MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

ACRYLOID® B-72 50% Resin

<table>
<thead>
<tr>
<th>Product code</th>
<th>66753</th>
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</thead>
<tbody>
<tr>
<td>Key</td>
<td>905748-7</td>
</tr>
<tr>
<td>MSDS date</td>
<td>04/05/91</td>
</tr>
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<td>Supersedes</td>
<td>05/17/89</td>
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Rohm and Haas Hazard Rating

<table>
<thead>
<tr>
<th>Hazard Rating</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>2</td>
</tr>
<tr>
<td>Fire</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Special</td>
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</table>

COMPONENT INFORMATION

<table>
<thead>
<tr>
<th>No.</th>
<th>CAS REG NO.</th>
<th>AMT.(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acrylic copolymer</td>
<td>Not Hazardous 49-51</td>
</tr>
<tr>
<td>2</td>
<td>Residual monomers</td>
<td>Not Required 0.6 MAX</td>
</tr>
<tr>
<td>3</td>
<td>Toluene</td>
<td>108-88-3 49-51</td>
</tr>
</tbody>
</table>

EMERGENCY RESPONSE INFORMATION

FIRST AID PROCEDURES

Inhalation

Move subject to fresh air. Give artificial respiration if breathing has stopped.

Ingestion

If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

Eye and Skin Contact

IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. See a physician. Wash affected skin areas thoroughly with soap and water. Remove and wash contaminated clothing thoroughly.

Note to Physician

Acute massive exposure to toluene can cause transient hematuria and albumnuria. Cardiac dysrythmias can occur after massive inhalation.
FIRE FIGHTING INFORMATION

Unusual Hazards

Vapors can travel to a source of ignition and flash back.

Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material:
- polar solvent (alcohol) foam
- carbon dioxide
- water spray
- dry chemical

Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

Special Procedures

Use water spray to cool containers exposed to fire.

SPILL OR LEAK HANDLING INFORMATION

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See the PERSONAL PROTECTION MEASURES Section for recommendations. If exposed to material during clean-up operations, see the FIRST AID PROCEDURES Section for actions to follow.

Procedures

Eliminate all ignition sources. Evacuate the spill area. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Keep dust to a minimum. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. NOTE: Spills on porous surfaces can contaminate groundwater.

HAZARD INFORMATION

HEALTH EFFECTS FROM OVEREXPOSURE

Primary Routes of Exposure

Inhalation
Eye Contact
Skin Contact
CONTINUATION

Inhalation

Inhalation of solvent vapor or mist can cause the following: - irritation of nose and throat - drowsiness - slurred speech - headache - nausea - dizziness - stupor - unconsciousness

Inhalation of high solvent vapor or mist concentrations can cause the following:
- coma - death

Eye Contact

Material can cause the following:
- substantial irritation - corneal clouding

Skin Contact

Material can cause the following:
- moderate skin irritation - defatting and drying of the skin which can lead to irritation and dermatitis

Prolonged or repeated skin contact can cause the following:
- severe skin irritation

Delayed Effects

Prolonged or repeated overexposure to toluene can cause the following: - irritation of the respiratory tract - enlarged liver - kidney effects - cardiac sensitization - severe skin irritation

FIRE AND EXPLOSIVE PROPERTIES

Flash Point . . . . . . 70°C/158°F Pensky Martens Closed Cup
Lower explosive limit . . . . . . 1.2% Estimate
Upper explosive limit . . . . . . 7.1% Estimate

REACTIVITY INFORMATION

Instability

This material is considered stable.

Hazardous Decomposition Products

There are no known hazardous decomposition products for this material.

Hazardous Polymerization

Product will not undergo polymerization.
ACCIDENT PREVENTION INFORMATION

COMPONENT EXPOSURE INFORMATION

Component Information

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<td>3</td>
<td>Toluene</td>
<td>108-88-3</td>
<td>49-51</td>
</tr>
</tbody>
</table>

Exposure Limit Information

<table>
<thead>
<tr>
<th>Component</th>
<th>ROHM AND HAAS</th>
<th>OSHA</th>
<th>ACGIH</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>TWA</td>
</tr>
<tr>
<td>No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>75</td>
<td>100</td>
</tr>
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</table>

a Not Required

PERSONAL PROTECTION MEASURES

Respiratory Protection

A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the TWA/TLV's listed in the COMPONENT EXPOSURE INFORMATION Section.

