The Science Company®

MSDS

Material Safety Data Sheet

1. PRODUCT and COMPANY IDENTIFICATION

Product: Phenolphthalein, 0.1 - 5%
Product Code(s): NC-0700, NC-9102, P1012, P1013
Synonyms: Mixture
Manufacturer: The Science Company
95 Lincoln St, Denver, CO 80203
Ph: (303)777-3777 Fax: (303)777-3331

IN CASE OF EMERGENCY
24 HOUR CONTACT TELEPHONE
CHEM-TEL: (800)255-3924
All non-emergency questions may be directed to customer service (303)777-3777

2. COMPOSITION and INFORMATION on INGREDIENTS

Ingredients	CAS#	Chemical Formula	Formula Weight	Hazardous	% by Weight
Ethyl alcohol	64-17-5	C_2H_5OH	46.07	Yes	>85
Isopropanol	67-63-0	C_3H_8O	60.10	Yes	<5
Methanol	67-56-1	CH_3OH	32.04	Yes	<5
Phenolphthalein	77-09-8	$C_{20}H_{14}O_4$	318.31	No	0.1-5

3. HAZARDS IDENTIFICATION

Emergency Overview:

POISON! DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. VAPOR HARMFUL. FLAMMABLE! AFFECTS CENTRAL NERVOUS SYSTEM. MAY CAUSE BLINDNESS. CAN NOT BE MADE NON-POISONOUS. CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY AFFECT LIVER, BLOOD, AND REPRODUCTIVE SYSTEM.

SAFETY RATINGS: Health: 3, Severe; Reactivity: 1, Slight; Flammability: 3, Severe; Contact: 2, Moderate
Protective Equipment: Chemical Safety Glasses/Goggles, Lab Coat/Apron, Gloves, Local/General Ventilation.
Storage Code: Red: Flammable.

Potential Health Effects:

INHALATION:
Exposure may cause irritation to the mucous membranes of the upper respiratory tract. Prolonged exposures to high concentrations may cause drowsiness, loss of appetite and inability to concentrate. A slight irritant to the mucous membranes.
INGESTION:
Toxic! Can intoxicate and cause blindness. Usual fatal dose: 100 - 125 milliliters of Methanol. Toxic effects exerted upon nervous system, particularly the optic nerve. Once absorbed into the body, it is very slowly eliminated. Symptoms of overexposure may include headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma, and death.
SKIN CONTACT:
Methyl Alcohol is a defatting agent and may cause skin to become dry and cracked. Skin absorption can occur, symptoms may parallel ingestion exposure.
EYE CONTACT:
Can cause Irritation. Splashes may cause temporary pain and blurred vision.
POTENTIAL CHRONIC HEALTH EFFECTS:
Marked impairment of vision and enlargement of the liver have been reported. Repeated or prolonged exposure may cause skin irritation.
MEDICAL CONDITIONS GENERALLY AGGRAVATED by EXPOSURE:
Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

4. FIRST AID MEASURES

INHALATION:
Remove to fresh air. If symptoms occur, get medical attention.
INGESTION:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SKIN CONTACT:
Wash with mild soap and water. If irritation develops, get medical attention.
EYE CONTACT:
Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If irritation develops, get medical attention.

5. FIRE FIGHTING MEASURES

NFPA RATINGS: Health: 2 Flammability: 3 Reactivity: 0
FIRE:
Ethyl alcohol 200 proof: Flash Point: 13°C (55°F)
Ethyl alcohol 200 proof: Autoignition : 422°C (792°F).
Ethyl alcohol 200 proof: Flammable Limits in Air % by Volume: LEL: 3.3% UEL: 19%
Flammable liquid and vapor! Dangerous fire hazard when exposed to heat or flame!
EXPLOSION:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sealed containers may rupture when heated. Sensitive to static discharge.
FIRE EXTINGUISHING MEDIA:
Water spray, dry chemical, alcohol foam or carbon dioxide. Water may be ineffective.
SPECIAL INFORMATION:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Use non sparking tools and equipment. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth), and place in a suitable container for reclamation or disposal. Do not use combustible materials, such as sawdust. Do not flush to sewer. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800)424-8802.

7. HANDLING and STORAGE

Store in a cool, dry, ventilated area away from flame, sources of ignition, heat and incompatible materials. Keep containers tightly closed and upright. Protect from physical damage. Keep out of direct sunlight and separate from incompatible materials. Use non sparking tools and equipment including explosion proof ventilation. When opening metal containers use non-sparking tools because flammable vapors may be present. Containers should be bonded and grounded for transfers to avoid static sparks. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids); observe all warnings and precautions listed for the product. Storage and use areas should be non-smoking. Wash thoroughly after handling.

