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## 1. IDENTIFICATION

A. Product Name : **Anysol-100(C9 Aromatics)**

B. Recommended use of the chemical and restrictions on use

- o Recommended use : Solvents
- o Restrictions on use : Used for only recommended uses.

C. Manufacturer/Supplier

1) Manufacturer

HanwhaTotal Petrochemicals Co.,Ltd			
103, Dokgot2-Ro, Daesan-Eup, Seosan-Si, Chungnam, 31900, Korea			
T e l e p h o n e	82-41-660-6349	F a x	82-41-660-6417

2) Supplier

HanwhaTotal Petrochemicals Co.,Ltd			
17~20F Hanwha Finance Plaza, 92, Sejong-daero, Jung-gu, Seoul 04525, Korea			
T e l e p h o n e	82-2-3415-9363	F a x	82-2-3415-9390

3) Competitive person

Departments	Safety Environment Division PSM Team		
T e l e p h o n e	82-41-660-6382, 6366	F a x	82-41-660-6348

## 2. HAZARD IDENTIFICATION

A. GHS Classification

1) Physical Hazards Hazards

- Flammable liquids : Category 3

2) Health Hazards

- Skin corrosion/irritation : Category 2
- Aspiration hazard : Category 1


3) Environmental Hazards :

- Acute aquatic toxicity : Category 2

B. GHS label elements

1) Hazard symbols :



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2) Signal Words : Danger

3) Hazard statements :

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H401 Toxic to aquatic organisms.

4) Precautionary statements :

■ Precaution

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

■ Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P321 Specific treatment

P331 Do NOT induce vomiting.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370+P378 In case of fire: Use Suitable extinguishing media for extinction.

■ Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

■ Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

C. Other hazards which do not result in classification: (NFPA Classification)

– NFPA grade (0 ~ 4 level) : Health : 1, Flammability : 2, Reactivity : 0



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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### A. Chemical nature

Chemical Name	Trade names and Synonyms	CAS No.	Content (%)
Solvent naphtha (petroleum), light aromatics	C9 aromatics	64742-95-6	100

#### B. Other constituents required for disclosure

Chemical Name	Trade names and Synonyms	CAS No.	Content (%)
o,m,p-Xylene (Mixed Xylene)	Xylol ; Methyltoluene	1330-20-7	1~5

### 4. FIRST AID MEASURES

#### A. Eye contact

- Call emergency medical service.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

#### B. Skin Contact


- If on skin (or hair): Remove/Take off immediately all contaminated clothing.
- Rinse skin with water/shower.
- If skin irritation occurs: Get medical advice/ attention.
- Get immediate medical advice/attention.
- Remove and isolate contaminated clothing and shoes.
- In case of burns, immediately cool affected skin for as long as possible with cold water.
- Do not remove clothing if adhering to skin.
- Wash skin with soap and water.

#### C. Inhalation contact

- Specific medical treatment is urgent.
- Do not induce vomiting.
- Move victim to fresh air.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

#### D. Ingestion contact

- If swallowed: Immediately call a poison center or doctor/physician.

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– Do not induce vomiting.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Exposures require specialized first aid with contact and medical follow-up.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

F. Notes to physician

- Notify medical personnel of the substance and have them take appropriate protective measures.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media


- 1) Suitable extinguishing media : Use alcohol foam, carbon dioxide, water spray, dry sand or earth
- 2) Unsuitable extinguishing media : Not available
- 3) In case of large fire : Not available

B. Specific hazards arising from the chemical

- 1) Hazardous combustion product : Carbon oxide
- 2) Fire & Explosion hazard :
  - Flammable liquid and vapour.
  - May violently polymerize and result in fire and explosion.
  - Vapors may travel to a source of ignition and ignite.
  - Material may produce irritating and highly toxic gases by heat and combustion.
  - May form explosive mixtures at temperatures at or above the flashpoint.
  - Containers may explode when heated.
  - HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
  - Spilled material may create fire or explosion hazard.
  - May cause vapor explosion hazard indoors, outdoors or in sewers.
  - Some of these materials may burn, but none ignite readily.
  - Vapors may form explosive mixtures with air.

