

THINNER 9000

This product appears in the following stock number(s):

99915

Last revised: 08/30/01

Printed: 6/17/2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** THINNER 9000**General use:** This information applies to the thinner component of a kit. After proper mixing and curing, the product is not hazardous.**Chemical family:** Styrene**MANUFACTURER**ITW Devcon
30 Endicott St.
Danvers, MA 01923**EMERGENCY INFORMATION****Emergency telephone number**
(CHEMTREC): (800) 424-9300
Other Calls: (978) 777-1100**2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Styrene		100425	> 99	20 ppm	50 ppm	50 ppm (Canada)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: clear liquid with pungent styrene odor.

WARNING! Flammable. Reactive. Eye, skin and mucous membrane irritant. May cause Central Nervous System depression. Suspected human carcinogen based on tests with laboratory animals. Potential liver and kidney effects. Prolonged or repeated contact with liquid or breathing of vapors or mists may cause delayed and serious injury.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:**Skin:** May cause irritation and sensitization, rash, redness, itching, blistering.**Eyes:** May cause moderate irritation, including burning sensation, tearing, redness, or swelling.**Inhalation:**

Excessive exposure may cause anaesthetic or narcotic effects, and irritation of upper respiratory tract.

Ingestion:

Single dose oral toxicity is low. Liquid aspirated into the lungs during vomiting can however cause severe lung damage.

Effects of chronic overexposure:

Repeated excessive exposures to high concentrations may cause central nervous system, liver, and kidney effects.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s) : Styrene

Medical conditions which may be aggravated by exposure:

Inhalation of solvents may aggravate existing respiratory disorders.

Other effects:

Styrene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations (sixteen times the tlv and higher); however, the relevance of this to humans is unknown. Some studies in humans link repeated styrene exposure to minor subclinical decreases in the ability to discriminate between colors.

4. FIRST AID MEASURES**First aid for eyes:**

Flush eye with clean water for at least 20 minutes while gently holding eyelids open. Get immediate medical attention.

First aid for skin:

Remove contaminant and contaminated clothing. Wash thoroughly with soap and warm water. If sticky, use waterless cleanser first. Consult a physician if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention.

First aid for ingestion:

Do NOT induce vomiting. Give 1-2 glasses of lukewarm water if victim is conscious / alert. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get medical help.

5. FIRE FIGHTING MEASURES**General fire and explosion characteristics:**

Liquid normally inhibited but the vapors are not.

Extinguishing media:

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): 90

Method: TCC

Explosive limits in air (percent) -- Lower: 1.1

Upper: 6.1

Special firefighting procedures:

Smother flames with listed extinguishing media. Use water spray to cool containers exposed to fire. Fire fighters should wear self-contained breathing apparatus.

Unusual fire and explosion hazards:

Solvent vapors are heavier than air; they can travel along floors to an ignition source and flash back. Heat/impurities/inhibitor depletion/exposure to air/radiation may spontaneous reaction/increase temperature/build pressure/rupture closed containers, spread fire, increasing risk of burns/injuries. Water may be ineffective in firefighting due to low solubility.

Hazardous products of combustion:

Carbon dioxide, carbon monoxide, and other unidentified organic compounds.

6. ACCIDENTAL RELEASE MEASURES

Spill control:

Avoid personal contact. Evacuate area. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

Cleanup:

Blanket with firefighting foam. Absorb spill on inert material such as vermiculite and transfer to impervious vented container.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Spills on porous surfaces can contaminate groundwater. Notify authorities immediately if liquid enters sewer/public waters. Use bonding/ grounding lines and non-sparking tools. Have proper fire extinguishers manned by properly trained personnel.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Launder contaminated clothing and protective gear before reuse. Ground/bond containers to prevent static charge buildup. Use non-sparking tools.

---When welding or flame-cutting coated surfaces, provide adequate ventilation or respiratory protection to remove decomposition products.

---Take proper precautions against overexposure to the dusts that may be generated if this product is sanded or machined after curing.

---NOTE ON VOLATILES: In normal use, the styrene in this product is polymerized during cure. For the purpose of air quality regulations, we believe the VOC content to be low. Actual emissions are a function of process and substrate and should be considered on an individual basis.

