

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

Guangdong Zhaoqing Red Eagle Technology Co. LTD

Version No: 1.2

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: 16/12/2023

Print Date: 16/12/2023

S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Alcohol based Color mark ink
Synonyms	Not Available
Proper shipping name	Flammable liquids, n.o.s.
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Pen
--------------------------	-----

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Guangdong Zhaoqing Red Eagle Technology Co. LTD
Address	Sanrong Gorge (Zhaoqing Pabst Blue Ribbon Beer Gaoli Co, LTD.) Factory In the western suburb of Zhaoqing City (No.16) Postal code: 526060 China
Telephone	18561672638
Fax	Not Available
Website	Not Available
Email	lianglimin@canmill.cn

Emergency phone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 Hazard(s) identification

Classification of the substance or mixture



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Flammable Liquids Category 2, Sensitisation (Skin) Category 1, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3
----------------	---

Label elements

Hazard pictogram(s)	
---------------------	--

Page 1 continued...

Signal word	Danger
-------------	--------

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

Precautionary statement(s) Response

P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
-------------	--

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Common ingredients on each color		
64-17-5	55.5-85	<u>Ethanol</u>
107-98-2	10-25	<u>Propylene glycol monomethyl ether - alpha isomer</u>
25054-06-2	5-10	<u>Formaldehyde/ cyclohexanone copolymer</u>
Additional ingredients on each color		
12237-31-9	0-5	<u>C.I. Solvent Yellow 79</u>
39279-59-9*	0-5	<u>3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)</u>
52256-37-8	0-5	<u>C.I. Acid Orange 92</u>
73297-17-3	0-5	<u>C.I. Solvent Red 118</u>
3520-42-1	0-5	<u>C.I. Acid Red 52, sodium salt</u>
37229-23-5	0-5	<u>C.I. Solvent Blue 45</u>
12220-53-0*	0-5	<u>Acid Violet 66</u>
61901-87-9*	0-8	<u>C.I. Solvent Black 29</u>

SECTION 4 First-aid measures**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> Wash out immediately with fresh running water. ▶ 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 attention without delay; if pain persists or recurs seek medical attention. <p>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
--------------------	---

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▸ 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. <p>For thermal burns:</p> <ul style="list-style-type: none"> ▸ Decontaminate area around burn. ▸ Consider the use of cold packs and topical antibiotics. <p>For first-degree burns (affecting top layer of skin)</p> <ul style="list-style-type: none"> ▸ Hold burned skin under cool (not cold) running water or immerse in cool water until pain subsides. ▸ Use compresses if running water is not available. ▸ Cover with sterile non-adhesive bandage or clean cloth. ▸ Do NOT apply butter or ointments; this may cause infection. ▸ Give over-the counter pain relievers if pain increases or swelling, redness, fever occur. <p>For second-degree burns (affecting top two layers of skin)</p> <ul style="list-style-type: none"> ▸ Cool the burn by immerse in cold running water for 10-15 minutes. ▸ Use compresses if running water is not available. ▸ Do NOT apply ice as this may lower body temperature and cause further damage. ▸ Do NOT break blisters or apply butter or ointments; this may cause infection. ▸ Protect burn by cover loosely with sterile, nonstick bandage and secure in place with gauze or tape. <p>To prevent shock: (unless the person has a head, neck, or leg injury, or it would cause discomfort):</p> <ul style="list-style-type: none"> ▸ Lay the person flat. ▸ Elevate feet about 12 inches. ▸ Elevate burn area above heart level, if possible. ▸ Cover the person with coat or blanket. ▸ Seek medical assistance. <p>For third-degree burns</p> <p>Seek immediate medical or emergency assistance.</p> <p>In the mean time:</p> <ul style="list-style-type: none"> ▸ Protect burn area cover loosely with sterile, nonstick bandage or, for large areas, a sheet or other material that will not leave lint in wound. ▸ Separate burned toes and fingers with dry, sterile dressings. ▸ Do not soak burn in water or apply ointments or butter; this may cause infection. ▸ To prevent shock see above. ▸ For an airway burn, do not place pillow under the person's head when the person is lying down. This can close the airway. ▸ Have a person with a facial burn sit up. ▸ Check pulse and breathing to monitor for shock until emergency help arrives.
Inhalation	<ul style="list-style-type: none"> ▸ 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, without delay.
Ingestion	<ul style="list-style-type: none"> ▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

SECTION 5 Fire-fighting measures**Extinguishing media**

- Alcohol stable foam.
- Dry chemical powder.