C. Special protective actions for firefighters

- Rescuers should put on appropriate protective gear.
- Evacuate area and fight fire from a safe distance.
- Many liquids are lighter than water.
- Most vapors are heavier than air, they will spread along ground and collect in low or confined areas.

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- Move containers from fire area if you can do it without risk.
- Fire involving Tanks; Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out
- Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks; Always stay away from tanks engulfed in fire
- Fire involving Tanks; For large fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures


- Clean up spills immediately, observing precautions in Protective Equipment section.
- Isolate hazard area.
- Keep unnecessary and unprotected personnel from entering.
- Eliminate all ignition sources.
- All equipment used when handling the product must be grounded.
- Stop leak if you can do it without risk.
- Please note that there are materials and conditions to avoid.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Dike for later disposal.
- Absorb spills with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Wipe contaminated areas with water and detergent.
- Notification to central government, local government when emissions at least of the standard amount.
- Dispose of waste in accordance with local regulation.

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## 7. HANDLING AND STORAGE

### A. Precautions for safe handling

- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Loosen closure cautiously before opening.
- Use only with adequate ventilation.
- Avoid prolonged or repeated contact with skin.
- Please note that there are materials and conditions to avoid.
- You need measurement of air concentration and ventilation in low, closed and confined areas due to lack of oxygen.

### B. Conditions for safe storage, including any incompatibilities

- Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- Keep container tightly closed and in a well-ventilated place.
- Avoid direct sunlight.
- The container may be pressurized if exposed to heat.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### A. Exposure limits

- 1) ACGIH TLV : Not regulated
- 2) OSHA PEL : Not regulated


### B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

### C. Individual protection measures, such as personal protective equipment

#### 1) Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.

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- Consider warning properties before use
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

2) Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

3) Hand protection

- Wear appropriate chemical resistant glove.

4) Skin protection

- Wear appropriate chemical resistant protective clothing.

5) Others: Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance :

- State : Liquid
- Color : Colorless, clear

B. Odor : Specific hydrocarbon smell

C. Odor Threshold : Not available

D. pH : Not available

E. Melting point/Freezing point : Not available

F. Boiling point/range : 160~180℃

G. Flash point : 48℃

H. Evaporation rate : Not available

I. Flammability (solid, liquid): Not applicable

J. Flammability Limit (lower/upper) : 1.0/7.0 vol%

K. Vapor pressure : 0.07mmHg(@37.8℃)

L. Solubility in water : below 0.1wt% of water


M. Vapor density : >1(air=1)

N. Specific gravity : 0.8767@15℃

O. Partition Coefficient(n-Octanol/water) : Not available

P. Auto-ignition temperature : 450℃

Q. Thermal decomposition : Not available

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R. Viscosity : 0.88 cst(20℃)  
S. Molecular weight : Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- Stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with heat, sparks, flame or other ignition sources.

D. Incompatible materials : Combustible material, reducing agents

E. Hazardous decomposition products

- Thermal decomposition product : Carbon oxides
- Irritating, corrosive and toxic gases

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure


- ☐ Respiratory tracts : May be fatal if swallowed and enters airways.
- ☐ Oral : Not available
- ☐ Eye·Skin : Causes skin irritation.

B. Delayed and immediate effects and also chronic effects from short and long term exposure

1) Acute toxicity :

- Oral : Not classified
  - [Solvent naphtha (petroleum), light aromatics] : Rat, LD50 > 5,000mg/kg bw (OECD TG 401, GLP)
- Dermal : Not classified
  - [Solvent naphtha (petroleum), light aromatics] : Rabbit, LD50 > 2,000 mg/kg bw, No death (OECD TG 402, GLP)
- Inhalation : Not classified
  - [Solvent naphtha (petroleum), light aromatics] : Rat, LC50(4h)>5,610mg/m3, No death (OECD TG 403, GLP), Rat, LC50(4h)=3,400ppm



