



Material Safety Data Sheet

Durite™ SC-1008

1. Product and company identification

Product name Durite™ SC-1008

MSDS Number 00000000244

Product Type Phenolic Resin

Product use Laminating Resin Applications

Manufacturer, Importer, Supplier Hexion Specialty Chemicals, Inc.
6210 Campground Road
Louisville KY 40216

hazcom@hexion.com

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Telephone **For Emergency Medical Assistance**
Call Health & Safety Information Services, 1-866-303-6949

For Emergency Transportation Information
CHEMTREC US Domestic (800) 424-9300
CHEMTREC International (703) 527-3887
CANUTEC CA Domestic (613) 996-6666

For additional health and safety or regulatory information, call 1 888-4-Hexion.

The MSDS is not to be used as a specification sheet. For Specific technical information on any of the above products, a sales specification sheet should be obtained from your Hexion representative.

2. Hazards identification

Form Liquid

Odor Slight phenolic

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview **WARNING 1**
FLAMMABLE LIQUID AND VAPOR. MAY FORM EXPLOSIVE MIXTURES WITH AIR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES EYE IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION. INHALATION CAN CAUSE CENTRAL NERVOUS SYSTEM (CNS) EFFECTS.

Potential acute health effects

Inhalation Can cause central nervous system (CNS) depression. Slightly irritating to the respiratory system. May cause sensitization by inhalation. Can cause central nervous system (CNS) effects.

Ingestion Can cause central nervous system (CNS) depression.

Skin Slightly irritating to the skin. May cause sensitization by skin contact.

Eyes Severely irritating to eyes. Risk of serious damage to eyes. Direct contact with the eyes can cause irreversible damage, including blindness.

Potential chronic health effects

Chronic effects Contains material that can cause target organ damage. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and that preexisting respiratory and skin disorders may be aggravated by exposure. Signs and symptoms of chronic phenol poisoning may include vomiting, difficulty in swallowing, diarrhea, lack of appetite, jaundice, fatigue, bleeding or easy bruising and sometimes pain and swelling in the upper right abdomen, changes in urine output or dark urine, pain upon urination or in the lower back, or general edema. Can also cause cardiac damage evidenced by shortness of breath and in severe cases cardiac arrest. Preexisting medical conditions of the heart, kidney, liver, lung, eyes and skin may be aggravated by exposure.

Carcinogenicity Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Target organs Contains material which causes damage to the following organs: kidneys, liver, heart, skin, eyes, central nervous system (CNS), Review Section 2 and 11 for any additional assessments.

Over-exposure signs/symptoms

Inhalation Adverse symptoms may include the following: nausea or vomiting, respiratory tract irritation, coughing, headache, drowsiness/fatigue, dizziness/vertigo, wheezing and breathing difficulties, unconsciousness, asthma, cyanosis, motor difficulties, convulsion, confusion,

Ingestion Adverse symptoms may include the following: nausea or vomiting, dizziness/vertigo, drowsiness/fatigue, headache, unconsciousness,

Skin Adverse symptoms may include the following: irritation, redness,

Eyes Adverse symptoms may include the following: pain or irritation, watering, redness,

Medical conditions aggravated by over-exposure Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/Information on ingredients

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>
isopropanol	67-63-0	10.0 - 30.0
Phenol	108-95-2	10.0 - 30.0
Formaldehyde	50-00-0	1.0 - 5.0

** Any applicable Canadian trade secret numbers will be listed in Section 15.

4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. In the event of any complaints or symptoms, avoid further exposure.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first aid personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. If it is suspected that dust, vapor, mist or gas are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Flammability of the product	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Extinguishing media	
Suitable	Use dry chemical, CO ₂ , water spray (fog) or foam.
Not suitable	Do not use water jet.
Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-

exposed containers cool.

Hazardous combustion products

Decomposition products may include the following materials: carbon oxides,

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special Remarks on Explosion Hazards

Liquid and vapor may cause a flash fire or ignite explosively. Vapor is heavier than air and may settle in low places or spread long distances to a source of ignition and flashback. Explosive atmospheres may linger. Closed containers can rupture and release toxic vapors or decomposition products.