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

Special hazards arising from the substrate or mixture

Fire Incompatibility	<ul style="list-style-type: none"> Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
-----------------------------	--

Special protective equipment and precautions for fire-fighters

Fire Fighting	<ul style="list-style-type: none"> Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive.
Fire/Explosion Hazard	<ul style="list-style-type: none"> Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. <p>Combustion products include: carbon dioxide (CO₂) metal oxides other pyrolysis products typical of burning organic material.</p> <p>Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.</p>

SECTION 6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> Remove all ignition sources. Clean up all spills immediately.
Major Spills	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard.

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

SECTION 7 Handling and storage**Precautions for safe handling**

Safe handling	<ul style="list-style-type: none"> 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. <p>The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe</p> <ul style="list-style-type: none"> DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with DETONATION potential. <p>The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.</p> <p>Contains low boiling substance:</p> <p>Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.</p> <ul style="list-style-type: none"> Check for bulging containers. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs.
Other information	<ul style="list-style-type: none"> Store in original containers in approved flame-proof area. No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
---------------------------	--

Storage incompatibility

- ▶ Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.
- ▶ Glycol ethers may form peroxides under certain conditions; the potential for peroxide formation is enhanced when these substances are used in processes such as distillation where they are concentrated or even evaporated to near-dryness or dryness; storage under a nitrogen atmosphere is recommended to minimise the possible formation of highly reactive peroxides
- ▶ Nitrogen blanketing is recommended if transported in containers at temperatures within 15 deg C of the flash-point and at or above the flash-point - large containers may first need to be purged and inerted with nitrogen prior to loading
- ▶ In the presence of strong bases or the salts of strong bases, at elevated temperatures, the potential exists for runaway reactions.
- ▶ Contact with aluminium should be avoided; release of hydrogen gas may result- glycol ethers will corrode scratched aluminium surfaces.

Propylene glycol monomethyl ether (PGME):

-reacts violently with strong oxidisers, alkalis

-is incompatible with aliphatic amines, boranes, sulfuric acid, nitric acid, perchloric acid, caustics, isocyanates

▶ Avoid strong bases.

*

SECTION 8 Exposure controls / personal protection**Control parameters****Occupational Exposure Limits (OEL)****INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	ethanol	Ethyl alcohol (Ethanol)	1000 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	ethanol	Ethyl alcohol	1000 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	propylene glycol monomethyl ether - alpha isomer	Propylene glycol monomethyl ether	100 ppm / 360 mg/m3	540 mg/m3 / 150 ppm	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	C.I. Solvent Black 29	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	C.I. Solvent Black 29	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	C.I. Solvent Black 29	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	C.I. Solvent Black 29	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	C.I. Solvent Black 29	Particulates not otherwise regulated	Not Available	Not Available	Not Available	See Appendix D

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
ethanol	Not Available	Not Available	15000* ppm
propylene glycol monomethyl ether - alpha isomer	100 ppm	160 ppm	660 ppm

Ingredient	Original IDLH	Revised IDLH
ethanol	3,300 ppm	Not Available
propylene glycol monomethyl ether - alpha isomer	Not Available	Not Available
formaldehyde/ cyclohexanone copolymer	Not Available	Not Available
C.I. Solvent Yellow 79	Not Available	Not Available
3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)	Not Available	Not Available

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930


Ingredient	Original IDLH	Revised IDLH
C.I. Acid Orange 92	Not Available	Not Available
C.I. Solvent Red 118	Not Available	Not Available
C.I. Acid Red 52, sodium salt	Not Available	Not Available
C.I. Solvent Blue 45	Not Available	Not Available
Acid Violet 66	Not Available	Not Available
C.I. Solvent Black 29	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
C.I. Solvent Yellow 79	E	≤ 0.01 mg/m ³

Notes: Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul style="list-style-type: none"> Safety glasses with side shields. Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. Overalls. PVC Apron. Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

Forsberg Clothing Performance Index[®].

