

Material Safety Data Sheet

Prepared 5/26/10

Associated Technologies – AT-4020 (Component A) – Acrylic Adhesive

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AT-4020 (COMPONENT A) Product Type: Acrylics
Associated Technologies Information Telephone 860-788-3380
694 Higganum Road Emergency Telephone # (800) 255-3924 (CHEM•TEL)
Durham, CT 06422 Outside North America #: (813) 248-0585 (Call Collect)

SECTION 2– COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous Components</u> | <u>%</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER</u> |
|--|----------|--|--|-----------------|
| Methyl methacrylate 80-62-6 | 30 - 60 | 100 ppm STEL 50 ppm TWA | 100 ppm TWA 410 mg/m ³ TWA | 50 ppm |
| Polyethylene based rubber Proprietary | 10-30 | None | None | None |
| Hydroxyalkyl methacrylate 868-77-9 | 10-30 | None | None | 3 ppm (ceiling) |
| Methacrylic acid 79-41-4 | 1-5 | 20 ppm TWA | None | None |
| Benzenecarboperoxoic acid , 1, 1- Dimethylethyl ester 614-45-9 | 1-5 | None | None | None |
| Talc 14807-96-6 | 0.1-1 | 2 mg/m ³ TWA respirable fraction, particulate matter containing no asbestos and <1% crystalline silica | = 20 mppcf TWA | 50 ppm |
| Carbon tetrachloride 56-23-5 | 0.1-1 | 10 ppm STEL 5ppm TWA (skin) | 10 ppm TWA 25 ppm Ceiling | None |

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical State: Paste HMIS: Health: 2*
Color: White Opaque Flammability: 3
Odor: Sharp Physical Hazard: 1
Personal Protection: See Section 8

WARNING: Flammable Liquid And Vapor. Causes Eye, Skin And Respiratory Tract Irritation
May Cause Allergic Skin Reaction. May Be Harmful If Swallowed

Relevant Routes Of Exposure: Inhalation, Skin, Eyes, Ingestion

Potential Health Effects

Inhalation Vapors May Cause Headaches, Nausea, Dizziness and Respiratory Track Irritation.
Skin Contact: Irritating to Skin. May Cause Allergic Skin Reaction
Eye Contact Vapors May Irritate Eyes. Contact With Eyes Will Cause Irritation.
Ingestion May Be Harmful If Swallowed. Ingestion Causes Irritation and Effects Similar to
Inhalation
Existing Conditions Aggravated Eye, Skin And Respiratory Disorders
By Exposure See Section 11 For Additional Toxicological Information

SECTION 4 – FIRST AID MEASURES

Inhalation: Remove To Fresh Air, If Symptoms Develop And Persist, Get Medical Attention
Skin Contact Wash With Soap And Water. Remove Contaminated Clothing And Shoes. Wash Clothing Before
Reuse. Get Medical Attention If Symptoms Occur.
Eye Contact Flush With Copious Amounts Of Water, Preferably, Lukewarm Water For At Least 15 Minutes,

Ingestion: Holding Eyelids Open All The Time. Get Medical Attention
Do Not Induce Vomiting. Keep Individual Calm. Obtain Medical Attention

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: 14° C (58° F) Setaflash Closed Cup
Autoignition Temperature: Not Available
Flammable/Explosive Limits – Lower %: Not Available
Flammable/Explosive Limits – Upper %: Not Available
Extinguishing Media: Foam, Dry Chemical Or Carbon Dioxide
Special Fire Fighting Procedures: Wear Self-Contained Breathing Apparatus and Full Protective Clothing, Such as Turn-Out Gear.
Unusual Fire Or Explosion Hazards: Vapors May Accumulate In Low Or Confined Areas, Travel Considerable Distance To Source Of Ignition And Flash Back
Hazardous Combustion Products: Oxides Of Carbon. Oxides Of Nitrogen. Oxides of Sulfur. Hydrogen Cyanide. Hydrogen Chloride. Acids. Aldehydes. Alcohols. Toxic Fumes. Acrid Smoke And Fumes. Irritating Organic Vapors

