

SAFETY DATA SHEET

1. Identification

Material name: FAS N FREE ADHESIVE 5 GL
Material: 362500 805L

Recommended use and restriction on use

Recommended use: Adhesive
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco Incorporated
3735 Green Road
BEACHWOOD OH 44122
US

Contact person: EH&S Department
Telephone: 216-292-5000
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

| | |
|------------------------|------------|
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

Unknown toxicity - Health

| | |
|--|--------|
| Acute toxicity, oral | 1.92 % |
| Acute toxicity, dermal | 25.9 % |
| Acute toxicity, inhalation, vapor | 100 % |
| Acute toxicity, inhalation, dust or mist | 100 % |

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

| Chemical Identity | CAS number | Content in percent (%)* |
|--------------------------------------|------------|-------------------------|
| Asphalt | 8052-42-4 | 15 - 40% |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8 | 1 - 5% |
| Polymethylene polyphenyl isocyanate | 9016-87-9 | 0.5 - 1.5% |
| Maleic anhydride | 108-31-6 | 0.5 - 1.5% |
| Diphenylmethane diisocyanate | 26447-40-5 | 0.1 - 1% |
| Calcium oxide | 1305-78-8 | 0.1 - 1% |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Inhalation: Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.

Skin Contact: If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Type | Exposure Limit Values | Source |
|---|---------|--------------------------------|---|
| Asphalt - Inhalable fraction. - as benzene solubles | TWA | 0.5 mg/m ³ | US. ACGIH Threshold Limit Values (2011) |
| 4,4'-Methylene bis(phenylisocyanate) | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| | Ceiling | 0.02 ppm 0.2 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Maleic anhydride - Inhalable fraction and vapor. | TWA | 0.01 mg/m ³ | US. ACGIH Threshold Limit Values (02 2013) |
| Maleic anhydride | PEL | 0.25 ppm 1 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium oxide | TWA | 2 mg/m ³ | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 5 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|---------|-----------------------|---|
| Asphalt - Aerosol, inhalable. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Asphalt - Inhalable fraction. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Asphalt - Fume. | TWA | 5 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 4,4'-Methylene bis(phenylisocyanate) | CEILING | 0.01 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 0.005 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 4,4'-Methylene bis(phenylisocyanate) | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to |

| | | | |
|--|---------|-----------------------|---|
| | | | Biological or Chemical Agents) (06 2015) |
| 4,4'-Methylene bis(phenylisocyanate) | TWA | 0.005 ppm 0.051 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Polymethylene polyphenyl isocyanate | TWA | 0.005 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | CEILING | 0.01 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Maleic anhydride | TWA | 0.1 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Maleic anhydride - Inhalable fraction and vapor. | TWA | 0.01 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Maleic anhydride | TWA | 0.25 ppm 1.0 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection:

Use suitable protective gloves if risk of skin contact.

Other:

Wear suitable protective clothing. Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures:

Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

| | |
|--|---|
| Physical state: | liquid |
| Form: | Viscous Liquid |
| Color: | Black |
| Odor: | Slight odor |
| Odor threshold: | No data available. |
| pH: | No data available. |
| Melting point/freezing point: | No data available. |
| Initial boiling point and boiling range: | No data available. |
| Flash Point: | 194 °C 381 °F(Setaflash Closed Cup) |
| Evaporation rate: | Slower than n-Butyl Acetate |
| Flammability (solid, gas): | No |
| Upper/lower limit on flammability or explosive limits | |
| Flammability limit - upper (%): | No data available. |
| Flammability limit - lower (%): | No data available. |
| Explosive limit - upper (%): | No data available. |
| Explosive limit - lower (%): | No data available. |
| Vapor pressure: | No data available. |
| Vapor density: | Vapors are heavier than air and may travel along the floor and in the bottom of containers. |
| Relative density: | 1.05 |
| Solubility(ies) | |
| Solubility in water: | Insoluble in water |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water): | No data available. |
| Auto-ignition temperature: | No data available. |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |

10. Stability and reactivity

| | |
|--|---|
| Reactivity: | No data available. |
| Chemical Stability: | Material is stable under normal conditions. |
| Possibility of hazardous reactions: | No data available. |
| Conditions to avoid: | Avoid heat or contamination. |
| Incompatible Materials: | Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture. |

Hazardous Decomposition Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: May be harmful in contact with skin. Causes mild skin irritation. May cause an allergic skin reaction.

Eye contact: Eye contact is possible and should be avoided.

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: ATEmix: 285,194.17 mg/kg

Dermal Product: ATEmix: 4,982.39 mg/kg

Inhalation Product:

Specified substance(s):
Asphalt LC 50 (Rat): > 94.4 mg/m3

Maleic anhydride LC 50 (Rat): > 4.35 mg/l

Calcium oxide LC 50 (Rat): 40 mg/m3

Repeated dose toxicity Product: No data available.

Skin Corrosion/Irritation**Product:** No data available.**Specified substance(s):**

| | |
|--------------------------------------|--|
| Asphalt | in vivo (Rabbit): Not irritant Experimental result, Key study |
| 4,4'-Methylene bis(phenylisocyanate) | in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study |
| Maleic anhydride | in vivo (Rabbit): Corrosive Experimental result, Weight of Evidence study |
| Calcium oxide | in vivo (Rabbit): Irritating Read-across from supporting substance (structural analogue or surrogate), Key study |

Serious Eye Damage/Eye Irritation**Product:** No data available.**Specified substance(s):**

| | |
|------------------|-----------------------------------|
| Asphalt | Rabbit, 24 hrs: Not irritating |
| Maleic anhydride | Rabbit, 24 hrs: Highly irritating |

Respiratory or Skin Sensitization**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause sensitization by inhalation.**Carcinogenicity****Product:** Suspected of causing cancer.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

| | |
|---------|--|
| Asphalt | Overall evaluation: Possibly carcinogenic to humans. |
|---------|--|

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity**

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Maleic anhydride LC 50 (Bluegill (*Lepomis macrochirus*), 24 h): 150 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Asphalt NOAEL (*Oncorhynchus mykiss*, 28 d): $\geq 1,000$ mg/l Read-across from supporting substance (structural analogue or surrogate), Key study
LL 50 (*Oncorhynchus mykiss*, 28 d): $> 1,000$ mg/l Read-across from supporting substance (structural analogue or surrogate), Key study

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------------------|----------------------------|
| Asphalt | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Maleic anhydride | 5000 lbs. |
| Acetic acid | 5000 lbs. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**Delayed (Chronic) Health Hazard
Immediate (Acute) Health Hazards**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------------------|----------------------------|
| Asphalt | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Polymethylene polyphenyl isocyanate | |
| Maleic anhydride | 5000 lbs. |
| Acetic acid | 5000 lbs. |

SARA 311/312 Hazardous Chemical

| <u>Chemical Identity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------------------|------------------------------------|
| Asphalt | 10000 lbs |
| 4,4'-Methylene bis(phenylisocyanate) | 10000 lbs |
| Polymethylene polyphenyl isocyanate | 10000 lbs |
| Maleic anhydride | 10000 lbs |
| Diphenylmethane diisocyanate | 10000 lbs |
| Calcium oxide | 10000 lbs |

SARA 313 (TRI Reporting)

| <u>Chemical Identity</u> |
|--------------------------------------|
| 4,4'-Methylene bis(phenylisocyanate) |

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

Cancer - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Asphalt
4,4'-Methylene bis(phenylisocyanate)

US. Massachusetts RTK - Substance List

Chemical Identity

Asphalt
4,4'-Methylene bis(phenylisocyanate)
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Asphalt
4,4'-Methylene bis(phenylisocyanate)

US. Rhode Island RTK

Chemical Identity

Asphalt
4,4'-Methylene bis(phenylisocyanate)

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC:

Regulatory VOC (less water and exempt solvent) : 10 g/l

VOC Method 310 : 0.95 %

Inventory Status:

| | |
|--|--|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not listed on or exempt from the Inventory. |
| EINECS, ELINCS or NLP: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan (ENCS) List: | One or more components in this product are not listed on or exempt from the Inventory. |
| China Inv. Existing Chemical Substances: | All components in this product are listed on or exempt from the Inventory. |
| Korea Existing Chemicals Inv. (KECI): | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada NDSL Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Philippines PICCS: | One or more components in this product are not listed on or exempt from the Inventory. |
| US TSCA Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| New Zealand Inventory of Chemicals: | All components in this product are listed on or exempt from the Inventory. |
| Japan ISHL Listing: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan Pharmacopoeia Listing: | One or more components in this product are not listed on or exempt from the Inventory. |

16. Other information, including date of preparation or last revision

| | |
|-----------------------------|--------------------|
| Revision Date: | 07/21/2018 |
| Version #: | 1.1 |
| Further Information: | No data available. |

Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.