



SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

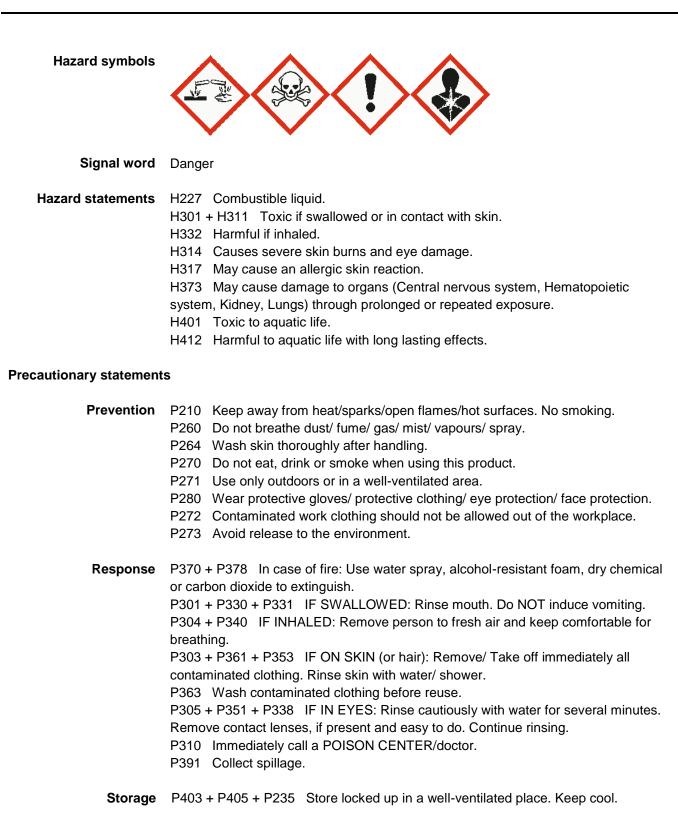
Trade name	CA44			
Synonyms	Cresylic Acid			
Use	Intermediate, Solvent mixture, Synthesis of polymers			
Company	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)			
Address	1914 Haden Road, Houston, TX 77015-6498			
Telephone	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424 9300		
	CHEMTREC World Wide	(703) 527-3887		
	Other Emergencies (24-hr)	(832) 783 6600		
	SDS and Product Information (8:00am-4:30pm CST)	(832) 783 6400		
	Health and Safety Information (7:30am-4:00pm CST)	(281) 588 3491		
	NCEC - Europe, Israel, Africa, Americas	+44 (0) 2087 628 322		
	NCEC - Middle East, Arabic African countries (where European languages are spoken)	+44 (0) 1235 239 670		
	NCEC - Middle East/Africa (where Arabic is spoken)	+44 (0) 1235 239 671		
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	NCEC - Australia	+61 2801 44558		
E-mail address	SasolElectronicSDS@us.sasol.com			

SECTION 2 HAZARDS IDENTIFICATION

OSHA/GHS	Flammable liquids	Category 4
Hazards	Acute toxicity (Oral)	Category 3
	Acute toxicity (Inhalation)	Category 4
	Acute toxicity (Dermal)	Category 3
	Skin corrosion	Category 1B
	Serious eye damage	Category 1
	Skin sensitisation	Category 1
	Specific target organ toxicity - repeated exposure	Category 2
	Acute aquatic toxicity	Category 2
	Chronic aquatic toxicity	Category 3

LABEL ELEMENTS







Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	CAS-No.	Weight percent
m-Cresol	108-39-4	20 - 40
3,5-Xylenol	108-68-9	20 - 40
p-Cresol	106-44-5	10 - 30
3,4-Xylenol	95-65-8	1 - 10
2,6-Xylenol	576-26-1	1 - 10
2,3-Xylenol	526-75-0	1 - 10
o-Ethylphenol	90-00-6	1 - 10
m-Ethylphenol	620-17-7	1 - 10
p-Ethylphenol	123-07-9	1 - 10
Trimethylphenol	26998-80-1	1 - 10