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Environmental Precautions: Prevent Product For Entering Drains Or Open Waters
Clean-Up Methods: Remove All Ignition Sources. Ensure Adequate Ventilation. Soak Up With Inert Absorbent. Store In A Closed Container Until Ready For Disposal

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid Contact With Eyes, Skin And Clothing. Avoid Breathing Vapor And Mist. Wash Thoroughly After Handling. During Use And Until All Vapors Are Gone: Keep Area Ventilated – Do Not Smoke; Extinguish All Flames, Pilot Lights, And Heaters; Turn Off Stoves, Electrical Tools And Appliances, And Any Other Sources Of Ignition. Make Sure Containers Are Properly Grounded Before Use Or Transfer Of Material.
Storage: Keep In A Cool, Well Ventilated Area Away From Heat, Sparks And Open Flame. Keep Container Tightly Closed Until Ready For Use. For Safe Storage, Store At Or Below 32° F
Incompatible Products Refer To Section 10.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use Local Exhaust Ventilation To Maintain Airborne Concentrations Below Established Exposure Limits
Respiratory Protection: Use NIOSH Approved Respirator If There Is Potential To Exceed Exposure Limit(s).
Skin Protection: Chemical Resistant, Impermeable Gloves. Nitrile Gloves.
Eye/Face Protection Safety Goggles Or Safety Glasses With Side Shields

See Section 2 For Exposure Limits

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Paste
Color: White Opaque
Odor: Sharp
Vapor Pressure: 28 mmHg@ 20° C (68° F)
pH: Not Applicable
Boiling Point/Range: Greater Than 100° C (212° F)
Melting Point/Range: Not Available
Specific Gravity: 1.04
Vapor Density: Greater Than 1
Evaporation Rate: Faster Than Ether (Ether = 1)
Solubility In Water: Slight
Partition Coefficient (n-octanol/water) Not Available
VOC Content Not Available

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: May Occur
Hazardous Decomposition Products : Oxides Of Carbon. Oxides Of Nitrogen. Oxides of Sulfur. Hydrogen Cyanide. Hydrogen Chloride. Acids. Aldehydes. Alcohols. Carbon Tetrachloride. Styrene. Acrolein. Acetophenone. Ethylbenzene. Cumene. 4-Vinyl Cyclohexene. Phenols. Irritating Organic Vapors. Toxic Fumes. Smoke.
Incompatibility:: Oxidizing Agents. Reducing Agents. Acids. Bases.
Conditions To Avoid: See "Handling And Storage" (Section 7) and "Incompatibility" (Section 10). Do not Mix In Batches Greater Than 100 Grams (0.22 pounds) Unless You Plan To Use Immediately

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogen Status:

| <u>Hazardous Components</u> | <u>NTP Carcinogen</u> | <u>IARC Carcinogen</u> | <u>OSHA Carcinogen</u> |
|--|------------------------------|-------------------------------|-------------------------------|
| Methyl methacrylate 80-62-6 | No | No | No |
| Polyethylene based rubber Proprietary | No | No | No |
| Hydroxyalkyl methacrylate 868-77-9 | No | No | No |
| Methacrylic acid 79-41-4 | No | No | No |
| Benzenecarboperoxoic acid 1, 1-Dimethylethyl ester 614-45-9 | No | No | No |
| Talc 14807-96-6 | No | No | No |
| Carbon tetrachloride 56-23-5 | Suspect Carcinogen | Group 2B | Yes |

Literature Referenced Target Organs & Other Health Effects:

| <u>Hazardous Components</u> | <u>Health Effects / Target Organs</u> |
|--|---|
| Methyl methacrylate 80-62-6 | Allergen, Irritant, Kidney, Liver, Nervous System, Respiratory, Mutagen |
| Polyethylene based rubber Proprietary | No Target Organs |
| Hydroxyalkyl methacrylate 868-77-9 | Allergen, Irritant |
| Methacrylic acid 79-41-4 | Allergen, Corrosive, Irritant |
| Benzenecarboperoxoic acid 1, 1-Dimethylethyl ester 614-45-9 | Central Nervous System, Irritant, Mutagen |
| Talc 14807-96-6 | Some Evidence of Carcinogenicity, Lung, Irritant |
| Carbon Tetrachloride 56-23-5 | Cardiac, Central Nervous System, Irritant, Kidney, Liver, Some Evidence of Carcinogenicity. |