The effect(s) of the following substance(s) are taken into account in the

computer-generated selection:

Alcohol based Color mark ink

Material	CPI
BUTYL	A
NEOPRENE	A
PVC	B

Respiratory protection

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AX-AUS	-	AX-PAPR-AUS / Class 1

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NITRILE	C
NITRILE+PVC	C
PE/EVAL/PE	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

up to 50 x ES	-	AX-AUS / Class 1	-
up to 100 x ES	-	AX-2	AX-PAPR-2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AX-AUS / Class 1	-
up to 50	1000	-	AX-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	AX-2
up to 100	10000	-	AX-3
100+		-	Airline**

** - Continuous-flow or positive pressure demand.

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 deg C)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	<p>A petroleum wax.</p> <p>The chemicals in this group are hydrocarbon, paraffin and slack waxes that are derived from lubricating oil basestocks (also known as base oils). The chemical composition depends on both the original crude oil and on the processes used during refining. Use may require material be molten. Molten or heated material may be compounded, moulded or extruded.</p> <p>The phthalates have a clear syrupy liquid consistency and show low water solubility, high oil solubility, and low volatility. The polar carboxyl group contributes little to the physical properties of the phthalates, except when R and R' are very small (such as ethyl or methyl groups).</p> <p>Glycerides, more correctly known as acylglycerols, are esters formed from glycerol and fatty acids. Glycerol has three hydroxyl functional groups, which can be esterified with one, two, or three fatty acids to form monoglycerides (MAGs), diglycerides (DAGs), and triglycerides (TAGs).</p> <p>Vegetable oils and animal fats contain mostly triglycerides, but are broken down by natural enzymes (lipases) into mono and diglycerides and free fatty acids and glycerol.</p> <p>Partial glycerides are esters of glycerol with fatty acids, where not all the hydroxyl groups are esterified. Since some of their hydroxyl groups are free their molecules are polar.</p> <p>Triglycerides are hydrophobic materials that range from oils, at the lowest molecular weights/shortest chain-lengths, to waxy solids, at the highest molecular weights/longest chain-lengths. Some triglycerides are produced synthetically via classical Fischer type esterification methods (i.e., reaction of carboxylic acids with a glycerin to produce carboxylic esters), although the reaction may be promoted by acid or base catalysis, or by the use of an acid chloride.</p>		
------------	--	--	--

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	>35	Molecular weight (g/mol)	Not Available
Flash point (°C)	<23	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> Unstable in the presence of incompatible materials. Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	<p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Animal testing shows that the most common signs of inhalation overdose is inco-ordination and drowsiness.</p> <p>The material has NOT been classified by EC Directives or other classification systems as 'harmful by inhalation'. This is because of the lack of corroborating animal or human evidence.</p> <p>PGME has an offensive odour, and may cause drowsiness and unconsciousness if higher concentrations are inhaled, and severe reactions involving the eyes, nose and throat.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p>						
Ingestion	<p>Ingestion of ethanol (ethyl alcohol, 'alcohol') may produce nausea, vomiting, bleeding from the digestive tract, abdominal pain and diarrhoea. Effects on the body:</p> <table border="1"> <thead> <tr> <th>Blood concentration</th> <th>Effects</th> </tr> </thead> <tbody> <tr> <td><1.5 g/L</td> <td>Mild: impaired vision, co-ordination and reaction time; emotional instability</td> </tr> <tr> <td>1.5-3.0 g/L</td> <td>Moderate: Slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired</td> </tr> </tbody> </table>	Blood concentration	Effects	<1.5 g/L	Mild: impaired vision, co-ordination and reaction time; emotional instability	1.5-3.0 g/L	Moderate: Slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired
Blood concentration	Effects						
<1.5 g/L	Mild: impaired vision, co-ordination and reaction time; emotional instability						
1.5-3.0 g/L	Moderate: Slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired						

