Not applicableVapor density: Not applicableSolubility in water: Negligible

SECTION 10

REACTIVITY AND STABILITY

Stability:

Stable.

Conditions to avoid:

Avoid contact with strong oxidizing agents. In processing, do not allow the temperature to

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exceed 250°C. Maintain a fire watch if 250°C is reached.

Hazardous Decomposition Products:

In processing at high temperature, some degree of thermal degradation may occur. Although highly dependent on temperature and environmental conditions, a variety of decomposition products may be present from simple hydrocarbons to toxic/irritating gases(carbon monoxide and dioxide, acrolein, ketones, aldehydes). See Handling Section.

SECTION 11

TOXICOLOGICAL INFORMATION

Other information:

The product is essentially non-toxic and is not irritating. See HAZARDS IDENTIFICATION section.

SECTION 12

ECOLOGICAL INFORMATION

This section will be updated as ecological reviews are completed.

SECTION 13

DISPOSAL CONSIDERATIONS

General Recommendations:

The product is easy to recycle. If the product becomes a waste, it will not be a hazardous waste. Place in an appropriate disposal facility in compliance with local regulations.

SECTION 14

TRANSPORT INFORMATION

Department of Transportation Classification:

Not hazardous by D.O.T. regulation.

SECTION 15

OTHER INFORMATION

Revision No.: 0

Revision Date: May 7, 2014

Special Notes:

The information contained herein is based on the data available to us and is believed to be correct. However, Link-Upon makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Link-Upon assumes no responsibility for injury from the use of the product described herein.

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