



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation CR291Series
Issue date 19-Aug-2015
Version # 01
Recommended use Inkjet printing
CAS # Mixture
Company identification HP PPS Malaysia Sdn. Bhd.
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2. HAZARDS IDENTIFICATION

Physical hazards Not classified.
Health hazards Acute toxicity (oral) Category 1
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitizer Category 1
Toxic to reproduction Category 1B
Specific target organ toxicity - single exposure Category 2
Specific target organ toxicity - repeated exposure Category 2
Environmental hazards Not classified.
GHS label elements
Signal word None.
Hazard symbols None.
Hazard statement None.
Precautionary statement
Prevention None.
Response None.
Storage None.
Disposal None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Glycerin	56-81-5	20-40
Proprietary Component	Proprietary	< 30
Proprietary Component	Proprietary	< 30
Proprietary Component	Proprietary	< 30
Ethylene glycol	107-21-1	2.5 - 10

4. FIRST AID MEASURES

Inhalation	Move to fresh air. If symptoms persist, get medical attention.
Skin contact	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
Eye contact	Do not rub eyes. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Ingestion	Rinse mouth out with water. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Notes to physician	Treat symptomatically. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Flash point	230.0 °F (110.0 °C)
Suitable extinguishing media	CO ₂ , water, dry chemical, or foam
Extinguishing media which must not be used for safety reasons	None known.
Unusual fire & explosion hazards	None known.
Fire fighting equipment/instructions	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Hazardous combustion products	Fire may produce irritating, corrosive and/or toxic gases.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation. Wear appropriate personal protective equipment. Avoid inhalation of vapors and contact with skin and eyes.
Environmental precautions	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Wipe up with adsorbent material (e.g. cloth, fleece).

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Provide good ventilation. Wear personal protective equipment. Avoid inhalation of vapors and contact with skin and eyes.
Storage	Keep away from heat, sparks and flame. Keep away from excessive heat or cold. Store in closed original container in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.
Glycerin (CAS 56-81-5)	TWA	39.4 ppm 10 mg/m ³	Aerosol. Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Additional exposure data Not available.

Engineering measures to reduce exposure Provide adequate ventilation.

Personal protective equipment

Respiratory protection Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection.

Hand protection Wear appropriate chemical resistant gloves.

Eye protection Wear safety glasses; chemical goggles (if splashing is possible).

Skin and body protection	Wear suitable protective clothing and eye/face protection. Remove and wash contaminated clothing before re-use.
General	Avoid contact with the skin and the eyes. Wear suitable protective equipment.
Hygiene measures	When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Not available.
Color	Black.
Odor	Odorless
Odor threshold	Not available.
pH	6.8 - 7.7
Vapor pressure	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	Not available.
Specific gravity	Not available.
Flash point	230.0 °F (110.0 °C)
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.

10. STABILITY AND REACTIVITY

Conditions to avoid	Not available.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Carbon monoxide and carbon dioxide.
Stability	Stable under recommended storage conditions.
Materials to avoid	oxidizing agents
Hazardous polymerization	None known.

11. TOXICOLOGICAL INFORMATION

Toxicological information	Complete toxicity data are not available for this specific formulation
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Respiratory or skin sensitization	
Skin sensitization	Not available.
Respiratory sensitization	Not available.
Carcinogenicity	Proprietary component 1 is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).
Germ cell mutagenicity	Not available.
Aspiration hazard	Not available.

Toxicological data

Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	9530 mg/kg
<i>Oral</i>		
LD50	Cat	1650 mg/kg
	Dog	5500 mg/kg
	Guinea pig	8.2 g/kg

Components	Species	Test Results
	Mouse	14.6 g/kg
	Rat	5.89 g/kg
<i>Other</i>		
LD50	Mouse	5.8 g/kg
	Rat	2800 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 8050 mg/l, 96 hours
Glycerin (CAS 56-81-5)		
Aquatic		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 51000 - 57000 mg/l, 96 hours

Environmental effects Not available.

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Ethylene glycol	-1.36
Glycerin	-1.76

13. DISPOSAL CONSIDERATIONS

Disposal instructions Do not allow this material to drain into sewers/water supplies. Dispose of in compliance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s. (Sodium Hydroxide)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packaging group	III
Special precautions for user	Not available.
Transport hazard class(es)	
Label(s)	8
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

IATA

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s. (Sodium Hydroxide)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
Special precautions for user	Not available.

IMDG

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s. (Sodium Hydroxide)
Transport hazard class(es)	
Class	8
Subsidiary risk	-

Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Not available.

ADR

Basic shipping requirements:

Proper shipping name	Corrosive liquids, n.o.s. (Sodium Hydroxide)
Hazard class	8
UN number	1760
Packing group	III
Additional information:	
Packaging exceptions	154

DOT



IATA; IMDG



ADR

15. REGULATORY INFORMATION

International regulations Contains components not listed in: Japan, Canada, European Union, and Philippines.

16. OTHER INFORMATION

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This data sheet contains changes from the previous version in section(s):

1. Product and Company Identification: Alternate Trade Names
3. Composition / Information on Ingredients: Ingredients

Manufacturer information

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Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds