Material Safety Data Sheet

Adhesive

TYPE: Hot Melt Adhesive

PHYSICAL PROPERTIES: Appearance: Light yellow solid

Solids: 100%

Viscosity: Approx. 4,900 cps @ 275_F

Approx. 3,200 cps @ 300_F Approx. 1,850 cps @ 325_F Lbs./gallon: Approx. 7.8

Softening Point: Approx. 235_F (Ball & Ring)

SUGGESTED USES: Construction adhesive - Nonwovens.

OPERATING CONDITIONS: Running temperature 275_F - 350_F.

Can be applied by all conventional hot melt applicators

including roll, nozzle, spray, foam.

PRECAUTIONS: Material is applied hot - appropriate clothing and eye

protection should be used. Use with adequate ventilation

to remove any hot melt fumes or vapors that are generated. Keep containers and premelters covered to avoid contamination. Rotate stock - first in - first out. Do

not mix with other adhesives.

PACKAGE: 3.5 lb. per block, cavity package.

Airlaid

1. IDENTIFICATION

Article: Thermal Bonded Airlaid Material

Possible Application: Absorption material, acquisition material, etc.

Telephone: 1-866-913-8363

2. INFORMATION ON INGREDIENTS

Composition: cellulose, polyolefines

3. HAZARD IDENTIFICATION

Ingestion: can absorb liquid

| Route(| Inhalation? | Skin? | Ingestion? |
|--------|--------------------------|--------------------|--------------------|
| s) of | Excessive dust | NOT APPLICABLE FOR | NOT APPLICABLE FOR |
| Entry | concentrations may cause | PRODUCT IN | PRODUCT IN |
| | unpleasant deposit or | PURCHASE FORM. | PURCHASE FORM. |
| | obstruction in the nasal | | |
| | passages. Remove to | | |

fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

Health Hazards (Acute and Chronic)
NOT A HEALTH HAZARD AS DEFINED BY OSHA

Carcinogenicity NTP? IARC Monographs? OSHA Regulated?
Listing: NOT LISTED NOT REGULATED

Signs and Symptoms of Exposure

PĂPER (cellulose) DUST IS A BIOLOGICALLY INERT DUST THAT HAS LITTLR OR NO EFFECT ON THE LUNGS AND DOES NOT PRODUCE SIGNIFICANT ORGANIC DISEASE OR TOXIC EFFECT WHEN ALLOWABLE EXPOSURE LIMITS ARE MET.

Medical conditions Generally Aggravated by Exposure

CELLULOSE DUST MAY AGGRAVATE PREEXISTING RESPIRATORY CONDITIONS OR ALLERGIES.

Emergency and First Aid Procedures

EYE CONTACT: IRRIGATE WITH WATER FOR 15 MINUTES. IF ANY IRRITATION PERSISTS OBTAIN MEDICAL ADVICE.

SKIN CONTACT: NOT APPLICABLE FOR PRODUCT IN PURCHASE FORM.

INGESTION: NOT APPLICABLE FOR PRODUCT IN PURCHASE FORM

INHALATION: REMOVE ANY MATERIAL FROM THE MOUTH AND FREE THE AIRWAY. REMOVE THE PATIENT TO FRESH AIR. IF BREATHING HAS STOPPED OBTAIN

MEDICAL ASSISTANCE IMMEDIATELY.

4. FIRST AID MEASURES

Ingestion: seek medical aid

(no others applicable)

5. FIRE FIGHTING MEASURES

Extinguishing media: water

Special fire fighting measures: ABC powder, foam

6. ACCIDENTAL RELEASE MEASURES

(none required)

7. HANDLING AND STORAGE

Handling: no special safety measures required

Storage conditions: avoid moisture; keep in dry place away from

open flame

8. EXPOSURE CONTROLS

(none required)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid
Odour: odourless
Melting Point/Range: not applicable

Boiling Point/Range: not applicable for this product

Vapour pressure:

Flash point:

Autoignition:

Specific density:

not applicable
not applicable

~ 230 °C (cellulose)
see specification sheet

Solubility in water: insoluble pH-value: not applicable Viscosity: not applicable

10. STABILITY AND REACTIVITY

Stability: stable Reactivity: non reactive

Decomposition: combustion products include carbon monoxide

and carbon hydrates

11. TOXICOLOGICAL INFORMATION

This product and its ingredients are not toxic, not irritant and not carcinogenic.

12. ECOLOGICAL INFORMATION

This product is partial biodegradable.

13. DISPOSAL CONCIDERATION

Disposal of the product:

This product may be disposed of by

incineration, in approved landfill tips or by other authorised means. Observe local regulations.

Waste description: cellulose, polyolefines.

14. TRANSPORT INFORMATION

Does not belong to dangerous goods according to transport regulations.

15. REGULATORY INFORMATION

No regulatory information is relevant to the usage of this product.

16. OTHER INFORMATION

For further information, please refer to raw materials MSDS.

SECTION 1: PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME: This MSDS is applicable to all polyethylene based films used in manufacturing by McDonald Technology Group.