Storage:

Keep container tightly closed and otherwise in accordance with NFPA regulations. Store in a cool, dry area away from heat, sparks, ignition sources, flame, strong oxidizers and polymerization initiators. Can self-react / polymerize / liberate heat / raising temperature, pressure / possibly rupturing container unless properly inhibited. Avoid conditions that remove all oxygen from stored liquid. Maintain air space in storage containers, inhibitor requires oxygen contact to function. Vapors are uninhibited and may form polymers in vents or flame arrestors, resulting in blockage of vents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation :

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits (or to the lowest feasible levels when limits have not been established). Although good general mechanical ventilation is usually adequate for most industrial applications, local exhaust ventilation is preferred (see ACGIH - Industrial Ventilation). Local exhaust may be required for confined areas (see OSHA 1910.146).

Other engineering controls :

Have emergency shower and eye wash available.

Personal protective equipment

Eye and face protection:

Chemical goggles if liquid contact is likely, or safety glasses with side shields.

Skin protection:

Chemical-resistant rubber gloves and other protective gear as needed to prevent skin contact.

Respiratory protection:

In poorly ventilated areas use NIOSH approved organic vapor cartridge respirator, supplied air (positive pressure or continuous flow) respirator, or a self-contained breathing apparatus for uncured resin, or a dust/particle respirator during grinding/sanding operations for cured resin as exposure levels dictate (see OSHA 1910.134). A supplied air (positive pressure or continuous flow) respirator or a self-contained breathing apparatus is required if there is any potential for uncontrolled release or when contaminant concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	0.9	Boiling point (°F):	295
Melting point (°F):	-23	Vapor density (air = 1):	3.6
Vapor pressure (mmHg):	4.5 at 68 °F	Evaporation rate (butyl acetate = 1):	n/d
VOC (grams/liter):	n/d	Solubility in water:	< 0.1 %
Percent volatile by volume:	100	pH (5% solution or slurry in water):	n/d
Percent solids by weight:	0		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization may occur.

Conditions to avoid :

Avoid heat, sparks, open flames and other ignition sources. Avoid storage in direct sunlight and temperatures above 120 F.

Incompatible materials:

Oxidizers, aluminum chloride, contaminants, catalysts, peroxides, strong acids, strong alkalies, sulfuric acid, alkali metal-graphite compounds, pure oxygen, copper and its alloys.

Hazardous products of decomposition:

May produce hazardous fumes if heated. Final combustion products are carbon monoxide, carbon dioxide and other toxic gases.

Conditions under which hazardous polymerization may occur:

Avoid contact with metal salts such as ferric and aluminum chlorides. Also temperatures above 120 F.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

Acute inhalation effects: LC50 (rat): Not available.

Exposure: 4 hours.

Eye irritation:

Not available.

Subchronic effects:

Some studies in humans link repeated styrene exposure to subtle, subclinical effects on color vision.

Carcinogenicity, teratogenicity, and mutagenicity:

Styrene: An increased incidence of lung tumors was observed in mice from an inhalation study. The International Agency for Research on Cancer (IARC) states that styrene is 'possibly carcinogenic to humans' (Group 2B) based on 'inadequate evidence' in humans, 'limited evidence' in animals and other 'relevant data'. According to the IARC report, these 'other relevant data' include studies demonstrating that styrene is metabolized in humans to styrene oxide, an agent which is known to induce cancers in two animal species. Additionally, styrene has been shown to be mutagenic in several 'in vitro' assays. However, unlike some animal species, man apparently is able to readily detoxify the styrene oxide generated from styrene exposures. Moreover, studies in humans exposed for long periods of time to styrene have not demonstrated any carcinogenic effects. **TERATOLOGY:** In laboratory animals, styrene did not produce birth defects or any other effects on the fetus even at exposure concentrations having an adverse effect on the mother. **REPRODUCTIVE EFFECTS:** In animal studies, styrene has been shown not to interfere with reproduction.

Other chronic effects:

Lung effects have been observed in the mouse following repeated exposure to styrene.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Styrene	2650 mg/kg	n/d	24,000 mg/m3

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

Not available.

Mobility and persistence:

Not available.

Environmental fate:

Not available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this product becomes a waste, it would be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations. Do not dispose of in a landfill. Incineration is the preferred method of disposal. Empty containers still contain hazardous product residue (vapors and/or liquid). Follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition - DO NOT cut, drill, grind, or weld on or near container.

14. TRANSPORT INFORMATION**Proper shipping name:** Styrene monomer, stabilized ***Technical name :** N/A**Hazard class :** 3**UN number:** 2055**Packing group:** III**Emergency Response Guide no.:** 128P**IMDG page number:** N/A**Other:**

*Depending upon the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the United States, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

D001

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Styrene	No	Yes	1000.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : B2; D2A; D2B

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

**Hazardous Materials
Identification System (HMIS)
ratings:**

Health**2*****Flammability****3****Reactivity****2**

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.