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

	<p>objective performance in standardized tests.</p> <p>The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence. Accidental ingestion of the material may be damaging to the health of the individual.</p>
Skin Contact	<p>The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Harmful amounts of PGME may be absorbed through the skin following extensive prolonged contact; this may result in drowsiness, unconsciousness and depression. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p>
Eye	<p>Direct contact of the eye with ethanol (alcohol) may cause an immediate stinging and burning sensation, with reflex closure of the lid, and a temporary, tearing injury to the cornea together with redness of the conjunctiva. Discomfort may last 2 days but usually the injury heals without treatment. There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.</p>
Chronic	<p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. There is sufficient evidence to suggest that this material directly causes cancer in humans. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Ample evidence exists that this material directly causes reduced fertility Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Some glycol esters and their ethers cause wasting of the testicles, reproductive changes, infertility and changes to kidney function. Shorter chain compounds are more dangerous. Chromium (III) is an essential trace mineral. Chronic exposure to chromium (III) irritates the airways, malnourishes the liver and kidneys, causes fluid in the lungs, and adverse effects on white blood cells, and also increases the risk of developing lung cancer. Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents. When taken repeatedly, PGME may cause damage to liver and kidney, drowsiness and even unconsciousness and death. There is no evidence of damage to the sex organs.</p>

Alcohol based Color mark ink	TOXICITY	IRRITATION
	Not Available	Not Available
ethanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 17100 mg/kg ^[1]	Eye (rabbit): 500 mg SEVERE
	Inhalation(Rat) LC50: 64000 ppm4h ^[2]	Eye (rabbit):100mg/24hr-moderate
	Oral (Rat) LD50: 7060 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit):20 mg/24hr-moderate
	Skin (rabbit):400 mg (open)-mild	
	Skin: no adverse effect observed (not irritating) ^[1]	
propylene glycol monomethyl ether - alpha isomer	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit) 230 mg mild
	Inhalation(Rat) LC50: >6 mg/l4h ^[2]	Eye (rabbit) 500 mg/24 h. - mild
	Oral (Rat) LD50: 3739 mg/kg ^[1]	Eye (rabbit): 100 mg SEVERE
	Skin (rabbit) 500 mg open - mild	

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

formaldehyde/ cyclohexanone copolymer	TOXICITY Not Available	IRRITATION Not Available
C.I. Solvent Yellow 79	TOXICITY Oral (Rat) LD50: >5000 mg/kg ^[2]	IRRITATION Eye (rabbit): irritant * Skin (rabbit): non-irritating *[Clariant]
3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)	TOXICITY Not Available	IRRITATION Not Available
C.I. Acid Orange 92	TOXICITY Oral (Rat) LD50: >5000 mg/kg ^[1]	IRRITATION Not Available
C.I. Solvent Red 118	TOXICITY Oral (Rat) LD50: >10000 mg/kg ^[2]	IRRITATION Eye (rabbit): non-irritating * Skin (rabbit): non-irritating *
C.I. Acid Red 52, sodium salt	TOXICITY Oral (Mouse) LD50; 10300 mg/kg ^[2]	IRRITATION Eye: no adverse effect observed (not irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1]
C.I. Solvent Blue 45	TOXICITY Oral (Rat) LD50: >10000 mg/kg ^[2]	IRRITATION Eye (rabbit): non-irritating * Eye: no adverse effect observed (not irritating) ^[1] Skin (rabbit): non-irritating * * [Sandoz] Skin: no adverse effect observed (not irritating) ^[1]
Acid Violet 66	TOXICITY Not Available	IRRITATION Not Available
C.I. Solvent Black 29	TOXICITY Oral (Rat) LD50: >5000 mg/kg * ^[2]	IRRITATION Eye (rabbit): mild ** Eye (rabbit):non-irritant (OECD 405)* Skin (rabbit): mild ** (Primary Irritation Index 0.2) Skin (rabbit):non-irritant (OECD 404)*

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Alcohol based Color mark ink	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema.
ETHANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER	NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Foetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species.

