



## MSDS AND TEST DATA EXPLANATION

Enclosed with this cover letter is a copy of our Safety Data Sheet for the liquid form of LiquiSmoke, and a summary of the Maxim Technologies and Wisconsin Occupational Health Laboratory reports on the smoke generated by Hurco's LiquiSmoke.

**Please note that only people who are using the "raw" LiquiSmoke (the liquid form) will be concerned with the SDS sheet. People who are exposed to the "smoke" LiquiSmoke only need to be concerned with the Maxim Technologies and WOHL reports.** What is important to note on the SDS sheet is Section 11 - Toxicological Information - it is not a potential carcinogen. The "raw" LiquiSmoke does not require any hazardous transportation documentation.

Since there is not an SDS for products in smoke form, we hired a private, nationally recognized laboratory, Maxim Technologies, Inc. of Sioux Falls, South Dakota, to sample the smoke generated by LiquiSmoke. The samples were sent to the Wisconsin Occupational Health Laboratory where a GC Solvent Scan was performed. Of the 107 items listed in a GC Solvent Scan, only .01 parts per million (PPM) petroleum distillates was found. The OSHA Permissible Exposure Limit (PEL) is 500 ppm. Carbon Monoxide and Carbon Dioxide levels all tested within the OSHA PEL. This information is important to persons being exposed to the "smoke". Even though these test don't identify any harmful quantities of toxic compounds, you will need to warn your customers of dangerous sewer gases that may be traveling with the smoke. They should always be warned to evacuate the premise when smoke is detected.

Finally, we had Maxim Technologies test the smoke generated by our LiquiSmoke for staining and residue. The tests showed that there was no staining or residue caused by LiquiSmoke. Your customers can rest assured that LiquiSmoke will not ruin their furniture or drapery. More information is included in the following document, "Scientific Evaluation of LiquiSmoke".

If you have any questions or concerns about Hurco's LiquiSmoke, please contact me at 1-800-888-1436.

Sincerely,

Beckie Hurley  
Vice President

# Scientific Evaluation of LiquiSmoke™

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## **A Summary of the Scientific Evaluation Reports Produced by Maxim Technologies of Sioux Falls, South Dakota**

During testing conducted by Maxim Technologies, the following facts concerning the smoke generated by LiquiSmoke were determined, under the guidelines set by The National Institute of Occupational Safety and Health (NIOSH), and the Occupational Safety and Health Administration (OSHA).

During the tests, Maxim Technologies collected a sample of the smoke generated by LiquiSmoke in a charcoal tube. The sample was sent to the Wisconsin Occupational Health Laboratory. A GC Solvent Scan was conducted to determine if the smoke generated by LiquiSmoke formed any hazardous compounds or conditions. The GC Solvent Scan searched for 107 different hazardous organic compounds. Of the 107 items listed, only .01 parts per million (ppm) petroleum distillates was found. The OSHA permissible Exposure Limit is 500 ppm.

Further testing by Maxim Technologies found that the ambient carbon monoxide levels were found to be zero. NIOSH regulations have determined that the “8 hour time weighted average” (TWA) for carbon monoxide to be 35 ppm. During the duration of the test, measurable TWA levels of LiquiSmoke ranged from 4.6 to 7.8 ppm – within the OSHA Permissible Exposure Limit (PEL) set by OSHA.

Maxim Technologies also tested for carbon dioxide levels. Ambient levels were found to be at 330 ppm. The level of carbon dioxide during the entire LiquiSmoke test was determined to be 500 ppm. The OSHA Permissible Exposure Limit (PEL) is 5,000 ppm.

In addition, testing by Maxim Technologies was also performed to determine if usage of the product left any staining or odor. Residual staining and odor tests were conducted in a closed facility filled with LiquiSmoke. Time interval testing of filter paper samples exposed to LiquiSmoke were examined under a microscope at 40X magnification. In all cases, no visible staining was present, along with no odor on any of the filter papers exposed to the smoke.

This summary is based on complete reports from Maxim Technologies of Sioux Falls, South Dakota. Copies of these tests, as well as the findings of the Wisconsin Occupational Health Laboratory, are available from Hurco Technologies, Inc.



PLEASE NOTE: This information is for Hurco LiquiSmoke in LIQUID form ONLY.  
This does not pertain to the SMOKE form. Contact Hurco for that information.

