SAFETY DATA SHEET

ORANGE SOLVENT

APPLIED PRODUCTS AUSTRALIA PTY LTD

Catalogue number: AP128 Version No: 2.3 Issue Date: 01/10/2024 Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

Product name	ORANGE SOLVENT
Product code	AP128
Pack sizes	5L & 15L
Proper shipping name	DIPENTENE

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Carpet cleaning solvent booster

Details of the manufacturer/importer

Registered company name	APPLIED PRODUCTS AUSTRALIA PTY LTD	The Restoration Group Ltd
Address	11 Gamma Close, Beresfield 2322 NSW Australia	53 Wakefield Street, Onekawa, Napier ,4010
Telephone	(02) 4966 5516	(06) 835 - 0065
Website	www.actichem.com.au	www.restorationgroup.co.nz
Email	info@actichem.com.au	info@restorationgroup.co.nz

Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	0800 - 764 - 766
Other emergency telephone numbers	02 4966 5516

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

Poisons Schedule	5
GHS Classification	Aspiration Hazard Category 1, Flammable Liquid Category 3, Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1, STOT - SE (Narcosis) Category 3, Serious Eye Damage Category 2
	Classification drawn from HCIS and ECHA C&L Inventory

Label elements

Hazard pictograms	
SIGNAL WORD	DANGER

Hazard statement(s)

H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P261	Avoid breathing mist or vapours.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P241	Use explosion-proof and intrinsically safe electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P310+P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P302+P352+P363+P333+P313	IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs; get medical advice / attention.
P305+P351+P338+P363+P313	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice / attention.
P304+P312+P340	IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+P313	If skin irritation or rash occurs, Get medical advice/attention
P370+P378	In case of fire, use alcohol resistant foam or normal protein foam for extinction.
P391	Collect spillage.

Precautionary statement(s) Storage

P403+P405+P235+P233	Store locked up, in a well-ventilated place. Keep cool. Keep container tightly closed.
P410	Protect from sunlight.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local government regulations

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures.

Mixtures

CAS No	%[weight]	Name
5989-27-5	30-60	d-limonene
64742-48-9.	30-60	naphtha petroleum, isoparaffin, hydrotreated
9016-45-9	<10	nonylphenol ethoxylates
64-17-5	<10	ethanol

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Wash out immediately with fresh running water for at least 15 minutes. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical advice; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	Immediately seek medical advice. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Avoid giving milk or oils. Avoid giving alcohol.

Indication of any immediate medical attention and special treatment needed.

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media	Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide. Water spray or fog - Large fires only.

Special hazards arising from the substrate or mixture.

Fire incompatibilities	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot.
Fire/Explosion Hazard	Liquid and vapour are flammable. Moderate fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Moderate explosion hazard when exposed to heat or flame. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon monoxide (CO), carbon dioxide (CO_2), other pyrolysis products typical of burning organic material Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions. WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.
HAZCHEM	•3Y

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Remove all ignition sources. NO SMOKING Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wipe up spill using paper towel or equivalent and dispose of safely.
Major Spills	Immediately remove all possible sources of ignition. NO SMOKING. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labeled drums and dispose of according to local government regulations. Immediately notify emergency services (Police or Fire Brigade) if the spill is too large for you to safely and effectively handle. CARE: Absorbent materials wetted with occluded oil must be moistened with water as they may auto-oxidize, become self-heating and ignite.

PPE	Personal Protective Equipment advice is contained in Section 8 of the SDS

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Contains low boiling substance: Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately. Check for bulging containers. Vent periodically Always release caps or seals slowly to ensure slow dissipation of vapours DO NOT allow clothing wet with material to stay in contact with skin
Other information	Store in original containers in approved flammable liquid storage area. Store away from incompatible materials in a cool, dry, well-ventilated area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources. Storage areas should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorised personnel - adequate security must be provided so that unauthorised personnel do not have access. Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. Use non-sparking ventilation systems, approved explosion proof equipment and intrinsically safe electrical systems. Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers - dry chemical, foam or carbon dioxide) and flammable gas detectors. Keep adsorbents for leaks and spills readily available. Protect containers against physical damage and check regularly for leaks.