Up to 10 times the TWA/TLV: MSHA/NIOSH approved (or equivalent) half-mask, air-purifying respirator.

Up to 100 times the TWA/TLV: MSHA/NIOSH approved (or equivalent) full-facepiece, air-purifying respirator.

Above 100 times or Unknown: MSHA/NIOSH approved (or equivalent) self-contained breathing apparatus in the positive pressure mode, OR,

MSHA/NIOSH approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Air-purifying respirators should be equipped with organic vapor cartridges.
CONTINUATION

Eye Protection

Use chemical splash goggles (ANSI Z87.1 or approved equivalent).

Hand Protection

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection:
- Nitrile
Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

FACILITY CONTROL MEASURES

Ventilation

Use explosion proof local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

STORAGE AND HANDLING INFORMATION

Storage Conditions

Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Store away from excessive heat (e.g. steampipes, radiators), from sources of ignition and from reactive materials. Low temperature storage can cause handling problems. Viscosity of material will increase.

Handling Procedures

Ground all containers when transferring material.

Other

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid) follow all MSDS and label warnings even
CONTINUATION

after container is emptied. Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container.

SUPPLEMENTAL INFORMATION

TYPICAL PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor Characteristic</td>
<td>Sour, burnt odor</td>
</tr>
<tr>
<td>Viscosity</td>
<td>5500 CPS Maximum</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1)</td>
<td>1.0</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>22 mm Hg @20°C/68°F Estimate</td>
</tr>
<tr>
<td>Melting point</td>
<td>-95°C/-139°F Initial</td>
</tr>
<tr>
<td>Boiling point</td>
<td>110°C/230°F Initial</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Percent Volatility</td>
<td>50-52</td>
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<tr>
<td>Evaporation rate (BAc = 1)</td>
<td>&gt; 1</td>
</tr>
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TOXICITY INFORMATION

Acute Data

The information shown in the HEALTH EFFECTS FROM OVEREXPOSURE Section is based on toxicity profiles of similar materials or on the solvents present in this material.

Oral LD50 - rat: 5000 mg/kg
Dermal LD50 - rabbit: 12124 mg/kg
Inhalation LC50 - rat: 4000 ppm for 4 hr
Skin Irritation - rabbit: moderate irritation
Eye Irritation - rabbit: substantial irritation

Reproductive/Teratology Data

Toluene has been demonstrated to be embryofetotoxic and teratogenic in laboratory animals.

WASTE DISPOSAL

Procedure

For disposal incinerate this material at a facility that complies with local, state, and federal regulations.
REGULATORY INFORMATION

WORKPLACE CLASSIFICATIONS

This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

TRANSPORTATION CLASSIFICATIONS

US DOT Hazard Class . . . . FLAMMABLE LIQUID

EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW (SARA TITLE 3)

Section 311/312 Categorizations (40CFR 370)

This product is a hazardous chemical under 29CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard.

Section 313 Information (40CFR 372)

This product contains a chemical which is listed in Section 313 above de minimis concentrations. The following listed chemicals are present: (Quantity present is found elsewhere on this MSDS.)
- Toluene (108-88-3)

CERCLA INFORMATION (40CFR 302.4)

This material has a component or components with a reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. The components, CAS numbers, and reportable quantities are listed below. Spills of a component in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.
Toluene (108-88-3) 1000lbs.

RCRA INFORMATION

When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste with the characteristic of ignitability, hazardous waste number: D001
CHEMICAL CONTROL LAW STATUS

All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

STATE RIGHT-TO-KNOW LAWS

Any material listed as "Not Hazardous" in the CAS REG NO column of the COMPONENT INFORMATION Section of this MSDS is trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

ACRYLOID® is a trademark of Rohm and Haas Company or one of its subsidiaries or affiliates.

ABBREVIATIONS:

ACGIH = American Conference of Governmental Industrial Hygienists
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
PEL = Permissible Exposure Limit
TWA = Time Weighted Average
STEL = Short-Term Exposure Limit
BAC = Butyl acetate

Bar denotes a revision from previous MSDS in this area.

The information contained herein relates only to the specific material identified. Rohm and Haas Company believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Rohm and Haas Company urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.