

Material Data Safety Sheet (MSDS): EM-409 Aluminum Frame adhesive

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Note: This information sheet has been re-formatted for better clarity by the Department of Earth Sciences. Some of the data such as information on shipping and weapons treaties were intentionally left out. If you want to look at the complete MSDS, you can either check one of the hardcopy versions in the Department, contact the manufacturer, or check one of the various Web-based databases such as those compiled

1. Product Identification

PRODUCT NAME: EM-409 Aluminum Frame Adhesive (鋁框接著劑)

2. Hazards Identification

BOILING PLINT(FAHRENHEIT) 150-160°C
 SOLUBILITY IN WATER complte
 SPECIFIC GRAVITY(H20=1) 0.975
 PERCENT VOLATILE(BY VOLUMME) 35-55%
 EVAPORATION RATE(N-BUTYL ACETATE=10.2
 APPEARANCE AND OI BLACK COLOR PASTE

ESTER Odor



3. Composition/Information on Ingredients

INTGREDIENT	BY WEIGHT	CAS:
Toluene	>25	108-88-3
Chloroprcne rubbcr	>10	9019-93-44
Ethyl acetate	>25	141-78-6
N-hexane	>25	110-54-3

4. First Aid Measures

FLASH PLINT(DEGREES FAHRENHEIT TCC) 150
 EXPLOSIVE LIMITS LEL-UEL 1.00-16.00

EXTINGUISHING MMMEDIA Alcohol Foam,Dry Chemical,CO2
 SPECIAL FIRE FIGHTING PROCEDUTRES Wear self-contained breathing apparatus.
 Wear protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE AND EXPLOSION HAZARDS Vapors are heavier than air and may travel considerable distances to a source of ignition and backflash. Can react with sarong oxidizing materials.

EMERGENCY AND FIRST AID PROCEDURES INHALATION-Remove to fresh air.Aid in Breathing if necessary. Get immediate medical attention.

SKIN-Wash affected areas with soan and water
Remove contaminated clothing. Launder before
reuse. If irritation developes,get medical
attention.

INHALATION-Remove to fresh air.Aid in
Breathing if necessary. Get immediate medical
attention.

SKIN-Wash affected areas with soan and water
Remove contaminated clothing. Launder before
reuse. If irritation developes,get medical
attention.

5. Fire Fighting Measures

THRESHOLD LIMIT VALUE

EFFECTS OF SINGLE OVEREXPOSURE

EYES-Eye Irritation

DERMAL-Drying and cracking of the skin.

Skin Irritation

INGESTION-Irritation of the mouth, throat, or mucous membranes.

INHALATION-Dizziness

Unconsciousness

Central Nervous System Damage

Narcotic Effects

Nausea

Headache

Respiratory Irritation

EFFECTS OF CHRONIC OVEREXPOSURE

DERMAL-Drying and cracking of the skin.

INHALATION-Unknown

Kidney Damage

Liver Damage

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

J. T. Baker SOLUSORB(tm) solvent adsorbent is recommended for spills of this product.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof

ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 1000 ppm (TWA)

-ACGIH Threshold Limit Value (TLV): 500 ppm (TWA), 750 ppm (STEL) A4 - not classifiable as a human carcinogen

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the DERMAL-Drying and cracking of the skin.

Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face organic vapor respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties (Acetone)

Appearance:	Clear, colorless, volatile liquid.
Odor:	Fragrant, mint-like
Solubility:	solvent
Density:	0.941 @ 20C/4C
pH:	No information found.
% Volatiles by volume @ 21C (70F):	35-45%
Boiling Point:	186-194C @ 760 mm Hg
Melting Point:	-95C (-139F)
Vapor Density (Air=1):	0.03
Vapor Pressure (mm Hg):	
Evaporation Rate (n-Butyl Acetate=1):	0.1

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Concentrated nitric and sulfuric acid mixtures, oxidizing materials, chloroform, alkalis, chlorine compounds, acids, potassium t-butoxide.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 5800 mg/kg; Inhalation rat LC50: 50,100mg/m³; Irritation eye rabbit, Standard Draize, 20 mg severe; investigated as a tumorigen, mutagen, reproductive effector.

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material is expected to readily biodegrade. When released to water, this material is expected to quickly evaporate. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be moderately degraded by photolysis. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition.

Environmental Toxicity:

This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Proper Shipping Name : NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT) SECTION 313

This product contains the following substances subject to the reporting requirements of Section

313 of Title III of the Superfund Amendments and Reauthorization Act 1986 and 40 CFR Part
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980
(CERCLA)SECTION 103

Product Name: SW-301 WASH UP

This product contains Glycol Ether(s),keton,aromatic which although included as a broad category on
the CERCLA hazardous substance list, has not been assigned a reportable quantity.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY
PLANNING AND COMMUNITY RIGHT TO KNOW ACT) SECTION 302

To the best of our knowledge this product does not contain chemicals at levels which
require reporting under this statute.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY
PLANNING AND COMMUNITY RIGHT TO KNOW ACT)SECTIONS 311 AND 312

Delayed (Chronic) Health Hazard : Yes

Fire Hazard : No

Immediate (Acute) Health Hazard : Yes

Reactive Hazard : No

Sudden Release of Pressure Hazard : No

TOXIC SUBSTANCES CONTROL ACT (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory
requirements.

CEPA - DOMESTIC SUBSTANCES LIST (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List
(DSL) or are not required to be listed.

To the best of our knowledge this product does not contain chemicals at levels which require
reporting under this statute.

This product contains no listed substances known to the State of California to cause cancer,
birth defects or other reproductive harm, at levels which would require a warning under the
statute.

This section provides selected regulatory information on this product including its components.

This is not intended to include all regulations. It is the responsibility of the user to know and
comply with all applicable rules, regulations and laws relating to the product being used.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 3 Reactivity: 0

Label Hazard Warning:

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH
FIRE. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND
RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Label Precautions:

Keep away from heat, sparks and flame.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Avoid breathing vapor.

Avoid contact with eyes, skin and clothing.

Label First Aid:

Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting
occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an

unconscious person. Call a physician immediately. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

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