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4 FIRST AID MEASURES

- **Eye contact** In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
- **Skin contact** Take off contaminated clothing and shoes immediately. If possible, quickly blot material from skin to avoid spreading it. Rapid skin decontamination is critical. Wash off immediately with plenty of water. Wash off with polyethylene glycol and afterwards with plenty of water. Apply PEG/EtOH solution liberally to affected area. Allow to remain 15 to 30 seconds, then wash with water Continue cycle of water PEG/EtOH solution for at least 15 minutes (PEG/EtOH solution consists of 2 parts polyethylene glycol 400 to 1 part ethanol. For external use only.) Wash off with soap and water. Obtain medical attention. Wash contaminated clothing before re-use.
 - **Inhalation** Remove to fresh air. Keep patient warm and at rest. Obtain medical attention. If breathing is irregular or stopped, administer artificial respiration. Inhalation of vapors in high concentration may cause shortness of breath (lung edema). In case of shortness of breath, give oxygen.
 - **Ingestion** Call a physician or poison control centre immediately. Do NOT induce vomiting. Rinse mouth. Immediately give plenty of water (if possible charcoal slurry). Never give anything by mouth to an unconscious person.

SECTION 5 FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion May be ignited by open flame. NFPA Class IIIA combustible liquid.

Revision Date 04/08/2019





Suitable extinguishing media			
Protective equipment and precautions for firefighters	Wear self-contained breathing apparatus and protective suit.		
Further information	Evacuate personnel to safe areas. Prevent further leakage or spillage if safe to do so. Keep containers and surroundings cool with water spray. In the event of fire and/or explosion do not breathe fumes. Avoid contact with runoff water		

SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and
materials forEvacuate personnel to safe areas. Use personal protective equipment. Land spill:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth,
diatomaceous earth, vermiculite) and transfer to a container for disposal according to local
/ national regulations (see section 13). Do not flush into surface water or sanitary sewer
system. Water spill: Contain spill with booms. Remove material that settles in deeper
areas of waterway. Non-disposable equipment should be thoroughly decontaminated with
soap and water. Prevent further leakage or spillage if safe to do so. Do not contaminate
any lakes, streams, ponds, groundwater or soil.

SECTION 7 HANDLING AND STORAGE

Safe handling advice Wear personal protective equipment. Avoid contact with skin and eyes. Provide sufficient air exchange and/or exhaust in work rooms. In case of insufficient ventilation, wear suitable respiratory equipment.

 Storage and handling materials
 Unsuitable: Avoid use of aluminum, copper or brass alloys in storage or process equipment which will contact this material

 Further information
 Keen containers tightly closed in a dry cool and well wertilated place. Keen away for

Further information Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

Eyes Chemical resistant goggles must be worn., Wear as appropriate:, Face-shield



- **Skin** Full protective clothing, chemical boots, and chemical gloves. Impervious gloves. Nondisposable equipment should be thoroughly decontaminated with soap and water.
- **Inhalation** Use NIOSH approved respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

EXPOSURE GUIDELINES

Exposure limit(s) ACGIH TLV (8-hour) 20 mg/m3 (inhalable fraction and/or vapor) NIOSH Recommended Exposure Limit 2.3 ppm 10 mg/m3 NIOSH NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) 250 ppm OSHA PEL (Permissible Exposure Limit) 5 ppm 22 mg/m3
ACGIH TLV (8-hour) 20 mg/m3 (inhalable fraction and/or vapor) NIOSH Recommended Exposure Limit 2.3 ppm 10 mg/m3 NIOSH NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) 250 ppm OSHA PEL (Permissible Exposure Limit) 5 ppm 22 mg/m3
OSHA PEL (Permissible Exposure Limit) 10 ppm 50 mg/m3 ACGIH TLV (8-hour) 10 ppm 50 mg/m3 NIOSH Recommended Exposure Limit 10 ppm 50 mg/m3 NIOSH Short term exposure limit 15 ppm 75 mg/m3 NIOSH NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) 250 ppm

PEL=	Permissible Exposure Limits	TWA=	Time Weighted Average (8 hr.)
TLV=	Threshold Limit Value	STEL=	Short Term Exposure Limit (15 min.)
EL=	Excursion Limit	WEEL=	Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	clear to amber
Form	liquid
Odour	Antiseptic
Odour Threshold	No data available
Flash point	92 - 94 °C, 197 - 201 °F
Flammability	Upper explosion limit: approximately 8 %(V)
	Lower explosion limit: approximately 1 %(V)



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Boiling point/boiling range	190 - 220 °C, 374 - 428 °F
Melting point/range	< -20 °C, < -4 °F
Auto-ignition temperature	estimated 559 °C, 1,038 °F
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapour pressure	0.2 mm Hg @ 25 °C, 77 °F
Vapour density	approximately 4
Density	1.03 g/cm3 @ 15.5 °C, 59.9 °F
Relative density	1.03 @15.5 °C, 59.9 °F
Water solubility	approximately 20 g/l @ 25 °C, 77 °F
Viscosity	No data available
Viscosity, dynamic	5 mPa.s @ 50 °C, 122 °F
рН	5.5
Evaporation rate	No data available
Partition coefficient: n- octanol/water	log Pow: 2
Molecular weight	116 g/mol

SECTION 10 STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Keep away from heat and sources of ignition.