CHEMICAL NAME:

Polyethylene or Ethylene-Olefin Copolymer

CHEMICAL FAMILY:

Ethylene-Based Polymer

PRODUCT DESCRIPTION:

A thin film based upon Polyethylene polymers

EMERGENCY TELEPHONE NUMBER: 1-866-913-8363

SECTION 2: HAZARDOUS INGREDIENT INFORMATION

This product is not hazardous as defined in, 29 CFRI910.1200

SECTION 3 HEALTH INFORMATION & PROTECTION

NATURE OF HAZARD

EYE CONTACT:

Particulates may scratch eye surfaces/cause mechanical irritation.

SKIN CONTACT:

Negligible hazard at ambient temperatures (-18 to +38 degrees C; 0 to 100 degrees F). Exposure to hot material may cause thermal burns.

INHALATION:

Negligible hazard at ambient temperature (-18 to 38 Deg C; 0 to 100 Deg F) Vapors and/or aerosols, which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Low order of toxicity.

INGESTION:

Minimal toxicity.

FIRST AID EYE CONTACT:

This product is an inert solid. If piece gets in eye, remove as one would any foreign object.

SKIN CONTACT:

For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. **No** attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.

INHALATION:

First aid is normally not required

INGESTION:

First aid is normally not required.

WORKPLACE EXPOSURE LIMITS

OSHA REGULATION 29CFRI910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:

5 mg/m3 (respirable dust), and 15 mg/m3 (total dust) based on the OSHA PEL for nuisance dust.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

a TWA of 10 mg/m3 (total dust) for nuisance dust.

PRECAUTIONS

PERSONAL PROTECTION:

For open systems at ambient temperature (-18 to 38 degrees C) where contact is likely, wear safety glasses with side shields.

Where contact may occur with hot material. Wear thermal resistant gloves, arm protection, and a face shield.

VENTILATION:

Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit. See personal protection recommendations.

SECTION 4 FIRE & EXPLOSION HAZARD

FLASHPOINT: 649 Deg F. METHOD: ASTM E136 NOTE:

Estimated Minimum

FLAMMABLE LIMITS: n/a NOTE: Not

applicable

AUTOIGNITION TEMPERATURE: 649 Deg F. NOTE:

Estimated Minimum

GENERAL HAZARD:

Solid material may burn at or above the flashpoint, and airborne dust may explode if ignited. Toxic gases will form upon combustion.

Static Discharge, material can accumulate static charges, which can cause an incendiary electrical discharge

FIRE FIGHTING:

Use water spray to cool fire-exposed surfaces, protect personnel, and extinguish the fire. Respiratory and eye protection required for fire fighting personnel.

HAZARDOUS COMBUSTION PRODUCTS:

Oxygen-lean conditions may produce carbon monoxide and irritating smoke.

SECTION 5 SPILL CONTROL/ACCIDENTAL RELEASE PROCEDURE

(applicable to material in pellet form only)

LAND SPILL:

Recover spilled material and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Plastic pellets are defined by the US EPA under the Clean Water Act (40CFRI22.26) as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties. Skim from surface.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Recover the spilled material and place in suitable containers for recycle or disposal.

SECTION 6: NOTES

NOTES:

SPECIAL PRECAUTIONS:

Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures. It is recommended that the current ACGIH-TLVs for these materials be observed.

HAZARD RATING SYSTEMS:

This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

| | NPCA-HMIS | NFPA 704 | KEY |
|--------------|-----------|----------|--------------|
| HEALTH | 2 | 2 | 4 = Severe |
| FLAMMABILITY | 1 | 1 | 3 = Serious |
| REACTIVITY | 0 | 0 | 2 = Moderate |
| | | | I = Slight |
| | | | 0 = Minimal |

SECTION 7: REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

DOT HAZARD CLASS: Not regulated

DOT IDENTIFICATION NUMBER: Not Available

FLASHPOINT: 649 Deg F. METHOD: AS1-M E136 NOTE: Estimated Minimum

TSCA:

This product is listed on the TSCA Inventory.

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/3i2 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories: Not Hazardous.

This product does not contain Section 313 Reportable Ingredients.

SECTION 8 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY: VAPOR PRESSURE, mmHg at 'F:

0.92 0.970 Not applicable

SOLUBILITY IN WATER, WT. VISCOSITY OF LIQUID, CST AT 'F:

Insoluble Not applicable

SP. GRAV. OF VAPOR, at 1 atm (air=1) FREEZING/MELTING POINT, 'F

Not applicable 225 to 229 Deg F

EVAPORATION RATE, n-Bu Acetate=I: BOILING POINT, . F:

Not applicable Not applicable

SECTION 9: REACTIVITY DATA

STABILITY: HAZARDOUS POLYMERIZATION:

Stable Will not occur

CONDITIONS TO AVOID INSTABILITY:

Temperatures over 650 F (343 C) may cause resin degradation.

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Fluorine

Strong Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:

Not applicable

SECTION 10: STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:

Yes, use proper grounding procedure

STORAGE TEMPERATURE, 'F:

Ambient

LOADING/UNLOADING TEMPERATURE, 'F:

Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

VISC. AT LOADING/UNLOADING TEMP.. cST:

Solid

REVISION SUMMARY: (NA)

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES

REPRESENTATIVE 1-866-913-8363

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