C.I. SOLVENT YELLOW 79 Material is of low acute oral toxicity to rats*
Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

Continued...

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

C.I. ACID RED 52, SODIUM SALT	Hamster cell mutagen
C.I. Solvent Black 29	Oral (-) LD50: >2000 mg/kg * Dermal (-) LD50: >2000 mg/kg * The material was classified as a mild irritant to rabbit skin by the Draize classification. No corrosive effects were noted. The material was classified as a mild eye irritant, producing a group mean score of 20.3 and (Class 4 on a 1 to 8 scale). The material did not meet the criteria of EU labelling to classify it as an eye irritant. Positive in the Ames test Not a sensitiser. * BASF ** Orient Chemical Industries Ltd. Japan
Alcohol based Color mark ink & C.I. SOLVENT YELLOW 79	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.
Alcohol based Color mark ink & C.I. Solvent Black 29	On skin and inhalation exposure, chromium and its compounds (except hexavalent) can be a potent sensitiser, as particulates. Studies show that they have a complex toxicity mechanism with hexavalent chromium associated with an increased risk of lung damage and respiratory cancers (primarily bronchogenic and nose cancers).
Alcohol based Color mark ink & PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER	For propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers.
FORMALDEHYDE/ CYCLOHEXANONE COPOLYMER & C.I. ACID ORANGE 92	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✗	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

Alcohol based Color mark ink	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

ethanol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	275mg/l	2
	EC50	48h	Crustacea	2mg/l	4
	EC50	96h	Algae or other aquatic plants	<0.001mg/L	4
	LC50	96h	Fish	42mg/l	4
	EC50(ECx)	96h	Algae or other aquatic plants	<0.001mg/L	4

propylene glycol monomethyl ether - alpha isomer	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	96h	Algae or other aquatic plants	>1000mg/l	2
	EC50	72h	Algae or other aquatic plants	>500mg/l	2
	EC50	48h	Crustacea	23300mg/l	1
	LC50	96h	Fish	>2000mg/l	Not Available
	EC50(ECx)	168h	Algae or other aquatic plants	>1000mg/l	1

formaldehyde/ cyclohexanone copolymer	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
C.I. Solvent Yellow 79	Not Available	Not Available	Not Available	Not Available	Not Available
3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)	Not Available	Not Available	Not Available	Not Available	Not Available
C.I. Acid Orange 92	LC50	96h	Fish	3.7mg/l	2
	EC50	48h	Crustacea	24.1mg/l	2
	EC10(ECx)	168h	Algae or other aquatic plants	0.297mg/l	2
C.I. Solvent Red 118	Not Available	Not Available	Not Available	Not Available	Not Available
C.I. Acid Red 52, sodium salt	Not Available	Not Available	Not Available	Not Available	Not Available
C.I. Solvent Blue 45	NOEC(ECx)	168h	Algae or other aquatic plants	100mg/l	2
Acid Violet 66	Not Available	Not Available	Not Available	Not Available	Not Available
C.I. Solvent Black 29	Not Available	Not Available	Not Available	Not Available	Not Available

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Toxic to soil organisms.

For Propylene Glycol Ethers: log Kow's range from 0.309 for TPM to 1.523 for DPnB. Calculated BCFs range from 1.47 for DPnB to 3.16 for DPMA and TPM, indicating low bioaccumulation.