## SECTION 1 IDENTIFICATION

Product Identifier	Hydrotreated Middle Distillate
Trade Name	Hurco LiquiSmoke™
Chemical Formula	Proprietary
Use	This product is intended for use in Hurco Smoke Testing Equipment.
Manufacturer/Distributor	Hurco Technologies, Inc. 409 Enterprise Street Harrisburg, SD57032 605-743-2466 info@hurcotech.com
Emergency Phone	CHEMTREC - 800-424-9300

## SECTION 2 HAZARD IDENTIFICATION

GHS Classification	Aspiration Hazard Category 1
Signal Word	DANGER!
Pictogram	
Hazard Statement	May be fatal if swallowed and enters airways.
Response	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

This product is considered hazardous under 29 CFR 1919.1200

# SAFETY DATA SHEET

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Hydrotreated Middle Distillate
CAS #	64742-46-7
Percent	100

## SECTION 4 FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. Get medical attention if irritation occurs.

**Skin Contact:** Remove contaminated clothing and shoes. Wash skin immediately and thoroughly with soap and water. Get medical attention if irritation develops. Wash clothing and shoes before reuse.

**Inhalation:** Move affected person to fresh air. Loosen tight clothing. If breathing is difficult, provide oxygen. If not breathing, provide artificial respiration. Get medical attention if adverse health symptoms persist or are severe.

**Ingestion:** Consult poison center/doctor immediately. Rinse mouth thoroughly if conscious. Do not induce vomiting. If vomiting occurs, keep head low so the vomit does not enter lungs.

Acute Exposure Effects	Ingestion may cause nausea, vomiting and diarrhea. May be fatal if swallowed and enters airway. May cause skin dryness or irritation.
Chronic Exposure Effects	Ingestion may cause nausea, vomiting and diarrhea. May cause skin dryness or irritation.
Physician Treatment	Treat symptomatically.

## SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media	CO2, Dry Chemical, Foam.
Unsuitable Extinguishing Media	Avoid solid water stream/jet which may spread fire.
Fire Fighting Procedures	Isolate scene. Wear appropriate protective equipment. SCBA may be required.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Eliminate all sources of ignition. Avoid walking through spilled product. Remove unnecessary personnel. Wear appropriate protective equipment when required.
Environmental Precautions	Prevent spilled material from entering sewers, drainage systems, waterways and soil. Contact proper authorities regarding possible contamination if necessary.
Containment and Cleanup	Contain with earthen like or petroleum absorbent material. Remove all contaminated materials to salvage container. Dispose of in accordance with local regulations. Smaller amounts of product may be diluted with water and mopped up.

## SECTION 7 HANDLING AND STORAGE

Handling	Do not eat, drink or smoke while handling product or in product storage areas.
Storage	Keep away from ignition sources. Store in original container or a properly labeled approved alternative. Keep container upright and tightly closed.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient	Hydrotreated Middle Distillate
Exposure Limits	OSHA PEL: TWA 5 mg/m3 (8 hours) ACGIH TLV: TWA 5 mg/m3 (8 hours); STEL 10 mg/m3 (15 minutes)
Appropriate Engineering Controls	General ventilation. Local exhaust to control vapors. Mechanical ventilation for confined spaces.
Personal Protective Equipment	Eye protection - Chemical goggles or face shield. Skin protection - PVC/equivalent glove. PVC/equivalent apron where splash potential exists.
Hygienic Practices	Minimize body contact. Wash body contact areas promptly. Wash contaminated clothing.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to light yellow liquid
Odor	Negligible
Odor Threshold	Not available
pH	Not available
Melting Point	30 °F
Freezing Point	Not available
Boiling Point	470 °F
Flash Point	252 °F
Evaporation Rate	Not available
Flammability (Solid, Gas)	Not available
Upper/Lower Explosive Limits	Not available
Vapor Pressure	<0.1
Vapor Density	Not available
Relative Density	0.85
Solubility in Water	Insoluble
Partition Coefficient	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	3.6

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	Not known to be reactive under normal conditions.
<b>Stability</b>	Stable under normal conditions.
<b>Hazardous Reactions</b>	No hazardous reactions under normal conditions.
<b>Materials to Avoid</b>	Heat and flame
<b>Incompatible Materials</b>	Oxidizers and acids
<b>Hazardous Decomposition</b>	Carbon Monoxide and other petroleum decomposition products.

## SECTION 11 TOXICOLOGICAL INFORMATION

<b>Route of Exposure</b>	<b>Inhalation</b>
Related Symptoms	None known
Acute and Chronic Effects	None known
<b>Route of Exposure</b>	<b>Ingestion</b>
Related Symptoms	Nausea or vomiting
Acute and Chronic Effects	May be fatal if swallowed and enters airway
<b>Route of Exposure</b>	<b>Skin</b>
Related Symptoms	May cause irritation or dryness
Acute and Chronic Effects	May cause irritation or dryness
<b>Route of Exposure</b>	<b>Eye</b>
Related Symptoms	None known
Acute and Chronic Effects	None known
<b>Numerical measures of toxicity</b>	Oral LD Rat - >5000 mg/kg. Dermal LD50 - >2000 mg/kg
<b>Potential Carcinogen</b>	No