SECTION 12 – Ecological Information

Ecological Information: None Available

SECTION 13 – Disposal Considerations

Recommended Disposal Method: Dispose Of According To Federal, State, And Local Governmental Regulations
EPA Hazardous Waste Number:: D001: Ignitable. D019: Carbon Tetrachloride

SECTION 14 – TRANSPORT INFORMATION

US DOT Transportation Ground (49 CFR)

| | |
|--------------------------|---|
| Proper Shipping Name: | Adhesives |
| Hazard Class Or Division | 3 |
| Identification Number: | UN 1133 |
| Packing Group: | II |
| Exceptions: | Consumer Commodity ORM-D (Not More Than 5 Liters) |
| Marine Pollutant: | None |

International Air Transportation: (ICAO/IATA):

| | |
|--------------------------|---|
| Proper Shipping Name: | Adhesives |
| Hazard Class Or Division | 3 |
| Identification Number: | UN 1133 |
| Packing Group: | II |
| Exceptions: | May Qualify As consumer Commodity ID8000 (Not More Than 500 ML) |

Water Transportation: (IMO/IMDG):

| | |
|--------------------------|-----------|
| Proper Shipping Name: | Adhesives |
| Hazard Class Or Division | 3 |
| Identification Number: | UN 1133 |
| Packing Group: | II |
| Marine Pollutant | None |

SECTION 15 – Regulatory Information

United States Regulatory Information

| | |
|----------------------------------|--|
| TSCA 8 (b) Inventory Status: | All Components Are Listed Or Are Exempt From Listing On The Toxic Substances Control Act Inventory. |
| TSCA 12 (b) Export Notification: | 4-Methoxyphenol (150-76-5) |
| CERCLA/SARA Section 302 EHS: | None above reporting de minimus. |
| CERCLA/SARA Section 311/312: | Immediate Health Hazard, Delayed Health Hazard, Fire. |
| CERCLA/SARA 313: | This Product Contains The Following Toxic Chemicals Subject To The Reporting Requirements Of Section 313 Of The Emergency Planning And Community Right To Know Act Of 1986 (40 CFR 372) Methyl Methacrylate (CAS# 80-62-6). Carbon Tetrachloride (CAS# 56-23-5). |
| California Proposition 65: | This Product Contains A Chemical Known In The State Of California To Cause Cancer. |

Canada Regulatory Information

| | |
|-----------------------|--|
| CEPA DSL/NDSL Status: | All Components Are Listed On Or Are Exempt From Listing On The Domestic Substances List. |
| WHMIS Hazard Class: | B.2, D.2.A, D.2.B |

SECTION 16 – Other Information

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Associated Technologies, LLC. Does not assume responsibility for any results obtained by persons over whose methods Associated Technologies, LLC has no control. It is the user's responsibility to determine the suitability of Associated Technologies, LLC products or any other production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in handling and use of any Associated Technologies, LLC's products. In light of the foregoing, Associated Technologies, LLC. Specifically disclaims all warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Associated Technologies, LLC's products. Associated Technologies further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Material Safety Data Sheet

Prepared 5/25/10

Associated Technologies – AT-4020 (Component B) – Acrylic Adhesive

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AT-4020 (COMPONENT B) Product Type: Acrylics
Associated Technologies Information Telephone 860-788-3380
694 Higganum Road Emergency Telephone # (800) 255-3924 (CHEM•TEL)
Durham, CT 06422 Outside North America #: (813) 248-0585 (Call Collect)

SECTION 2– COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous Components</u> | <u>%</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER</u> |
|--|----------|----------------------------|--|--------------|
| Methyl methacrylate 80-62-6 | 60-100 | 100 ppm STEL 50 ppm TWA | 100 ppm TWA 410 mg/m ³ TWA | 50 ppm |
| Aldehyde-amine Condensate Proprietary | 1-5 | None | None | None |
| Nepheline Syenite 37244-96-5 | 10-30 | None | None | None |

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical State: Paste HMIS: Health: 2*
Color: Tan Opaque Flammability: 3
Odor: Strong Physical Hazard: 1
Personal Protection: See Section 8

WARNING: Flammable Liquid And Vapor. Causes Eye, Skin And Respiratory Tract Irritation
May Cause Allergic Skin Reaction. May Be harmful If Swallowed

Relevant Routes Of Exposure: Inhalation, Skin Contact, Eye Contact, Ingestion

Potential Health Effects

Inhalation Vapors May Cause Headaches, Nausea, Dizziness and Respiratory Track Irritation.
Skin Contact: May Cause Skin Irritation. May Cause Allergic Skin Reaction.
Eye Contact May Cause Irritation.
Ingestion May Be Harmful If Swallowed.
Existing Conditions Aggravated By Exposure Eye, Skin And Respiratory Disorders.
See Section 11 For Additional Toxicological Information.

SECTION 4 – FIRST AID MEASURES

Inhalation: Remove To Fresh Air, If Symptoms Develop And Persist, Get Medical Attention
Skin Contact Wash With Soap And Water. Remove Contaminated Clothing And Shoes. Wash Clothing Before Reuse. Get Medical Attention If Symptoms Occur.
Eye Contact Flush With Copious Amounts Of Water, Preferably, Lukewarm Water For At Least 15 Minutes, Holding Eyelids Open All The Time. Get Medical Attention
Ingestion: Do Not Induce Vomiting. Keep Individual Calm. Obtain Medical Attention

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: 14° C (58° F) Setaflash Closed Cup
Autoignition Temperature: Not Available
Flammable/Explosive Limits – Lower % Not Available
Flammable/Explosive Limits – Upper % Not Available
Extinguishing Media: Foam, Dry Chemical Or Carbon Dioxide
Special Fire Fighting Procedures: Wear Self-Contained Breathing Apparatus And Full Protective Clothing, Such As Turn-Out Gear

Unusual Fire Or Explosion Hazards: Vapors May Accumulate In Low Or Confined Areas, Travel Considerable Distance To Source Of Ignition And Flash Back
Hazardous Combustion Products: Oxides Of Carbon. Oxides Of Nitrogen. Toxic Fumes. Acrid Smoke And Fumes, Irritating Organic Vapors

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Environmental Precautions: Prevent Product For Entering Drains Or Open Waters
Clean-Up Methods: Remove All Ignition Sources. Ensure Adequate Ventilation. Soak Up With Inert Absorbent. Store In A Closed Container Until Ready For Disposal

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid Contact With Eyes, Skin And Clothing. Avoid Breathing Vapor And Mist. Wash Thoroughly After Handling. During Use And Until All Vapors Are Gone: Keep Area Ventilated – Do Not Smoke; Extinguish All Flames, Pilot Lights, And Heaters; Turn Off Stoves, Electrical Tools And Appliances, And Any Other Sources Of Ignition. Make Sure Containers Are Properly Grounded Before Use Or Transfer Of Material
Storage: Keep In A Cool, Well Ventilated Area Away From Heat, Sparks And Open Flame. Keep Container Tightly Closed Until Ready For Use. For Safe Storage, Store At Or Below 32° F
Incompatible Products Refer To Section 10.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use Local Exhaust Ventilation To Maintain Airborne Concentrations Below Established Exposure Limits
Respiratory Protection: Use NIOSH Approved Respirator If There Is Potential To Exceed Exposure Limit(s).
Skin Protection: Chemical Resistant, Impermeable Gloves. Nitrile Gloves.
Eye/Face Protection Safety Goggles Or Safety Glasses With Side Shields

See Section 2 For Exposure Limits

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Paste
Color: Tan Opaque
Odor: Strong
Vapor Pressure: Not Available
pH: Not Applicable
Boiling Point/Range: Greater Than 100° C (212° F)
Melting Point/Range: Not Available
Specific Gravity: 0.96
Vapor Density: Greater Than 1
Evaporation Rate: Faster Than Ether (Ether = 1)
Solubility In Water: Slight
Partition Coefficient (n-octanol/water) Not Available
VOC Content Not Available

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: May Occur
Hazardous Decomposition Products: Oxides Of Carbon. Oxides Of Nitrogen. Toxic Fumes. Irritating Organic Vapors. Smoke
Incompatibility: Oxidizing Agents. Reducing Agents. Acids. Bases. Alkalis. Heat, sunlight, or UV Light.
Conditions To Avoid: See "Handling And Storage" (Section 7) and "Incompatibility" (Section 10). Do not Mix In Batches Greater Than 100 Grams (0.22 pounds) Unless You Plan To Use Immediately

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogen Status:

| <u>Hazardous Components</u> | <u>NTP Carcinogen</u> | <u>IARC Carcinogen</u> | <u>OSHA Carcinogen</u> |
|--|------------------------------|-------------------------------|-------------------------------|
| Methyl methacrylate 80-62-6 | No | No | No |
| Aldehyde-amine Condensate Proprietary | No | No | No |
| Nepheline Syenite 37244-96-5 | No | No | No |

Literature Referenced Target Organs & Other Health Effects:

| <u>Hazardous Components</u> | <u>Health Effects / Target Organs</u> |
|--|---|
| Methyl methacrylate 80-62-6 | Allergen, Irritant, Kidney, Liver, Nervous System, Respiratory, Mutagen |
| Aldehyde-amine Condensate Proprietary | No Data |
| Nepheline Syenite 37244-96-5 | No Target Organs |

SECTION 12 – Ecological Information

Ecological Information: None Available

SECTION 13 – Disposal Considerations

Recommended Disposal Method: Dispose Of According To Federal, State, And Local Governmental Regulations
EPA Hazardous Waste Number:: D001: Ignitable.

SECTION 14 – TRANSPORT INFORMATION

US DOT Transportation Ground (49 CFR)

Proper Shipping Name: Adhesives
Hazard Class Or Division: 3
Identification Number: UN 1133
Packing Group: II
Exceptions: Consumer Commodity ORM-D (Not More Than 5 Liter)

International Air Transportation: (ICAO/IATA):

Proper Shipping Name: Adhesives
Hazard Class Or Division: 3
Identification Number: UN 1133
Packing Group: II
Exceptions: May Qualify As consumer Commodity ID8000 (Not More Than 500 ML)

Water Transportation: (IMO/IMDG):

Proper Shipping Name: Adhesives
Hazard Class Or Division: 3
Identification Number: UN 1133
Packing Group: II
Exceptions: Dangerous Goods In Limited Quantities Of Class 3 (Not More Than 1 Liter)
Marine Pollutant: None

SECTION 15 – Regulatory Information

United States Regulatory Information

| | |
|----------------------------------|--|
| TSCA 8 (b) Inventory Status: | All Components Are Listed Or Are Exempt From Listing On The Toxic Substances Control Act Inventory |
| TSCA 12 (b) Export Notification: | 4-Methoxyphenol (150-76-5) |
| CERCLA/SARA Section 302 EHS: | None |
| CERCLA/SARA Section 311/312: | Immediate Health Hazard, Delayed Health Hazard, Fire. |
| CERCLA/SARA 313: | This Product Contains The Following Toxic Chemicals Subject To The Reporting Requirements Of Section 313 Of The Emergency Planning And Community Right To Know Act Of 1986 (40 CFR 372). Methyl Methacrylate (CAS# 80-62-6). |
| California Proposition 65: | This Product Contains A Chemical Known In The State Of California To Cause Cancer And Birth Defects Or Other Reproductive Harm. |

Canada Regulatory Information

| | |
|-----------------------|--|
| CEPA DSL/NDSL Status: | All Components Are Listed On Or Are Exempt From Listing On The Domestic Substances List. |
| WHMIS Hazard Class: | B.2, D.2.B |

SECTION 16 – Other Information

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Associated Technologies, LLC. Does not assume responsibility for any results obtained by persons over whose methods Associated Technologies, LLC has no control. It is the user's responsibility to determine the suitability of Associated Technologies, LLC products or any other production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in handling and use of any Associated Technologies, LLC's products. In light of the foregoing, Associated Technologies, LLC. Specifically disclaims all warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Associated Technologies, LLC's products. Associated Technologies further disclaims any liability for consequential or incidental damages of any kind, including lost profits.