6. Accidental release measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Do not breathe dust, vapor, mist or gas.

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in

which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Follow US NFPA 30, "Flammable & Combustible Liquids Code", or other national, state and local codes on safe handling of flammable liquids. Train workers in the recognition and prevention of hazards associated with the storage, handling and transfer of flammable liquids in the plant. Empty containers retain product residue and can be hazardous. Do not reuse container. Do not breathe dust, vapor, mist or gas.

Storage

Store in an area designated for storage of flammable liquids (See NFPA 30 and OSHA 29 CFR 1910.106). Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient name
Isopropanol

Occupational exposure limits

ACGIH TLV 8-hr TWA
200 ppm

ACGIH TLV STEL (15 min)
400 ppm

OSHA PEL 8-hr TWA
980 mg/m³ 400 ppm

Phenol

ACGIH TLV 8-hr TWA
19 mg/m³ 5 ppm

OSHA PEL 8-hr TWA
19 mg/m³ 5 ppm

Formaldehyde

ACGIH TLV Ceiling
0.37 mg/m³ 0.3 ppm

OSHA PEL Z2 8-hr TWA
0.75 ppm

OSHA PEL Z2 STEL (15 mins)
2 ppm

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering measures	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Form	Liquid
Flash point	26.67 °C(80.01 °F) Setflash Closed Cup ASTM D 3828
Auto-ignition temperature	456 °C
Flammable limits	
Lower:	2.9 %(V)
Upper:	12.0 %(V)
Color	Clear, reddish-brown
Odor	Slight phenolic
pH	Not applicable
Boiling point	98 °C(208 °F)
Freezing Point	Not applicable

Relative density	1.070 - 1.100
Vapor pressure	28 mm Hg @ 25 °C(77 °F)
Odor threshold	Not available
Viscosity	Dynamic- Not applicable
Solubility	Complete
Partition coefficient: n-octanol/water	Not determined
Evaporation rate	3 (n-Butyl acetate=1)
Vapor density	2.1

10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Avoid exposure - obtain special instructions before use.
Materials to avoid	Reactive or incompatible with the following materials: oxidizing materials,
Other hazards	During processing, vapors of phenol, formaldehyde, alcohols, glycols or other solvents may be released.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Acute toxicity

Product name

Durite™ SC-1008

LD50 Oral	Rat	> 2,001 mg/kg Estimated.
LC50 Inhalation	Rat	> 2501 ppm/1 h Estimated.
LD50 Dermal	Rabbit	> 2,001 mg/kg Estimated.
16 CFR Part 1500.41	Rabbit	Slight Skin Irritant
16 CFR Part 1500.42	Rabbit	Severe Eye Irritant

Acute toxicity

Ingredient name

Isopropanol

LD50 Oral	Mouse	3,600 mg/kg
LD50 Oral	Rabbit	6,410 mg/kg
LD50 Oral	Rat	5,000 mg/kg
LC50 Inhalation	Rat	16000 ppm/8 h
LD50 Dermal	Rabbit	12,800 mg/kg

Phenol

LD50 Oral	Rat	317 mg/kg
LD50 Oral	Mouse	270 mg/kg
LD50 Oral	Mammal	500 mg/kg
LC50 Inhalation	Mouse	0.177 mg/l/4 h
LC50 Inhalation	Rat	0.316 mg/l/4 h
LD50 Dermal	Rat	669 mg/kg
LD50 Dermal	Rabbit	630 mg/kg

Formaldehyde

LD50 Oral	Mouse	42 mg/kg
LD50 Oral	Guinea	260 mg/kg

LD50 Oral	pig	
	Rat	800 mg/kg
LC50 Inhalation	Mouse	0.454 mg/4 h
LC50 Inhalation	Mouse	0.505 mg/2 h
LC50 Inhalation	Rat	0.578 mg/2 h
LC50 Inhalation	Rat	250 ppm/2 h
LD50 Dermal	Rabbit	270 mg/kg

Other Toxicological Information

Carcinogenicity

Conclusion/Summary

OSHA regulates formaldehyde as a potential human carcinogen. See the OSHA Formaldehyde Workplace Standard at 29CFR 1910.1048. Rats chronically exposed to 14 ppm formaldehyde contracted nasal cancer. The National Toxicology Program (NTP) has listed formaldehyde as a probable human carcinogen. The International Agency for Research on Cancer (IARC) has concluded formaldehyde is carcinogenic to humans. Safe handling and use instructions are provided in this MSDS and in the OSHA Formaldehyde Workplace Standard at 29CFR1910.1048. OSHA has identified 0.5 ppm as the "Action Level". Please review and understand the guidance contained in this MSDS and refer to the OSHA Formaldehyde Standard for regulatory requirements that may be applicable to your operation and use. For further information and a review of various studies, go to www.osha.gov/SLTC/formaldehyde, www.iarc.fr and other authoritative websites.

