



Material Safety Data Sheet

Last Revision: 04/05/2007

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DURALINK® HTS

MSDS NO. FLXP0007

Chemical Name: Sodium Hexamethylene-1,6-bisthiosulfate dihydrate

Synonyms: HTSNa; Hexamethylene-1,6-bis(thiosulfate), disodium salt, dihydrate; Thiosulfuric acid (H₂S₂O₃), S,S'-1,6-hexanediyl ester, disodium salt; Disodium S,S'-hexane-1,6-diyldi(thiosulfate) dihydrate; ERP-390

Use: Post-Vulcanization Stabilizer.

Manufactured By: Flexsys America L.P. 260 Springside Drive Akron OH 44333-2433 USA

Emergency Telephone: CHEMTREC: 1-800-424-9300 [TOLL FREE - USA and Territories]
703-527-3887 [ELSEWHERE - Collect Calls Accepted]
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SETIQ: 91-800-00-214 [Mexico]

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2. HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Combustible dust - explosion potential. CAUSES ALLERGIC SKIN REACTION. May cause mild eye and skin irritation.

Eye Contact: Causes mild eye irritation. Mild Eye Irritation: signs/symptoms can include redness, swelling, pain and tearing.

Skin Contact: CAUSES ALLERGIC SKIN REACTION. May cause a rash and itching of the skin.

Inhalation: May cause mild respiratory irritation.

Ingestion: Swallowing a relatively large amount of this material is unlikely to produce serious illness or death.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium Hexamethylene-1,6-bisthiosulfate dihydrate	5719-73-3	96 - 99
White Mineral Oil	8042-47-5	1 - 2

4. FIRST AID MEASURES

In Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

On Skin: Remove contaminated clothing and launder before reuse. Wash with soap and water. If irritation persists or signs of toxicity occur, seek medical attention.

Inhaled: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

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4. FIRST AID MEASURES

Swallowed:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.
Notes To Physician:	Repeated exposure to this material carries a HIGH RISK of sensitization/allergic reaction.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temp. (°F/C):	Not Determined
Lower Explosion Limit (LEL):	325 grams/m ³ 260<MIE<1kJ Kst = 112 bar.m/s Pmax = 7.1 bar-g Rmax = 411 bar-m/s Dust Class = ST-1
Upper Explosion Limit (UEL):	Not Determined.
Extinguishing Media:	Use water fog, carbon dioxide, foam or dry chemical.
Special Exposure Hazards:	Fight fire from a safe distance and from a protected location. Combustible dust when in a finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways.
Special Protective Equipment:	Fire fighters should wear full impervious protective clothing, including self-contained breathing equipment.
Unusual Fire/Explosion Hazards:	Toxic emissions may result if product is involved in a fire. Fire produces highly toxic sulfur dioxide gas.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures:	Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Procedure for Cleaning/Absorption:	Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Scoop up and remove solids. Do NOT spread spilled product with water.
CERCLA Reportable Quantity (RQ):	Not Applicable

7. HANDLING AND STORAGE

Handling:	Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded with material. Avoid generating or breathing dust. Avoid contact with eyes, skin and clothing. Reclose containers of unused product. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Good housekeeping is very important! Clean up spilled material immediately to prevent dust generation and area contamination. Do not reuse this container.
Storage:	Store closed containers in a cool, dry, well-ventilated area. Avoid exposure to direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection:	Wear safety glasses or goggles to protect against exposure.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection:	Normal work coveralls. Launder contaminated clothing before reuse. ATTENTION: PROLONGED OR REPEATED EXPOSURE CAN CAUSE ALLERGIC SKIN REACTION IN SENSITIVE INDIVIDUALS.
Gloves:	Use gloves as a standard industrial handling procedure. All cleanable impervious glove types are acceptable.
Respiratory Protection:	Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting: Use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus.
Ventilation:	Adequate ventilation should be provided to keep dust concentrations below acceptable exposure limits. Discharge from the ventilation system should comply with the applicable air pollution control regulations. Eliminate ignition sources. If air is to be recirculated, it must be filtered properly.
Airborne Exposure Limits:	Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m ³ (Total Dust). OSHA PEL/8-Hr TWA = 05 mg/m ³ (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m ³ . White Mineral Oil OSHA PEL/8-Hr TWA = 5mg/m ³ ACGIH TLV/8-Hr TWA = 5mg/m ³ .

