



SAFETY DATA SHEET

Cleaner Blend 300

Date of issue: 2017-07-11

Revision date: Not applicable

Version: R0001.0001

1. IDENTIFICATION

A. Product name

- Cleaner Blend 300

B. Recommended use and restriction on use

- General use : Cleaner
 - Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

o Manufacturer information

- Company name : ITW Polymers Adhesives, North America
 - Address : 30 Endicott Street, Danvers, MA 01923
 - Telephone number : (978)777-1100
 - Emergency telephone number : (800)424-9300

o Supplier/Distributor information

- Company name : ITW PP&F KOREA
 - Address : 13th Fl., Unit B, PAX Tower, 609, Eonju-ro, Gangnam-Gu, Seoul, Korea 06108
 - Telephone number : 02-2088-2560
 - Emergency telephone number :
 - Fax number : 02-513-3567

2. HAZARD IDENTIFICATION

A. GHS Classification

- Flammable liquids : Category3
 - Skin sensitization : Category1
 - Reproductive toxicity : Category1A
 - Reproductive toxicity : Category1B
 - Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)

B. GHS label elements

o Hazard symbols



o Signal words

- Danger

o Hazard statements

- H226 Flammable liquid and vapour
 - H317 May cause an allergic skin reaction
 - H335 May cause respiratory irritation.
 - H360 May damage fertility or the unborn child

○ **Precautionary statements**

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- 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. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

2) Response

- 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.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

3) Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

4) 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 : 2, Flammability : 2, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Propylene glycol methyl ether	1-Methoxy-2-hydroxypropane ; 2-Methoxy-1-methylethanol ; Alpha-propylene glycol monomethyl ether ; 1-Methoxy-2-propanol ; Propylene glycol methyl ether ; 1-Methoxypropane-2-ol ; Methoxyisopropanol	107-98-2	50~60
Propylene glycol methyl ether acetate	Propylene glycol monomethyl ether acetate ; 2-(1-Methoxy)propyl acetate ; 1-Methoxypropan-2-yl acetate ;	108-65-6	20~30
Water	Dihydrogen oxide ; Oxidane	7732-18-5	10~20

(R)-1-Methyl-4-(1-methylethenyl)cyclohexene	(D)-Limonene ; (+)-Limonene ; (R)-4-isopropenyl-1-methylcyclohexene ; (R)-p-Mentha-1,8-diene ; (+)-P-Mentha-1,8-diene ; Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)- ; 4-Isopropenyl-1-methylcyclohexene ; (R)-4-Isopropenyl-1-methyl-1-cyclohexene ;	5989-27-5	1~10
2-Methoxypropanol	2-Methoxypropanol ; 2-Methoxy-1-propanol ; 2-Methoxy-1-hydroxypropane ; 2-Methoxypropan-1-ol ; 1-Propanol, 2-methoxy- ; 2-METHOXY-1-PROPANOL ; 2-Methoxy-1-hydroxypropane	1589-47-5	0.1~1.0

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

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

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Must work against the wind, let the upwind people to evacuate.
- Move container to safe area from the leak area.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.
- Keep unauthorized people away, isolate hazard area and deny entry.

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

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Do not use plastic containers.
- Spilled material should be treated as a potential risk of waste collected.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid direct physical contact.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Avoid contact with incompatible materials.
- Get the manual before use.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Save applicable laws and regulations.
- Avoid direct sunlight.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Keep sealed when not in use.
- Collected them in sealed containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- **ACGIH TLV**
 - [Propylene glycol methyl ether] : TWA, 50 ppm (184 mg/m³), STEL, 100 ppm (369 mg/m³)
- **OSHA PEL**
 - Not available

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

- **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.
 - 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.
- **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.
- **Hand protection**
 - Wear appropriate chemical resistant glove.
- **Skin protection**
 - Wear appropriate chemical resistant protective clothing.
- **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	liquid
- Color	Pae Amber.
B. Odor	Ethereal.
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	100 °C
G. Flash point	40 °C
H. Evaporation rate	<1
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	12 m m Hg @68°F
L. Solubility	APPRECIABLE.
M. Vapour density	>1
N. Specific gravity(Relative density)	0.95
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Cylinders exposed to fire may vent and release flammable gas.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- **(Respiratory tracts)**
 - May cause respiratory irritation.
- **(Oral)**
 - Not available
- **(Eye·Skin)**
 - May cause an allergic skin reaction

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

- **Acute toxicity**
 - * **Oral - >5000mg/kg**
 - [Propylene glycol methyl ether] : LD50 > 5000 mg/kg Rat (OECD SIDS)
 - [Propylene glycol methyl ether acetate] : LD50 = 8532 mg/kg Rat (IUCLID)
 - [Water] : LD50 > 90000 mg/kg Rat (KOSHA)
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : LD50 5000 mg/kg Rat (NLM)
 - [2-Methoxypropanol] : LD50 5710 mg/kg Rat (HSDB)
 - * **Dermal - ATE MIX : >5000mg/kg**
 - [Propylene glycol methyl ether] : LD50 ~13000 mg/kg Rabbit (OECD SIDS)
 - [Propylene glycol methyl ether acetate] : LD50 > 5000 mg/kg Rabbit (IUCLID)
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : LD50 > 5000 mg/kg Rabbit (NLM)
 - [2-Methoxypropanol] : LD50 5660 mg/kg Rabbit (HSDB)
 - * **Inhalation - ATE MIX : 20.0mg/L < ATEmix <= 50.0mg/L**
 - [Propylene glycol methyl ether] : LC50 24.1 mg/L/4hr Rat (18.2 mg/L/7hr) (OECD SIDS)
 - [Propylene glycol methyl ether acetate] : Steam LC50 = 28.8 mg/L/4 hr Rat (KOSHA)
- **Skin corrosion/irritation**
 - Not available
- **Serious eye damage/irritation**
 - Not available
- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - May cause an allergic skin reaction
- **Carcinogenicity**
 - * **IARC**
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : Group 3
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - Not available
 - * **NTP**

- Not available
- * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Not available
- **Reproductive toxicity**
 - May damage fertility or the unborn child
- **STOT-single exposure**
 - May cause respiratory irritation.
- **STOT-repeated exposure**
 - Not available
- **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [Propylene glycol methyl ether acetate] : LC50 100 mg/l 96 hr Oryzias latipes (SIDS)
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : LC50 0.7 mg/l 96 hr Pimephales promelas (ECOTOX)
- **Crustaceans**
 - [Propylene glycol methyl ether] : EC50 > 500 mg/l 48 hr (NITE)
 - [Propylene glycol methyl ether acetate] : EC50 = 373 mg/l 48 hr Daphnia magna (SIDS)
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : EC50 69.6 mg/l 48 hr Daphnia pulex (ECOTOX)
- **Algae**
 - [Propylene glycol methyl ether acetate] : EC50 1000 mg/l 72 hr Selenastrum capricornutum (SIDS)

B. Persistence and degradability

- **Persistence**
 - [Propylene glycol methyl ether] : log Kow -0.49
 - [Propylene glycol methyl ether acetate] : log Kow = 0.43 (IUCLID)
 - [Water] : log Kow = -1.38
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : log Kow 4.2 (NITE)
- **Degradability**
 - Not available

C. Bioaccumulative potential

- **Bioaccumulative potential**
 - [Propylene glycol methyl ether] : BCF = 2
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : BCF 660 (NLM/HSDB)
- **Biodegradation**
 - [Propylene glycol methyl ether] : Biodegradability = 90 (%) 29 day (Aerobic, industrial sewage, Easily decomposed)
 - [Propylene glycol methyl ether acetate] : Biodegradability > 60 (%) 28 day (OECD Screening Information Data Set)
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : 100 (%) 28 day (IUCLID)

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat sepatatly, 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 disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, 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 CODE/IATA DGR)**

- 1993

B. Proper shipping name

- FLAMMABLE LIQUIDS, N.O.S.

C. Hazard Class

- 3

D. IMDG CODE/IATA DGR Packing group

- III

E. Marine pollutant

- Not applicable

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

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-E (Flammable liquids, floating on water)

15. REGULATORY INFORMATION**A. National and/or international regulatory information**

- o **POPs Management Law**
 - Not applicable
- o **Information of EU Classification**
 - * **Classification**
 - [Propylene glycol methyl ether] : R10 R67
 - [Propylene glycol methyl ether acetate] : R10
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : R10 Xi; R38 R43 N; R50-53
 - [2-Methoxypropanol] : R10 Repr. Cat. 2; R61 Xi; R37/38-41
 - * **Risk Phrases**
 - [Propylene glycol methyl ether] : R10, R67
 - [Propylene glycol methyl ether acetate] : R10
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : R10, R38, R43, R50/53
 - [2-Methoxypropanol] : R61, R10, R37/38, R41
 - * **Safety Phrase**
 - [Propylene glycol methyl ether] : S2
 - [Propylene glycol methyl ether acetate] : S2
 - [(R)-1-Methyl-4-(1-methylethenyl)cyclohexene] : S2, S24, S37, S60, S61
 - [2-Methoxypropanol] : S53, S45
- o **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29CFR1910.119)**
 - Not applicable
 - * **CERCLA Section 103 (40CFR302.4)**
 - Not applicable
 - * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable
 - * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable

* **EPCRA Section 313 (40CFR372.65)**

- Not applicable

o **Rotterdam Convention listed ingredients**

- Not applicable

o **Stockholm Convention listed ingredients**

- Not applicable

o **Montreal Protocol listed ingredients**

- Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2017-07-11

C. Revision number and Last date revised

- Not applicable

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).