Conditions for safe storage, including any incompatibilities.

Suitable container	Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. Check that containers are clearly labelled and free from leaks.
Storage incompatibility	Reacts with strong oxidisers and may explode or combust. Is incompatible with strong acids, including acidic clays, peroxides, halogens, vinyl chloride and iodine pentafluoride

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	naphtha petroleum, heavy, hydrotreated	Oil mist, refined mineral	5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	ethanol, denatured	Ethyl alcohol	1880 mg/m3 / 1000 ppm	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
d-limonene	Limonene, d-	20 ppm	20 ppm	160 ppm
naphtha petroleum, isoparaffin, hydrotreated	Naphtha, hydrotreated heavy; (Isopar H-rev 2)	171 ppm	171 ppm	570 ppm
nonylphenol, ethoxylated	Glycols, polyethylene, mono(p-nonylphenol) ether; (Nonoxynol-9)	9.9 mg/m3	110 mg/m3	300 mg/m3
ethanol, denatured	Ethyl alcohol	Not Available	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Always maintain adequate ventilation. In most circumstances natural ventilation systems are adequate. If ventilation is not adequate, then the use of a local exhaust system is recommended
Personal protection	
Eye and face protection	Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].
Skin protection	See Hand protection below
Hands/feet protection	Wear chemical protective gloves. Nitrile, PVA or Viton are recommended for this application.
Body protection	See Other protection below
Other protection	Not usually required.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear colourless liquid		
Physical state	Liquid	Relative density (Water = 1)	0.94
Melting point / freezing point (°C)	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature(°C)	Not Available
Initial boiling point and boiling range (°C))	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Odour	Strong citrus	Viscosity (cSt)	Not Available
pH (as supplied)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Decomposition temperature	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution	Not Available
Vapour density (Air = 1)	Miscible	VOC g/L	Not Available
	Not Available		Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7 Unstable in the presence of
Chemical stability	incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7 See section 7
Conditions to avoid	See section 7
Incompatible materials	
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Accidental ingestion of the material may be damaging to the health of the individual. Isoparaffinic hydrocarbons cause temporary lethargy, weakness, incoordination and diarrhoea.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
Eye	If applied to the eyes, this material causes severe eye damage.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

Toxicological effects of ingredients

d-limonene	Acute toxicity	Oral LD50 (rat) 4400 mg/kg Dermal LD50 (rabbit) >5000 mg/kg Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction
	Skin corrosion/irritation	No data available No data available
	Eye damage/irritation	No data available
	Respiratory/skin sensitization	No data available
	Germ cell mutagenicity	No data available
	Carcinogenicity	May be fatal if swallowed and enters airways
	Reproductive toxicity	Oral LD50 (rat) >5000 mg/kg Dermal LD50 (rabbit) >5000 mg/kg Inhalation LC50 (rat) >5000 mg/m3 (8hr)
	STOT (single exposure)	Mildly irritating to skin with prolonged exposure (Based on test data for structurally similar materials)
	STOT (repeated exposure)	May cause mild, short-lasting discomfort to eyes (Based on test data for structurally similar materials)
	Aspiration toxicity	Not expected to be a respiratory or skin sensitiser. (Based on test data for structurally similar materials)
	Acute toxicity	Not expected to be a germ cell mutagen (Based on test data for structurally similar materials)
naphtha petroleum, hydrotreated heavy	Skin corrosion/irritation	Not expected to cause cancer (Based on test data for structurally similar materials)
	Eye damage/irritation	Not expected to be a reproductive toxicant (Based on test data for structurally similar materials)
	Respiratory/skin sensitization	Not expected to cause organ damage from a single exposure. Negligible hazard at ambient/normal handling temperatures. Vapour/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects including death.
	Germ cell mutagenicity	
	Carcinogenicity	
	Reproductive toxicity	Not expected to cause organ damage from prolonged or repeated exposure (Based on test data for structurally similar materials). Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis
	STOT (single exposure)	May be fatal if swallowed and enters airways (Based on physicochemical properties of the material). Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.
	STOT (repeated exposure)	
	Aspiration toxicity	
nonylphenol ethoxylated	Acute toxicity	Oral LD50 (mouse) 4290 mg/kg
	Skin corrosion/irritation	moderate to severe irritation.
	Eye damage/irritation	moderate to severe irritation
	Respiratory/skin sensitization	Not sensitizing
	Germ cell mutagenicity	Not genotoxic
	Carcinogenicity	No Data Available
	Reproductive toxicity	No Data Available
	STOT (single exposure)	No Data Available
	STOT (repeated exposure)	No Data Available
	Aspiration toxicity	No Data Available
	Acute toxicity	Oral LD50 (mouse) 3450 mg/kg Inhalation LC50 (rat) 2000 ppm/10hrs
ethanol	Skin corrosion/irritation	Irritating to skin. Prolonged contact may result in drying and defatting of the skin, rash and dermatitis.
	Eye damage/irritation	Irritating to eyes. Exposure may result in lacrimation, irritation, pain and redness
	Respiratory/skin sensitization	No Data Available
	Germ cell mutagenicity	No Data Available
	Carcinogenicity	No Data Available
	Reproductive toxicity	No Data Available
	STOT (single exposure)	No Data Available
	STOT (repeated exposure)	Chronic ingestion may result in cirrhosis of the liver
	Aspiration toxicity	No Data Available

SECTION 12 ECOLOGICAL INFORMATION

Toxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment .
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high watermark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. DO NOT discharge into sewer or waterways.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites

33.6	Endpoint	Test Duration (hr)	Species	Value
d-limonene	LC50	96	Fish	0/L.46mg
	EC50	48	Crustacea	0.307mg/L
	NOEC	504	Crustacea	0.05mg/
naphtha petroleum, heavy, hydrotreated	LC50	96	Fish	4.1mg/L
	EC50	48	Crustacea	4.5mg/L
	EC50	72	Algae or other aquatic plants	>1-mg/L
	NOEL	72	Algae or other aquatic plants	0.1mg/L
nonylphenol ethoxylates	LC50	48	Crustacea	1.43mg/L
	EC50	72	Algae or other aquatic plants	2.5mg/L
	LC50	96	Fish	42-mg/L
ethanol, denatured	EC50	48	Crustacea	2-mg/L
	EC50	96	Algae or other aquatic plants	-8.358-26.503mg/L
	EC10	168	Algae or other aquatic plants	1.91-mg/L
	NOEC	2016	Fish	0.000375-mg/L

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
d-limonene	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
d-limonene	HIGH (LogKOW = 4.8275)

Mobility in soil

Ingredient	Mobility
d-limonene	LOW (KOC = 1324)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / packaging disposal	Containers may still present a chemical hazard/ danger when empty. Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulations

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	
HAZCHEM	•3Y

Land transport (ADG)

UN number	2052
Packing group	III
UN proper shipping name	DIPENTENE
Environmental hazard	No relevant data
Transport hazard class(es)	Class: 3 Sub risk: Not Applicable
Special precautions for user	Special provisions: Not applicable Limited Quantities: 5L

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture
D-LIMONENE IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
NAPHTHA PETROLEUM, HEAVY, HYDROTREATED IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
NONYLPHENOL ETHOXYLATES IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List
ETHANOL, DENATURED IS FOUND ON THE FOLLOWING REGULATORY LISTS
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)

SECTION 16 OTHER INFORMATION

Revision Schedule

Revision Date	01/07/2021
Initial Date	18/11/2016

SDS Version Summary

Version	Issue Date	Sections Updated
2.1	19/10/2020	Sections 2,3,4,5,6,8,11,12,14,15,16 have been updated or corrected
2.2	01/07/2021	Section 16
2.3	07/07/2021	Sections 2, 3, 8, 11, 12, 15

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources such as the ECHA C&L Chemical Inventory, HSNO (CCID) New Zealand, AICIS and HCIS Australia

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Definitions and abbreviations

PC-TWA;	Permissible Concentration-Time Weighted Average
PC-STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

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End of SDS