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to off-white powder
Odor:	MILD, MUSTY
pH:	pH 8-9 in a water solution
Specific Gravity:	1.39 @ 25°C
Density:	1.39
Bulk Density:	1390 kg/m ³ @25°C
Melting Point (°F/C):	Undefined. H ₂ O liberated at 127°C
Boiling Point (°F/C):	Not Determined
Vapor Pressure:	Negligible
Vapor Density (Air=1):	Not Determined
% Volatile by Volume:	Not Determined
Solubility in Water:	270 g/l @ 23°C
Other Solubility:	Soluble in: Water Alcohol
Viscosity:	Not Determined.
Other Data:	Water Content of Hydrate: 8.5-10.0%
Molecular Weight:	390.4
Molecular Formula:	C ₆ H ₁₄ O ₆ S ₄ .2Na

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation. Stable if protected from heat and exposure to air.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Keep away from heat, sparks and flame.
Materials to Avoid:	Avoid halogens.
Hazardous Decomposition Products:	Carbon monoxide. Oxides of nitrogen. Oxides of sulfur.
Additional Guidelines:	Not Applicable

11. TOXICOLOGICAL INFORMATION

Acute Oral LD50 (mg/kg):	> 5000 mg/kg (Rat)
Acute Dermal LD50 (mg/kg):	> 5000 mg/kg (Rabbit)
Acute Inhalation LC50 (mg/l):	Not Determined

Target Organs / Principle Routes of Exposure: Eyes. Inhalation. Dermal - skin.

11. TOXICOLOGICAL INFORMATION

Ingestion:	Swallowing a relatively large amount of this material is unlikely to produce serious illness or death.
Skin Contact:	CAUSES ALLERGIC SKIN REACTION. May cause a rash and itching of the skin.
Inhalation:	May cause mild respiratory irritation.
Eye Contact:	Causes mild eye irritation. Mild Eye Irritation: signs/symptoms can include redness, swelling, pain and tearing.
Aggravated Conditions:	Dermal ailments. Allergies. This material or its emissions may cause an allergic or sensitization reaction and thereby aggravate systemic disease.
Carcinogenicity Comment:	This product, or one of its ingredients present at 0.1% or more, is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC or OSHA.
Other Information:	Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory sensitization. May be a skin sensitizer. Product releases amine vapors during cure.
Primary Irritation Effect:	Slightly irritating to skin and eyes. STRONG SKIN SENSITIZER in animal studies and human experience.
Carcinogenicity:	Negative in standard tests using bacteria and/or yeast cells.
Genotoxicity:	Negative for genetic activity - in vitro tests. Negative for genetic activity - in vivo tests.
Reproductive/Developmental Toxicity:	Did not affect reproductive performance or post-natal development in animal studies. No evidence of teratogenicity in animal studies using rats, mice and/or hamsters.

12. ECOLOGICAL INFORMATION

Acute Fish Toxicity:	96Hr LC50 Rainbow Trout: >1000 mg/l. 96Hr LC50 Bluegill Sunfish: >1000 mg/l.
Acute Crustaceans Toxicity:	48Hr EC50 Daphnia Magna = 80 mg/l.
Acute Algae Toxicity:	96Hr EC50 Algae = 275 mg/l.
Octanol/Water Coefficient:	4.72 log P.
Chemical Fate Information:	Ready Biodegradability (Modified Sturm) = <10% after 28 days (low)
Other Information:	Not Available

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method:	This material is not a RCRA hazardous waste. Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations. Empty containers should be handled in a manner not to cause dusting during collection, transportation and disposal.
Contaminated Packaging:	If empty container retains product residues, all label precautions must be observed. Store away from ignition sources. Transport with all closures in place. Return for reuse or dispose according to national or local regulations. Dispose of container according to national or local regulations.

14. TRANSPORT INFORMATION

DOT:	Not Regulated
DOT Reportable Quantity (lbs):	None
ICAO/IATA:	See DOT
IMDG:	See DOT
Marine Pollutant:	No
TDG (Canada):	See DOT
Remarks:	None

15. REGULATORY INFORMATION

Worldwide Inventory Status

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15. REGULATORY INFORMATION

USA (TSCA):	Listed
Canada (DSL):	Listed
Canada (NDSL):	Not Listed
European Union (EINECS/ELINCS):	Listed
Japan (ENCS):	Listed
Korea (ECL):	Listed
Australia (AICS):	Listed
New Zealand (NZ):	Listed
Phillipines (PICCS):	Listed
China (CLECS):	Listed.

US Regulatory Rules

SARA Section 302:	None Found
SARA 311/312 Hazard Categories:	Immediate Delayed
SARA 313 Chemical:	Not Applicable / None
RCRA Status:	Not a RCRA waste.

Other Regulations:

California Proposition 65:	NONE
New Jersey Right-to-Know List:	Not Applicable.
Pennsylvania Right to Know List:	Not Applicable.
Florida Right to Know:	Not Applicable.
Minnesota Right to Know:	Not Applicable
Massachusetts Right to Know Law:	Not Applicable.
FDA Status 21 CFR:	Not Regulated For Use in food contact applications under 21 CFR.

Canadian Regulations

WHMIS Hazard Class:	D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects
NPRI:	Not Listed. [Canada]

16. OTHER INFORMATION

Hazard Rating Systems:

HMIS Classification:	HEALTH 2, FLAMMABILITY 1, REACTIVITY 0
NFPA Rating:	HEALTH 2, FLAMMABILITY 1, REACTIVITY 0

The following has been revised since the last issue of this MSDS: New MSDS format. Addition of dust explosion data.

Additional Information: Added to the Canadian Domestic Substance List (DSL) in December, 2005. Delisted from the NDSL.

Important Note: This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

END OF MSDS

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