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Hazardous decomposition products	Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.
Materials to avoid	Incompatible with strong acids and bases. Incompatible with oxidizing agents. Copper and brass alloys Aluminium
Hazardous polymerisation	Hazardous polymerisation does not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks	Information given is based on data obtained from similar substances or components of this material.
Acute dermal toxicity	238 mg/kg (calculated ATE)
Acute inhalation toxicity	> 1 - 5 mg/l (calculated ATE)
Acute oral toxicity	130 mg/kg (calculated ATE)
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitisation	Guinea pig: Causes sensitisation.
Germ cell mutagenicity	Genotoxicity in vitro : Test substance: cresols In vitro tests showed mutagenic effects which were not observed with in vivo test.
	Genotoxicity in vivo : In vivo tests did not show mutagenic effects
	Assessment Mutagenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity	Reproductive toxicity: Rat; Oral;



NOAEL (parents): 375 mg/kg Test substance: cresols Rat; Oral; OECD Test Guideline 422 NOAEL (parents): 100 mg/kg Test substance: Phenol, 3-ethyl

Assessment Reproductive toxicity:

Based on available data, the classification criteria are not met.

Teratogenicity:

Rabbit; Oral; NOAEL (teratogen): 100 mg/kg Test substance: cresols Rat; Oral; NOAEL (teratogen): 100 mg/kg Category approach

Assessment teratogenicity:

Based on available data, the classification criteria are not met.

- **STOT single** The substance or mixture is not classified as specific target organ toxicant, single exposure exposure.
- **STOT repeated exposure** LOAEL: 0.0009 mg/l. Inhalation; Short-term exposure; Test substance: mixed cresols; Category approach Target Organs: Hematopoietic system

Rat; . Oral; 13 weeks; LOAEL: 50 mg/kg Test substance: cresols; Category approach Target Organs: Kidney

Mouse; . Oral; 2 years; LOAEL: 100 mg/kg Test substance: mixed cresols Target Organs: Lungs

Target Organs: Central nervous system, Hematopoietic system, Kidney, Lungs The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity Not applicable

Carcinogenicity Assessment carcinogenicity: Contains no ingredient listed as a carcinogen



SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity	Toxic to aquatic life. Harmful to aquatic life with long lasting effects.	
Toxicity to fish	LC50 (Salmo trutta (brown trout)) 96 hours: > 1 - 10 mg/l Test substance: p-Cresol (literature value)	
	LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 10 - 100 mg/l Test substance: 2,6-xylenol (literature value)	
	LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 10 - 100 mg/l Test substance: Phenol, 4-Ethyl- (literature value)	
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 48 hours: > 1 - 10 mg/l Test substance: p-Cresol (literature value)	
	EC50 (Daphnia magna (Water flea)) 48 hours: > 1 - 10 mg/l Test substance: Xylenol isomer mixture	
	EC50 (Daphnia magna (Water flea)) 48 hours: > 1 - 10 mg/l Test substance: Ethylphenol isomer mixture	
Toxicity to algae	ErC50 (Desmodesmus subspicatus (green algae)) 48 hours: > 10 - 100 mg/l Test substance: p-Cresol (literature value)	
	ErC10 (Desmodesmus subspicatus (green algae)) 48 hours: > 1 - 10 mg/l Test substance: p-Cresol (literature value)	
	ErC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 10 - 100 mg/l Test substance: Xylenol isomer mixture	
	NOErC (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 1 - 10 mg/l Test substance: Xylenol isomer mixture	
	ErC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 10 - 100 mg/l Test substance: Ethylphenol isomer mixture	
	NOErC (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 1 - 10 mg/l Test substance: Ethylphenol isomer mixture	
Chronic toxicity to fish	NOEC (Pimephales promelas (fathead minnow)) 32 d: > 1 - 10 mg/l Test substance: p-Cresol	
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(literature v	value)
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Chronic toxicity to aquatic invertebrates	NOEC (Daphnia magna (Water flea)) 21 d: > 0.1 - 1 mg/l Test substance: p-Cresol (literature value)
	NOEC (Daphnia magna (Water flea)) 21 d: > 0.1 - 1 mg/l Test substance: 2,6-xylenol (literature value)
Biodegradation	Product is expected to undergo biodegradation at the levels anticipated in the environment.
	Readily biodegradable. OECD Test Guideline 301D (28 d): > 60 % Test substance: m-Cresol (literature value)
	Readily biodegradable. OECD Test Guideline 301C (40 d): > 60 % Test substance: p-Cresol (literature value)
	Inherently biodegradable. OECD Test Guideline 302B Test substance: 3,5-xylenol
	Readily biodegradable. OECD Test Guideline 301B (28 d): > 60 % Test substance: Ethylphenol isomer mixture
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Code Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.



