SAFETY DATA SHEET

MINERAL SPIRITS RULE 66 (<8% AROMATICS)

Product ID: AA100901 Revised: 10-01-2013 Replaces: 09-07-2011

1. IDENTIFICATION

Product Name: MINERAL SPIRITS RULE 66 (<8% AROMATICS)

Synonyms: Mineral Spirits 75

CAS Number: MIXTURE

Recommended Use: No data available. **Restrictions on Use:** No data available.

Hydrite Chemical Co. EMERGENCY RESPONSE NUMBERS: 300 N. Patrick Blvd. 24 Hour Emergency #: (414) 277-1311 CHEMTREC Emergency #: (800) 424-9300

(262) 792-1450

2. HAZARD(S) IDENTIFICATION









Signal Word: Danger

GHS Classification: Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye Irritation Category 2A

Carcinogenicity Category 2

Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure

Category 2

Flammable Liquid Category 3

Acute Toxicity - Inhalation Vapour Category 3

Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

Hazard Statements: Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

Toxic if inhaled.

May cause drowsiness or dizziness.

Suspected of causing cancer.

May cause damage to organs (nervous and respiratory system) through

prolonged or repeated exposure (by inhalation).

Precautionary Statements:

Prevention: Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. – No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical, ventilating, and lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge. Do not breathe dust, fume, gas, mist, vapors or spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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Wear gloves, eye and face protection and protective clothing.

Use personal protective equipment as required.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse

skin with water.

IF INHALED: Remove victim to fresh air and keep at rest in a position

comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice or attention. Call a POISON CENTER or doctor if you feel unwell. Get medical advice or attention if you feel unwell.

Specific treatment (see First Aid on SDS or on this label). If skin irritation occurs: Get medical advice or attention. If eye irritation persists: Get medical advice or attention. Take off contaminated clothing and wash before reuse.

In case of fire: Use appropriate extinguishing media - See Section 5 on SDS.

Storage: Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store in a secure manner.

Disposal: Dispose of in accordance with local, regional and international regulations.

Hazards Not Otherwise Classified: Chronic effects of ingestion and subsequent aspiration into the

lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. May cause damage to the following organs: kidneys, lungs, liver, mucous membranes, upper

respiratory tract, skin, CNS, eye, lens or cornea. May be harmful

or fatal if swallowed and enters airways. Breathing high concentrations can cause irregular heartbeats which may be

fatal.

3. COMPOSITION/INFORMATION ON INGREDIENTS

ComponentCAS Number% by Wt.Distillates, Petroleum, Hydrotreated Light64742-47-8< = 100 %</td>Cumene98-82-8< 1.0 %</td>

Note: This product may be composed, in whole or in part, of any the following refinery streams: Distillates (petroleum), hydrotreated light (CAS No. 64742-47-8). Heavy hydrodesulfurized naphtha (petroleum) (CAS No. 64742-82-1).

4. FIRST-AID MEASURES

Eye Contact: If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do. Do not use eye ointment.

Skin Contact: If on skin: Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. If skin surface is not damaged, wash thoroughly with soap and water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. Discard contaminated leather articles such as shoes and belt.

Inhalation: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head

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below hips to prevent aspiration of liquid into the lungs. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended.

Note to Physicians:

Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required. If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

Most Important Symptoms/Effects:

Eye Contact: Causes moderate irritation. This product can cause transient, mild eye irritation with short-term contact with liquid sprays or mists. Symptoms may include: stinging. watering. redness. swelling.

Skin Contact: Causes moderate irritation. This product can cause mild, transient skin irritation with short-term exposure. The degree of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms may include: redness. itching. burning. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Skin Absorption: No data available.

Inhalation: Causes moderate irritation. Vapors or mists may irritate: throat. lungs. respiratory tract. May cause: central nervous system depression. nausea. headache. dizziness. fatigue. drowsiness. unconsciousness. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Ingestion: Causes moderate irritation. May cause irritation of the: mouth. throat. esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms may include: burning sensation. nausea. vomiting. dizziness. staggering gait. drowsiness. unconsciousness. delirium. other central nervous system effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water spray. Water fog. Foam. Dry chemical. Carbon dioxide. Water fog and spray are effective in cooling containers and adjacent structures but might cause frothing and/or may not achieve extinguishment. DO NOT USE: Direct water stream.

Fire Fighting Methods: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Avoid water accumulation. Product may reignite and burn on the water's surface. If container is not properly cooled, it can rupture in the heat of a fire. Do not use direct water stream. May spread fire. Run-off from fire control may cause pollution.

Fire and Explosion Hazards: FLAMMABLE LIQUID. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment). PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Hazardous Combustion Products: Carbon oxides. Products of incomplete combustion. Smoke. Fumes.

6. ACCIDENTAL RELEASE MEASURES

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Spill Clean-Up Procedures: FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Shut off source of leak if safe to do so. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor, but may not prevent ignition in closed spaces. Use non-sparking tools and equipment. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking containers for immediate disposal. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Prevent entry into basements, low areas, or confined areas. Flush remaining area with water to remove trace residue and dispose of properly.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Use appropriate grounding and bonding practices. Always open containers slowly to allow any excess pressure to vent.