Classification

Ingredient name

isopropanol

ACGIH Not classifiable as to its carcinogenicity to humans.
 IARC Not classifiable as to its carcinogenicity to humans.
 NTP Not listed
 OSHA Not regulated

Phenol

ACGIH Not classifiable as to its carcinogenicity to humans.
 IARC Not classifiable as to its carcinogenicity to humans.
 NTP Not listed
 OSHA Not regulated

Formaldehyde

ACGIH Suspected human carcinogen.
 IARC IARC Group 1, carcinogenic to humans
 NTP NTP reasonably anticipated to be carcinogenic
 OSHA OSHA cancer potential

12. Ecological information

Environmental effects

No known significant effects or critical hazards.

Aquatic ecotoxicity

Ingredient name

isopropanol

Fresh water Acute LC50 > 1,400 mg/l/96 h Bluegill
 Acute LC50 6,550 mg/l/96 h Fathead minnow

Phenol

Fresh water Acute LC50 24 mg/l/96 h Fathead minnow
 Fresh water Acute LC50 31 mg/l/96 h Guppy
 Fresh water Acute LC50 13.5 mg/l/96 h Bluegill

Formaldehyde

Fresh water	Acute LC50 24.1 mg/l/4 d	Fathead minnow
Fresh water	Acute LC50 40 mg/l/4 d	Bluegill
Fresh water	Acute LC50 40 mg/l/4 d	Rainbow trout, donaldson trout

Other adverse effects

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes*PG	Reportable Quantity (RQ)
CFR	1866	RESIN SOLUTION, flammable	Class 3 III	
TDG	1866	RESIN SOLUTION, flammable	Class 3 III	
IMO/MDG	1866	RESIN SOLUTION, flammable	Class 3 III	
IATA (Cargo)	1866	RESIN SOLUTION, flammable	Class 3 III	

*PG : Packing group

15. Regulatory information

US regulations

HCS Classification

Flammable liquid, Irritating material, Sensitizing material, Carcinogen, Target organ effects

U.S. Federal regulations

SARA 311/312 Classification Immediate (acute) health hazard, Delayed (chronic) health hazard, Fire hazard

SARA 313 - Supplier Notification

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Isopropanol - 67-63-0 (25.00%), Phenol - 108-95-2 (18.00%), Formaldehyde - 50-00-0 (2.00%).

SARA 302 Extremely Hazardous Substances The following components are listed: Phenol, Formaldehyde,

State regulations

Massachusetts RTK Substances The following components are listed: Isopropanol,

Phenol, Formaldehyde,

New Jersey RTK Hazardous Substances The following components are listed:
Isopropanol, Phenol, Formaldehyde,

Pennsylvania RTK Hazardous Substances The following components are listed:
Isopropanol, Phenol, Formaldehyde,

California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer. Formaldehyde - 50-00-0,

Canada

WHMIS (Canada)

Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPR: The following components are listed: Isopropanol, Phenol, Formaldehyde,

International regulations

Chemical inventories

Europe inventory All components are listed or exempted.
Australia inventory (AICS) All components are listed or exempted.
China inventory (IECSC) All components are listed or exempted.
Japan inventory (ENCS) All components are listed or exempted.
Japan inventory (ISHL) Not determined.
Korea inventory (KECI) All components are listed or exempted.
New Zealand inventory of Chemicals (NZIoC) Not determined.
Philippines inventory (PICCS) All components are listed or exempted.
Canada inventory All components are listed or exempted.
United States inventory (TSCA 8b) All components are listed or exempted.

16. Other information

**Hazardous Material
information System III
(U.S.A.)**

Health : 2
Flammability: 3
Physical hazards : 0
Chronic : *

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The customer is responsible for determining the PPE code for this material.

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