## SECTION 12 ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Not Available
<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

## SECTION 13 DISPOSAL CONSIDERATIONS

<b>Waste Management</b>	Dispose of per Federal, State and local laws. Avoid generation of waste wherever possible.
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## SECTION 14 TRANSPORT INFORMATION

<b>Proper Shipping Name</b>	Not a DOT regulated material
<b>UN/NA Number</b>	N/A
<b>Hazard Class</b>	N/A
<b>Packaging Group</b>	N/A
<b>Environmental Hazards</b>	No
<b>Transport in Bulk</b>	Packaging in excess of 3500 gal require an OIL SPILL perversion and response plan per 49 CFR1
<b>Special Precautions</b>	Transport upright in closed containers.

## SECTION 15 REGULATORY INFORMATION

SARA Section 311	This product is may be subject to regulations under Section 311 of the Clean water Act and Oil Pollution Act. Release of this product into United States waters or adjoining shorelines must be reported to the National Response Center: 800-424-8802.
SARA Section 313	No components are listed
Fire Hazard	No
Sudden Release	No
Immediate	No
Reactive Hazard	No

## SECTION 16 OTHER INFORMATION

Issue Date	06/01/15	
NFPA 704M Rating		
Flammability	1	
Health	1	
Instability	0	
Special Hazards	Blank	



**This SDS is for the unburnt LiquiSmoke ONLY.  
Test data is available for LiquiSmoke "smoke"  
by contacting Hurco Technologies.**

**Hurco Technologies, Inc.**  
 409 Enterprise Street  
 Harrisburg, SD 57032  
 605-743-2466  
 info@hurcotech.com  
**HURCO**TECH.COM

The information contained in this SDS is believed to be accurate, but is not warranted to be, whether originated with Hurco Technologies or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to the circumstances. All hazard precautions given in this SDS must be observed.



Wisconsin Occupational Health Laboratory recently conducted a GC Solvent Scan looking for volatile organic compounds in Hurco's LiquiSmoke-

**NONE OF THE COMPOUNDS LISTED BELOW WERE DETECTED**

Acetone  
 Allyl Alcohol  
 Amyl Acetate (n)  
 Amyl Alcohol  
 Benzaldehyde  
 Benzene  
 Butanone (2)  
 Butyl Acetate (n)  
 Butyl Acrylate  
 Butyl Alcohol (n)  
 Butyl Alcohol (Sec)  
 Butyl Alcohol (Tert)  
 Butyl Glycidyl Ether  
 Butyl Methacrylate  
 Carbon Tetrachloride  
 Chlorobenzene  
 Chloroform  
 Chloroprene  
 Chlorostyrene  
 Chlorotoluene (o)  
 Cumene  
 Cyclohexanol  
 Cyclohexanone  
 Decamethyl Cyclopentasiloxane  
 Dichloroethane (1,1)  
 Dichloroethane (1,2)  
 Diisobutyl Ketone  
 Dioxane (Diethylene Dioxide)  
 Dioxolane- 1,3  
 Epichlorohydrin  
 Epoxybutane (1,2)  
 Ethyl Alcohol  
 Ethoxyethyl Acetate (2)  
 Ethyl Acetate  
 Ethyl Acrylate  
 Ethyl Benzene  
 Ethyl Butyl Ketone

Ethyl Butyrate  
 Ethyl Ether  
 Ethyl Methacrylate  
 Ethyl Toluene  
 Heptanone-2 (MBK)  
 Hexane (n)  
 Hexone (MIBK)  
 Hexyl Acetate  
 Isoamyl Acetate  
 Isoamyl Alcohol  
 Isobutyl Alcohol  
 Isobutyl Isobutrate  
 Isopropyl Acetate  
 Isopropyl Alcohol  
 Isopropyl Ether  
 Mesityl Oxide  
 Methyl Acetate  
 Methyl Acrylate  
 Methyl Chloroform  
 Methyl Isoamyl Ketone  
 Methyl Methacrylate  
 Methyl Styrene

Naphtha (Coal Tar)  
 Nonane  
 Octamethylcyclotetrasiloxane  
 Octanol  
 P-Dichlorobenzene  
 Pentane  
 Pentanone (2)  
 Perchloroethylene  
 Petroleum Distillates (Naphtha)  
 Pinene-Alpha  
 Pinene-Beta  
 Propanol  
 Propyl Acetate (n)  
 Styrene  
 Tetrahydrofuran  
 Toluene  
 Trichloro-Benzene (1,2,4)  
 Trichloro-Ethane (1,1,2)  
 Trichloroethylene  
 Vinyl Acetate  
 Xylene (o, m & p)



**HURCO**  
 TECHNOLOGIES, INC.