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Disposal methods	Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.
Empty containers.	Empty containers retain product residue (liquid and/or vapor) 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 SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14 TRANSPORT INFORMATION

- DOT UN 2022, Cresylic Acid, 6.1 (8), II RQ = 100 lbs.
- IATA UN 2022, Cresylic Acid, 6.1 (8), II RQ = 100 lbs.
- IMDG UN 2022, Cresylic Acid, 6.1 (8), II RQ = 100 lbs.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No data available

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Listing

<u>Components</u>		CAS-No.
Phenol, 3-methyl		108-39-4
Phenol, 3,5-dimethyl		108-68-9
Phenol, 4-methyl		106-44-5
Phenol, 3,4-dimethyl		95-65-8
Phenol, 2,6-dimethyl		576-26-1
Phenol, 2,3-dimethyl		526-75-0
Phenol, 2-ethyl		90-00-6
Phenol, 3-ethyl		620-17-7
Phenol, 4-ethyl		123-07-9
Phenol, trimethyl		26998-80-1
SARA 302 Status		
<u>Components</u>	<u>CAS-No.</u>	Weight percent





No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Classification

Flammable liquids, Acute toxicity, Skin corrosion, Serious eye damage, Skin sensitisation, Specific target organ toxicity - repeated exposure

SARA 313 Chemical

<u>Components</u>	CAS-No.	Weight percent
Phenol, 3-methyl	108-39-4	20 - 40 %
Phenol, 4-methyl	106-44-5	10 - 30 %
Naphthalene	91-20-3	< 50 PPM

US. EPA CERCLA Hazardous Substances (40 CFR 302)

<u>Components</u>	Reportable Quantity	Weight percent
Phenol, 3-methyl	100 LB	20 - 40 %
Phenol, 4-methyl	100 LB	10 - 30 %
Naphthalene	100 LB	< 50 PPM

INTERNATIONAL REGULATIONS

WHMIS Classification

Flammable liquids	Category 4
Acute toxicity (Oral)	Category 3
Acute toxicity (Inhalation)	Category 4
Acute toxicity (Dermal)	Category 3
Skin corrosion	Category 1B
Serious eye damage	Category 1
Skin sensitisation	Category 1
Specific target organ toxicity -	Category 2
repeated exposure	
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 3

European Union

Classification according to Regulation (EU) 1272/2008.

Acute toxicity (Oral), Category 3 Acute toxicity (Inhalation), Category 4 Acute toxicity (Dermal), Category 3 Skin corrosion, Category 1 Serious eye damage, Category 1 Skin sensitisation, Category 1 Specific target organ toxicity - repeated exposure, Category 2 Chronic aquatic toxicity, Category 3

Australia. Inventory of Chemical Substances (AICS)

Listed

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Japan. Inventory of Existing and New Chemical Substances (ENCS)	Listed
Japan. ISHL - Inventory of Chemical Substances	Listed
Canada. Domestic Substances List (DSL) Inventory	Not listed
Canada. Non-Domestic Substance Listing (NDSL) This product contains one or several components listed in the Canadian NDSL.	Listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Not listed
Korea. Existing Chemicals Inventory (KECI)	Not listed
China. Inventory of Existing Chemical Substances (IECSC)	Listed
Mexico. National Inventory of Chemical Substances (INSQ)	Not listed
New Zealand. Inventory of Chemical Substances (NZIoC)	Not listed
Switzerland. Inventory of Notified New Substances (CHINV)	Listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65 <u>Components</u> Naphthalene

91-20-3

CAS-No.

Sasol does not specifically analyze for CA Prop 65-listed chemicals. However, through process knowledge, the components listed above may be present at detectable quantities. Sasol's manufacturing process is designed to minimize impurities which would include such substances.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

			<u>Physical Hazard/</u>
	<u>Health</u>	Flammability	Instability
HMIS®	3	2	0
NFPA	3	2	0
	3 3	2 2	0

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