Storage: FLAMMABLE LIQUID. Store in a cool, well ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment. See Section 10 for incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u> <u>Limits</u>

Cumene 50 ppm TWA; 245 mg/m3 TWA; (Skin)

ACGIH Exposure Guidelines:

<u>Component</u> <u>Limits</u>

Distillates, Petroleum, Hydrotreated 200 mg/m3 TWA (application restricted to conditions in which there are

Light negligible aerosol exposures); (Skin)

Cumene 50 ppm TWA

Note:

* MANUFACTURER RECOMMENDED EXPOSURE LIMIT: TWA of 100 ppm for Petroleum Distillate - Stoddard Solvent, S = Skin notation.

Engineering Controls: Local exhaust ventilation, process enclosures, or other engineering controls are imperative when handling or using this product to avoid overexposure. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Eye/Face Protection: Wear safety glasses with side shields while handling this product. Wear additional eye protection such as chemical safety goggles when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Chemical-resistant. Viton (R). Heavy nitrile rubber.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved respirator. NIOSH-Approved air-purifying respirator with: Organic vapor cartridge. NIOSH-Approved Supplied Air Respirator (SAR). NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI

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Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use. NIOSH-Approved organic respirator. NIOSH-Approved positive pressure supplied air respirator.

Other Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Rubber boots. Protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Color: Transparent. Colorless.

Odor: Characteristic hydrocarbon solvent odor.

Odor Threshold: N.D.

pH: N.A.

Freezing Point (deg. F): N.D. Melting Point (deg. F): N.D.

Initial Boiling Point or Boiling Range: 315 - 394 °F

Flash Point: 110 °F

Flash Point Method: TCC. ASTM D 56. Evaporation Rate (nBuAc = 1): N.D. Flammability (solid, gas): N.D. Lower Explosion Limit: ~ 0.5 % Upper Explosion Limit: ~ 6 % Vapor Pressure (mm Hg): 2 @ 20 C

Vapor Density (air=1): > 1

Specific Gravity or Relative Density: 0.78

Solubility in Water: Very slightly soluble in cold water (< 0.1% w/w)

Partition Coefficient (n-octanol/water): N.D.

Autoignition Temperature: No Data **Decomposition Temperature:** N.D.

Viscosity: N.D. % Volatile (wt%): 100 VOC (wt%): 100

VOC (lbs/gal): 783 g/l (w/v)

Fire Point: N.D.

10. STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid: Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Avoid other ignition sources. Keep away from strong oxidizing conditions and agents.

Incompatible Materials: Strong oxidizing agents. Strong acids. Strong alkalies.

Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Smoke. Fumes. Unburned hydrocarbons.

11. TOXICOLOGICAL INFORMATION

ComponentOral LD50Dermal LD50Inhalation LC50Distillates, Petroleum, HydrotreatedRat: > 5000 mg/kgRabbit: > 2000 mg/kg4H Rat: > 5.2 mg/L

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Light

Cumene Rat: 1400 mg/kg Rabbit: 12,300 µL/kg No Data

Acute Toxicity Estimate (ATE): Inhalation Vapor: 5.2261 mg/L

Routes of Exposure: Eyes. Skin. Inhalation. Ingestion. Absorption.

Eye Contact: Causes moderate irritation. This product can cause transient, mild eye irritation with short-term contact with liquid sprays or mists. Symptoms may include: stinging, watering, redness, swelling.

Skin Contact: Causes moderate irritation. This product can cause mild, transient skin irritation with short-term exposure. The degree of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms may include: redness. itching. burning. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

Skin Absorption: No data available.

Inhalation: Causes moderate irritation. Vapors or mists may irritate: throat. lungs. respiratory tract. May cause: central nervous system depression. nausea. headache. dizziness. fatigue. drowsiness. unconsciousness. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Ingestion: Causes moderate irritation. May cause irritation of the: mouth. throat. esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms may include: burning sensation. nausea. vomiting. dizziness. staggering gait. drowsiness. unconsciousness. delirium. other central nervous system effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Medical Conditions Aggravated by Exposure to Product: Skin disorders. Respiratory system disorders. Liver disorders. Kidney disorders. Central nervous system disorders.

Other: Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome").

Cancer Information:

This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:

Cumene

Distillates (petroleum), hydrotreated light:

IRRITATION:

Primary dermal irritation studies (four hour exposure) in rabbits utilizing mineral spirits containing less than 2% aromatics resulted in slight to moderate skin irritation. In humans, mineral spirits have produced slight to moderate skin irritation particularly with evaporation from the skin is prevented. Animal studies have demonstrated that mineral spirits produced mild respiratory tract irritation at elevated concentrations. Also, sensory respiratory tract irritation was evident by reduced breathing rates in the test animals in certain stidies. SENSITIZATION:

In animal studies utilizing mineral spirits containing up to 18%, aromatics skin sensitive is not evident. REPEAT DOSE/TARGET ORGAN TOXICITY:

The most common effects observed in repeated dose animal studies with mineral spirits are kidney changes that are consistent with an alpha 2u-globulin-medicated process that is not regarded as relevant to humans. The kidney damage occured only in male rats and appeared to involve both the tubules and glomerull. Certain studies have reported effects in the liver as well as hematological or urine chemistry changes. In general, these effects have not to been shown to be dose-related.

NERVOUS SYSTEM EFFECTS:

In animal studeis utilizing mineral spirits containing up to 22% aromatics indicated that the acute central nervous system effects are reversible. Based on exisiting animal studies, the potential for persistent effects is not clear. In certain repeated dose animal studies have changes were reported in behavior, neurochemistry and sensory evoked potentials which may be irreversible. Repeated exposure to elevated concentrations of hydrocarbon

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solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc.). REPRODUCTIVE/DEVELOPMENTAL TOXICITY:

There were no treatment-related effects on pregnancy rate, mortality or gross post mortem observations in animal studies utilizing mineral spirits containing less than 2% aromatics.

GENOTOXICITY:

In vivo and in vitro studies on mineral spirits containing up to 22% aromatics indicate that these products are not genotoxic.

CARCINOGENICITY:

The National Toxicology Program (NTP) conducted two-year carcinogenicity studies in rats and mice with Stoddard Solvent IIC (less than 2% aromatics). The studies indicated that there was some evidience of carcinogenic activity in male rats (adrenal medulla neoplasms and renal tubule adenoma) but no evidence of carcinogenic activity in female rats. Further, there was equivocal evidence of carcinogenic activity in female mice (hepatocellular adenoma) but no evidence of carcinogenic activity in male mice. A low carcinogenic potential is suggested by a lack of genotoxic potential identified in in vivo and in vitro genetic toxicity tests (with and without metabolic activation).

Trimethylbenzenes, all isomers:

Studies of Workers:

Levels of total hydrocarbon vapors present in the breathing atmosphere of these workers ranged from 10 to 60 ppm. The TCLo for humans is 10 ppm, with somnolence and respiratory tract irritation noted.

Studies in Laboratory Animals:

In inhalation studies with rats, four of ten animals died after exposures of 2400 ppm for 24 hours. An oral dose of 5 mL/kg resulted in death in one of ten rats. Minimum lethal intraperitoneal doses were 1.5 to 2.0 mL/kg in rats and 1.13 to 12 mL/kg in guinea pigs. Mesitylene (1, 3, 5 Trimethylbenzene) inhalation at concentrations of 1.5, 3.0, and 6.0 mg/L for six hours was associated with dose-related changes in white blood cell counts in rats. No significant effects on the complete blood count were noted with six hours per day exposure for five weeks, but elevations of alkaline phosphatase and SGOT were observed. Central nervous system depression and ataxia were noted in rats exposed to 5,100 to 9,180 ppm for two hours.

Cumene:

Effects from Acute Exposure:

Overexposure to cumene may cause upper respiratory tract irritation and severe CNS depression.

Effects from Prolonged or Repeated Exposure:

Studies in laboratory animals indicate evidence of adverse effects on the kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. IARC has classified cumene as "possibly carcinogenic to humans" (Group 2B).

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

Chemical Fate Information: This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The octanol-water partition coefficient (log Kow) for this product is expected to be in the range of 2.1 to 5.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D001 and D018

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Reclaim (recycle) solvent. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DO NOT pressurize, cut,

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weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN1268

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S. (NAPHTHA SOLVENT)

Hazard Class: 3
Packing Group: III

Label Required: FLAMMABLE
Reportable Quantity (RQ): 5000# (Cumene)

15. REGULATORY INFORMATION

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category Hazards:

Immediate (Acute) Delayed (Chronic)		Fire Hazard	Pressure Release			Reactive		
Yes	Yes		Yes	No			No	
Regulated Components: CA		CAS	CERCLA	SARA	SARA	<u>U.S.</u>	WI	Prop
Component		<u>Number</u>	<u>RQ</u>	<u>EHS</u>	<u>313</u>	<u>HAP</u>	<u>HAP</u>	<u>65</u>
Cumene		98-82-8	Yes	No	Yes	Yes	Yes	Yes

*Prop 65 - May Contain the Following Trace Components:

Ethylbenzene Benzene Toluene Naphthalene

Clean Water Act:

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharge or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800)424-8802.

16. OTHER INFORMATION

Hazard Rating System
Health: 1*
Flammability: 2
Reactivity: 0

* = Chronic Health Hazard

NFPA Rating System

Health: 1 Flammability: 2 Reactivity: 0 Special Hazard: None

MSDS Abbreviations
N.A. = Not Applicable
N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

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N.E./Not Estab. = Not Established

MSDS Prepared by: CSH

Reason for Revision: New format.

Revised: 10-01-2013 **Replaces:** 09-07-2011

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

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