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2) Skin corrosion/irritation : Category 2

- [Solvent naphtha (petroleum), light aromatics] : Test results using rabbit showed irritation. Erythema and edema fully recovered within 14 days (Erythema score:2.56, edema score: 1.67) (OECD TG 404, GLP)

3) Serious eye damage/irritation : Not classified

- [Solvent naphtha (petroleum), light aromatics] : Test results using rabbit showed that erythema and edema fully recovered within 72 hours. (Total irritation score: 0.2) (OECD TG 405, GLP)

4) Respiratory sensitization : Not available

5) Skin sensitization : Not classified

- [Solvent naphtha (petroleum), light aromatics] : Not sensitizing (Guinea Pig)(score: 0) (OECD TG 406, GLP)

6) Carcinogenicity : Not classified

- OSHA : Not available
- NTP : Not available
- IARC : Not available
- ACGIH : Not available
- EU CLP :
  - [Solvent naphtha (petroleum), light aromatics] : Carc. 1B ((Benzene content >0.1%, toluene >3%, n-hexane >3%))

7) Germ cell mutagenicity : Not classified

- [Solvent naphtha (petroleum), light aromatics] : In vitro – Reverse mutation test using microorganisms, Gene mutation test using mammalian cultured cells, regardless of metabolic activation system : Negative
- In vivo – Micronucleus test using mammalian red blood cells, Chromosome aberration test using mammalian bone marrow cells : Negative (OECD TG 475)

8) Reproductive toxicity : Not classified

- [Solvent naphtha (petroleum), light aromatics] : Second-generation reproductive toxicity studies in rats show no significant effects up to the highest concentration. (NOAEC P0, F1>= 20,000 mg/m³ air (nominal)) (OECD TG 416, GLP)


9) STOT-single exposure : Not available

10) STOT-repeated exposure : Not classified

- [Solvent naphtha (petroleum), light aromatics] : Subacute inhalation toxicity test using rats – As a result of the 28-day test, no specific clinical symptoms were observed. (NOAEL=9,840mg/m³ air (analytical)) (OECD TG 412, GLP)

11) Aspiration hazard : Category 1

- [Solvent naphtha (petroleum), light aromatics] : Hydrocarbons(C9H12) having a kinematic viscosity of less than 0.88 mPas.

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12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- Acute aquatic toxicity : Category 2
- Chronic aquatic toxicity : Not classified

1) Fish :

- [Solvent naphtha (petroleum), light aromatics] : 96h LL50(*Oncorhynchus mykiss*) =10 mg/L semi-static (OECD TG 203, GLP), 14d NOELR(*Pimephales promelas*) =2.6 mg/L semi-static (OECD TG 204, GLP)

2) Crustaceans :

- [Solvent naphtha (petroleum), light aromatics] : 48h EL50(*Daphnia magna*)=4.5mg/L static (OECD TG 202, GLP), 21d NOELR(*Daphnia magna*)=2.6 mg/L semi-static (OECD TG 211, GLP)

3) Algae :

- [Solvent naphtha (petroleum), light aromatics] : 72h EL50(*Pseudokirchnerella subcapitata*) =3.1 mg/L static (OECD TG 201, GLP), 72h NOELR(*Pseudokirchnerella subcapitata*) =0.5 mg/L static (OECD TG 201, GLP), 72h NOEC=1.3mg/L

B. Persistence and Degradability

1) Persistence :

- [Solvent naphtha (petroleum), light aromatics] : Expected to be low persistence because Log Kow is less than 4. (LogKow = -1.75, 25°C, QSAR)

2) Degradability :

- [Solvent naphtha (petroleum), light aromatics] : It will not be hydrolyzed in the environment.

