



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Radco Industries, Inc., PO Box 305 LaFox, IL 60147 USA
Emergency Phone: (630) 232-7966

Exclusively Packaged for:

Perigee Engineering Services LLC
Website: www.perigee-eng.com
Phone: 989-859-4090

Product Name: **HT-SOLVE™ 709**

Effective Date: 07/22/09

Emergency Phone Numbers:

For chemical emergency, spill, leak, fire exposure, accident or medical emergency, call CHEMTREC:

North America 1-800-424-9300

International +1 703-527-3887

For shipping emergency or off-hours rush orders call:

1-630-232-7966 or 1-630-336-6728

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS#	CONCENTRATION
1,1 – Di phenyl ethane	000612-00-0	>=50.0%
Blend of Ethylenated Aromatics	068987-42-8	<=50.0%

Note(s): Not a Hazardous Material for DOT shipping.

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS**Ingestion**

Single dose oral toxicity is low. If aspirated, may cause lung damage due to chemical pneumonia, a condition caused by petroleum and petroleum-like solvents.

Skin Absorption

A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.

Inhalation

In general, overexposure to high atmospheric concentrations of aromatics may produce central nervous depression, headache, dizziness, nausea and loss of appetite.

Eye contact

May cause transient eye irritation (tears, blurred vision, and redness).

4. FIRST AID MEASURES

Ingestion

DO NOT induce vomiting. Seek medical attention immediately.

Skin Absorption

Wash skin with soap and water. Remove contaminated clothing. Wash clothing before re-use. Obtain medical attention if irritation persists.

Inhalation

Obtain medical attention. Oxygen may be given by qualified personnel if breathing is difficult or cyanosis (blue discoloration of skin) is noted. Give artificial respiration if not breathing. Remove to fresh air if aerosol spray is inhaled. Aspiration may cause pulmonary edema or aspiration pneumonia. Exposed persons should be kept under medical observation for at least 48 hours because delayed effects may occur.

Eye contact

Flush eyes thoroughly with water for several minutes. Obtain medical attention if discomfort persists.

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5. FIRE-FIGHTING MEASURES

Flash point	> 121 °C (> 250°F)	Autoignition Temperature:	> 410 °C (> 770°F)
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NFPA CLASSIFICATION

Health: 1	Flammability: 1	Reactivity: 0	Special provisions: none
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Special fire fighting procedures

Use water spray to cool fire-exposed containers and structures. If a rail or tank truck is involved in a fire, ISOLATE for 800 meters (0.5 mile) in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from the area and let the fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear. Self-contained breathing apparatus with full face-piece operated in positive pressure mode.

Extinguishing media

Suitable: Treat as an oil fire.
 Small fires:
 - CO2
 - dry powder
 - foam
 Large fires:
 - alcohol-type foam or universal-type foams
 - water fog

Unsuitable: Oil will float on water and can spread any fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear protective clothing when taking up spill. Eliminate sources of ignition.

Environmental precautions

This product is insoluble in water and will float on the surface. Prevent from entering sewers or drains. Should this product enter sewers or drains, it should be pumped out into an open vessel. Emergency services may need to be called to assist in this operation.

Methods for cleaning up

Floor may be slippery; use care to avoid falling.

Small spills Absorb on inert material such as sand, earth, vermiculite.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Never use pressure to empty drums. Keep drums tightly closed to prevent contamination. Residual vapors may explode on ignition; do not puncture, drill, grind, or weld near this container. Electrically bond and ground all containers and equipment before transfer or use of material.

STORAGE

Storage requirements

Normal precautions common to safe manufacturing practice should be followed in handling and storage. Store in a dry location. Keep out of strong sunlight. Keep away from heat and flame. Keep container tightly closed.

Further information on storage

Keep away from strong oxidizing agents.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION

Respiratory protection

If vapor and/or mist is generated by heating, spraying, etc., wear an organic vapor respirator with a mist filter. No special respiratory protection is normally required.

Hand protection / protective gloves

Wear oil resistant gloves.

Eye protection

Face shield or chemical splash goggles in case of splashing.

Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

Industrial hygiene measures

Remove contaminated clothing and clean it.
 Do not eat or drink at work.

ENGINEERING CONTROLS

Ventilation

Local ventilation is needed in the presence of airborne mists.

EXPOSURE LIMITS

Component	Type	Value	Remark
HT-Solve 709	TWA (mist), ACGIH	7.8 mg/m ³ 1 ppm	WEEL

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Liquid
Color	Colorless to yellow
Odor	Aromatic

OTHER PROPERTIES

Boiling point (760 mmHg)	267 °C (513°F)
Specific gravity (H ₂ O=1)	0.97 (Water = 1.00)
Vapor pressure	0.002 mmHg at 25 °C
Solubility in water	Very Low
Solubility in organic solvents	Soluble
Vapor Density	6.5 (Air = 1)
Flash point	121 °C (250 °F) Method: Cleveland Open Cup ASTM D 92
Percent volatiles	Nil
Kinematic viscosity	4.15 cSt @ 20°C

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10. STABILITY AND REACTIVITY

Stability: Stable.

Incompatible materials

Normally unreactive; however avoid contact with:
Strong oxidizing agents.

Hazardous combustion products

Burning can produce the following combustion products:
Oxides of carbon.
Soot

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Acute effects

See Hazard Identification and First Aid sections of this MSDS.

Test results

Acute toxicity:

LD50 - Rat

Result: > 7760 mg/kg

Remark: Test results are based on analogy with a similar material.

SKIN ABSORPTION

Acute effects

Harmful effects are not expected from short periods of contact.

Effects of repeated overexposure

Prolonged or repeated contact may lead to skin irritation by dermatitis or oil acne.

INHALATION

Acute effects

Inhalation of mist or spray may be harmful.

Chronic effects

Aspiration may cause pulmonary edema or aspiration pneumonia.

Deposits in the lung may lead to fibrosis and reduced pulmonary function.

Prolonged or repeated inhalation of excessive amounts of oil mist or vapors may cause irritation of the respiratory tract.

SKIN CONTACT

Acute effects

No evidence of permanent harmful effects from available information.

EYE CONTACT

Acute effects

No evidence of permanent harmful effects from available information.

SENSITIZATION

Test results:

Species: Skin - Guinea pigs

Result: Non sensitizing.

CARCINOGENICITY

Assessment

No evidence of carcinogenic activity

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12. ECOLOGICAL INFORMATION

This product is toxic for aquatic life.

13. DISPOSAL CONSIDERATIONS

General: Incineration is the best means of disposal. Dispose of in accordance with appropriate Federal, State, and local regulations. If discarded in its purchased form, this material would not be considered at this time as a hazardous waste either by listing or by characteristics under Federal Hazardous Waste Regulations, 40 C.F.R. 261. Consult state and local regulations for proper disposal.

14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

Freight description road	MIXED AROMATICS, N.O.I.B.N
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IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

15. REGULATORY INFORMATION

EPA Hazard Categories (SARA 311, 312) None

CHEMICAL INVENTORY

United States: The ingredients of this product are on the TSCA inventory.

RECOMMENDED USES AND RESTRICTIONS

Please consult the product and/or application information bulletins for this product.

HMIS RATING

Health: 1	Flammability: 1	Reactivity: 0	PPI: D, n
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LEGEND

STP	Standard temperature and pressure
W/W	Weight/Weight
0 (HMIS)	Minimal hazard
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

WARNING: "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove and even a trace of remaining material constitutes as explosive hazard. "Empty" drums should be completely drained, properly bunged, and promptly returned to a drum recycler. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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