8. EXPOSURE CONTROL and PERSON PROTECTION

EXPOSURE LIMITS:
OSHA; Permissible Exposure Limit (PEL): 1000 ppm (TWA) (Methanol)
ACGIH; Threshold Limit Value (TLV): 1000 ppm (TWA) (Methanol)
VENTILATION SYSTEM:
A system of local and/or general ventilation is recommended to keep employee exposure below airborne limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion into the general work area.
PERSONAL RESPIRATORS (NIOSH) APPROVED:
If the exposure limit is exceeded and engineering controls are not feasible, wear an appropriate respirator with cartridge for the hazardous material being handled. All respirators should be approved and certified. For emergencies or instances where the exposure levels are not known, use a full face piece positive pressure, air supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen deficient atmospheres. This substance has poor warning properties.
SKIN PROTECTION:
Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.
EYE PROTECTION:
Use chemical safety glasses/goggles and/or a full face shield where splashing is possible. Maintain approved eye wash station in work area.

9. PHYSICAL and CHEMICAL PROPERTIES

For Denatured Ethanol:

APPEARANCE:	Clear liquid.
ODOR:	Alcoholic.
SOLUBILITY:	Miscible with water.
SPECIFIC GRAVITY:	0.79 @ 20°C/4°C
pH:	No information found.
% VOLATILES by VOLUME:	100
BOILING POINT:	78°C (172°F)
MELTING POINT:	-114°C (-173°F)
VAPOR DENSITY (Air =1):	1.6
VAPOR PRESSURE (mm Hg):	40 @ 19°C (66°F)
EVAPORATION RATE (BuAc=1):	ca. 1.4 (CCl4=1)

10. STABILITY and REACTIVITY

STABILITY:
Stable under ordinary conditions of use and storage.
HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon dioxide and carbon monoxide may form when heated to decomposition.
HAZARDOUS POLYMERIZATION:
Will not occur.
INCOMPATIBILITIES:
Strong oxidants, silver salts, acid chlorides, alkali metals, metal hydrides, hydrazine, and many other substances.
CONDITIONS to AVOID:
Heat, flames, ignition sources and incompatibles.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:

Ethanol:	Oral rat LD50: 7060 mg/kg. Inhalation rat LC50: 20,000 ppm/4H.

Irritation Data, standard Draize: Eye rabbit, 500mg/24hr. (moderate); Investigated as a tumorigen, mutagen and reproductive effecter.

Cancer Lists	--------NTP Carcinogen--------		
Ingredient	Known	Anticipated	IARC Category
Ethanol (64-17-5)	No	No	None

12. ECOLOGICAL INFORMATION

ENVIROMENTAL FATE:
When released into the soil, this material may leach into ground water; it is expected to readily biodegrade and quickly evaporates. When released into water, this material is expected to have a half-life between 1 - 10 days. When released into the air, this material is expected to be readily degraded by reaction with photo chemically produced hydroxyl radicals; it is expected to have a half-life between 10 and 30 days. This material is expected to be readily removed from the atmosphere by wet deposition.
ENVIROMENTAL TOXICITY:
This material is expected to be slightly toxic to aquatic life.

13. DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be handled as potentially hazardous waste and disposed of or incinerated at an approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

TRANSPORT (Land, DOT):
UN1987, Alcohols, n.o.s. (Denatured ethanol), 3, II

15. REGULATORY INFORMATION

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Ethanol (64-17-5)	Yes	Yes	Yes	Yes
Methyl Alcohol (67-56-1)	Yes	Yes	Yes	Yes
Isopropyl Alcohol (67-63-0)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

		---------Canada---------		
Ingredient	Korea	DSL	NDSL	Phil
Ethanol (64-17-5)	Yes	Yes	No	Yes
Methyl Alcohol (67-56-1)	Yes	Yes	No	Yes
Isopropyl Alcohol (67-63-0)	Yes	Yes	No	Yes

Federal, State & International Regulations – Part 1

	--SARA 302--		----------SARA 313---------	
Ingredient	RQ	TPQ	List	Chemical Catg
Ethanol (64-17-5)	No	No	No	No
Methyl Alcohol (67-56-1)	No	No	Yes	No
Isopropyl Alcohol (67-63-0)	No	No	Yes	No

Federal, State & International Regulations – Part 2

Ingredient	CERCLA	RCRA 261.33	TSCA 8 (d)
Ethanol (64-17-5)	No	No	No
Methyl Alcohol (67-56-1)	5000	U154	No
Isopropyl Alcohol (67-63-0)	No	No	No

Chemical Weapons Convention: No TSCA 12 (b): No CDTA: Yes SARA 311/312 Acute: Yes
Chronic: Yes Fire: Yes Pressure: No Reactivity: No Physical State: Mixture/Liquid

Australian Hazchem Code: 2[S]E
Poison Schedule: S5

16. OTHER INFORMATION

PRODUCT USE:
For manufacturing, industrial and laboratory use only; not for household use.

DISCLAIMER:
The Science Company provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.
THE SCIENCE COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS, ACCORDINGLY, THE SCIENCE COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.