C. Bioaccumulation potential

1) Biodegradation :


- [Solvent naphtha (petroleum), light aromatics]: Biodegradation occurs well and there is little potential for bioaccumulation (For 25 days, Biodegradation = 94%)

2) Bioaccumulative potential :

- [Solvent naphtha (petroleum), light aromatics] : Expected to be low bioaccumulative potential because BCF is less than 500. (BCF = 69.88(Estimate))

D. Mobility in soil : Not available

E. Other adverse effects : Not available

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### 13. DISPOSAL CONSIDERATIONS

#### A. Disposal methods

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

#### B. Special precautions for disposal

- The user of this product must dispose by oneself or entrust to waste disposer or person who other's waste recycle and dispose or person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

### 14. TRANSPORT INFORMATION

#### A. UN No. (IMDG) : UN1268

#### B. Proper shipping name : PETROLEUM DISTILLATES, N.O.S. OR PETROLEUM PRODUCTS, N.O.S.

#### C. Hazard Class : 3

#### D. IMDG Packing group : III

#### E. Marine pollutant : Not applicable

#### F. Special precautions for user related to transport or transportation measures

- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-E (Flammable liquids, floating on water)

### 15. REGULATORY INFORMATION

#### A. Additional national and/or international regulatory information


##### 1) POPs Management Law : Not regulated

##### 2) Information of EU Classification

- Classification : H350, H340, H304

##### 3) U.S. Federal regulations

- OSHA PROCESS SAFETY (29CFR1910.119) : Not regulated
- CERCLA Section 103 (40CFR302.4) : Not regulated
- EPCRA Section 302 (40CFR355.30) : Not regulated
- EPCRA Section 304 (40CFR355.40) : Not regulated
- EPCRA Section 313 (40CFR372.65) : Not regulated

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- 4) Rotterdam Convention listed ingredients : Not regulated  
5) Stockholm Convention listed ingredients : Not regulated  
6) Montreal Protocol listed ingredients : Not regulated

## 16. OTHER INFORMATION

### A. Reference

- ☐ TSCA; [http://iaspub.epa.gov/sor\\_internet/registry/substreg/searchandretrieve/searchbylist/search.do](http://iaspub.epa.gov/sor_internet/registry/substreg/searchandretrieve/searchbylist/search.do)
- ☐ EU Regulation 1272/2008
- ☐ TOMES; LOLI ; <http://csi.micromedex.com/fraMain.asp?Mnu=0>
- ☐ UN Recommendations on the transport of dangerous goods 17th
- ☐ IARC Monographs on the Evaluation of Carcinogenic Risks to Humans;  
<http://monographs.iarc.fr>
- ☐ ECHA CHEM; <http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>
- ☐ OECD SIDS; <http://webnet.oecd.org/Hpv/UI/Search.aspx>
- ☐ HSDB; <http://toxnet.nlm.nih.gov/cgi-bin/sis/search2>
- ☐ EPA; <http://www.epa.gov/iris>
- ☐ InChEM; <http://www.inchem.org/>
- ☐ EPISUITE Program ver.4.1

### B. Key acronyms

- ☐ ACGIH(American Conference of Governmental Industrial Hygienists)
- ☐ ECHA(European Chemicals Agency)
- ☐ OECD(Organization for Economic Co-operation and Development)
- ☐ CERCLA(Comprehensive Environmental Response, Compensation, and Liability Act)
- ☐ IARC(International Agency for Research on Cancer)
- ☐ NIOSH(National Institute for Occupational Safety and Health)
- ☐ OSHA(Occupational Safety and Health Administration)
- ☐ NTP(National Toxicology Program)
- ☐ TSCA(Toxic Substances Control Act)
- ☐ NFPA(National Fire Protection Association)
- ☐ LC50(Lethal Concentration 50% kill)
- ☐ LD50(Lethal Dose 50% kill)
- ☐ EC50(50% Effect Concentration)
- ☐ STEL(Short Term Exposure Limit)
- ☐ TWA(Time weight Average)
- ☐ TLV(Threshold Limit Value)



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C. Issue date : 2007. 07. 17

D. Revision number and date :

- ☐ Revision number : Rev. 5
- ☐ Revision data : 2018. 03. 15

E. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).
- This safety data sheet is based on current knowledge and information that we know.
- Please note that this information is not a guarantee of the product itself.