

MATERIAL SAFETY DATA SHEET

Sulfur, sublimed, 99.5% 96547

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Sulfur, sublimed, 99.5%

Sulphur; Brimstone Company Identification: Acros Organics N.V. One Reagent Lane Fairlawn, NJ 07410 For information in North America, call: 800-ACROS-01 For emergencies in the US, call CHEMTREC: 800-424-9300

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

-----+---+----+ Chemical Name % | EINECS# CAS# _____İ____İ_____İ_____ 100 | 231-722-6 7704-34-9 Sulfur + Hazard Symbols: XI Risk Phrases: 36/37/38 **** SECTION 3 - HAZARDS IDENTIFICATION **** EMERGENCY OVERVIEW Appearance: Not available. Danger! Flammable solid. May cause skin irritation. May cause respiratory and digestive tract irritation. Causes eye irritation. Target Organs: None. Potential Health Effects Eye: Causes eye irritation. Effects may be delayed. Skin: May cause skin irritation. Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Inhalation: May cause respiratory tract irritation. Chronic: Chronic inhalation may cause effects similar to those of acute inhalation. **** SECTION 4 - FIRST AID MEASURES ****

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid. Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Notes to Physician: Treat symptomatically and supportively. **** SECTION 5 - FIRE FIGHTING MEASURES **** General Information: Evacuate area and fight fire from a safe distance. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Flammable solid. Extinguishing Media: Use water spray to cool fire-exposed containers. Use extinguishing media most appropriate for the surrounding fire. Water spray may cause frothing. Autoignition Temperature: 235 deg C (455.00 deg F) Flash Point: Not applicable. (estimated) Health: ; Flammability: ; Reactivity: Explosion Limits, Lower: Not available. Upper: Not available. **** SECTION 6 - ACCIDENTAL RELEASE MEASURES **** General Information: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. **** SECTION 7 - HANDLING and STORAGE **** Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. May form flammable dust-air mixtures. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away

from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sulfur	none listed	none listed	none listed

OSHA Vacated PELs:

Sulfur:

Odor:

рН:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure. Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. **** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES **** Physical State: Solid Appearance: Not available. Not available. Not available. рн. Vapor Pressure: 10 mm Hg @ 246 Vapor Density: 8.9 Evaporation Rate: Not available. Viscosity: cP 119 deg C Boiling Point: 445 deg C @ 760.00mm Hg Boiling Point: 445 deg C Freezing/Melting Point: 114 deg C Decomposition Temperature: Not available. Solubility: Insoluble. Specific Gravity/Density: 2.3600g/cm3 Molecular Formula: S Molecular Weight: 32.05 **** SECTION 10 - STABILITY AND REACTIVITY **** Chemical Stability: Stable under normal temperatures and pressures. Conditions to Avoid: High temperatures, incompatible materials.

Incompatibilities with Other Materials: Hydrocarbons react with molten sulfur to produce carbon disulfide and

hydrogen sulfide. Reacts explosively with diethyl ether, halogen oxides, some metals, and some nonmetals. Highly flammable when it reacts with potassium nitride. Reacts with interhalogens, metal acetylides or carbides, metal halogenates, oxidants, tetraphenyllead and metal oxides. Hazardous Decomposition Products: Sulfur oxides (SOx), including sulfur oxide and sulfur dioxide. Hazardous Polymerization: Has not been reported. **** SECTION 11 - TOXICOLOGICAL INFORMATION **** RTECS#: CAS# 7704-34-9: WS4250000 LD50/LC50: Not available. Carcinogenicity: Sulfur -Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. Epidemiology: No data available. Teratogenicity: No data available. Reproductive Effects: No data available. Neurotoxicity: No data available. Mutagenicity: No data available. Other Studies: No data available. **** SECTION 12 - ECOLOGICAL INFORMATION **** Ecotoxicity: Not available. Environmental Fate: Not available. Physical/Chemical: Not available. Other: Not available. **** SECTION 13 - DISPOSAL CONSIDERATIONS **** Dispose of in a manner consistent with federal, state, and local regulations. RCRA D-Series Maximum Concentration of Contaminants: None listed. RCRA D-Series Chronic Toxicity Reference Levels: None listed. RCRA F-Series: None listed. RCRA P-Series: None listed. RCRA U-Series: None listed. Not listed as a material banned from land disposal according to RCRA. **** SECTION 14 - TRANSPORT INFORMATION **** US DOT Shipping Name: SULFUR Hazard Class: 9 UN Number: NA1350 Packing Group: III IMO

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Shipping Name: SULPHUR
         Hazard Class: 4.1
             UN Number: 1350
         Packing Group: III
    IATA
         Shipping Name: SULPHUR
         Hazard Class: 4.1
            UN Number: 1350
         Packing Group: III
   RID/ADR
         Shipping Name: SULPHUR
 Dangerous Goods Code: 4.1(11C)
            UN Number: 1350
   Canadian TDG
         Shipping Name: SULFUR
         Hazard Class: 4.1
            UN Number: UN1350
                 **** SECTION 15 - REGULATORY INFORMATION ****
US FEDERAL
   TSCA
         CAS# 7704-34-9 is listed on the TSCA inventory.
      Health & Safety Reporting List
        None of the chemicals are on the Health & Safety Reporting List.
      Chemical Test Rules
        None of the chemicals in this product are under a Chemical Test Rule.
       Section 12b
        None of the chemicals are listed under TSCA Section 12b.
      TSCA Significant New Use Rule
        None of the chemicals in this material have a SNUR under TSCA.
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R 36/37/38 Irritating to eyes, respiratory system and skin. Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 37/39 Wear suitable gloves and eye/face protection. WGK (Water Danger/Protection) CAS# 7704-34-9: 1 Canada CAS# 7704-34-9 is listed on Canada's DSL/NDSL List. This product does not have a WHMIS classification. CAS# 7704-34-9 is not listed on Canada's Ingredient Disclosure List. Exposure Limits **** SECTION 16 - ADDITIONAL INFORMATION **** MSDS Creation Date: 2/01/1996 Revision #2 Date: 8/24/1998 The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages. _____

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