For Ethanol:

log Kow: -0.31 to -0.32;

Koc 1: Estimated BCF= 3;

Half-life (hr) air: 144;

Half-life (hr) H2O surface water: 144;

Henry's atm m3 /mol: 6.29E-06;

BOD 5 if unstated: 0.93-1.67,63%

COD: 1.99-2.11,97%;

ThOD : 2.1.

Environmental Fate: Terrestrial - Ethanol quickly biodegrades in soil but may leach into ground water; most is lost by evaporation.

For solvent dyes:

Environmental Fate: Solvent dyes are characterised as non-ionic or neutral dyes, and are hydrophobic in character and thus solubility in water is low, ranging from 0.2 mg/l to 34.3 mg/l. Solvent dyes, like the disperse dyes, are hydrophobic.

For Chromium: Chromium is poorly absorbed by cells found in microorganisms, plants and animals. Hexavalent chromate anions are readily transported into cells and toxicity is closely linked to the higher oxidation state.

For chromium:

Aquatic Fate - Most chromium released into water will be deposited in the sediment. A small percentage of chromium can be found in soluble and insoluble forms with soluble chromium making up a very small percentage of the total chromium.

For Glycol Ethers:

Environmental Fate: Several glycol ethers have been shown to biodegrade however; biodegradation slows as molecular weight increases. No glycol ethers that have been tested demonstrate marked resistance to biodegradative processes.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Item numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1059, 87332-1069, 87332-1079, 87332-1089, 87332-1099, 87332-1109, 87332-1110, 87332-1170, 87332-1250, 87332-2010, 87332-2020, 87332-2030, 87332-2040, 87332-2050, 87332-2060, 87332-2070, 87332-2080, 87332-2090, 87332-2100, 87332-2110, 87332-2120, 87332-2130, 87332-2140, 87332-2150, 87332-2160, 87332-2170, 87332-2180, 87332-2190, 87332-2200, 87332-2210, 87332-2220, 87332-2230, 87332-2240, 87332-2250, 87332-2260, 87332-2270, 87332-2280, 87332-2290, 87332-2300, 87332-2310, 87332-2320, 87332-2330, 87332-2340, 87332-2350, 87332-2360, 87332-2370, 87332-2380, 87332-2390, 87332-2400, 87332-2410, 87332-2420, 87332-2430, 87332-2440, 87332-2450, 87332-2460, 87332-2470, 87332-2480, 87332-2490, 87332-2500, 87332-2510, 87332-2520, 87332-2530, 87332-2540, 87332-2550, 87332-2560, 87332-2570, 87332-2580, 87332-2590, 87332-2600, 87332-2610, 87332-2620, 87332-2630, 87332-2640, 87332-2650, 87332-2660, 87332-2670, 87332-2680, 87332-2690, 87332-2700, 87332-2710, 87332-2720, 87332-2730, 87332-2740, 87332-2750, 87332-2760, 87332-2770, 87332-2780, 87332-2790, 87332-2800, 87332-2810, 87332-2820, 87332-2830, 87332-2840, 87332-2850, 87332-2860, 87332-2870, 87332-2880, 87332-2890, 87332-2900, 87332-2910, 87332-2920, 87332-2930, 87332-2940, 87332-2950, 87332-2960, 87332-2970, 87332-2980, 87332-2990, 87332-3000, 87332-3010, 87332-3020, 87332-3030, 87332-3040, 87332-3050, 87332-3060, 87332-3070, 87332-3080, 87332-3090, 87332-3100, 87332-3110, 87332-3120, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3200, 87332-3210, 87332-3220, 87332-3230, 87332-3240, 87332-3250, 87332-3260, 87332-3270, 87332-3280, 87332-3290, 87332-3300, 87332-3310, 87332-3320, 87332-3330, 87332-3340, 87332-3350, 87332-3360, 87332-3370, 87332-3380, 87332-3390, 87332-3400, 87332-3410, 87332-3420, 87332-3430, 87332-3440, 87332-3450, 87332-3460, 87332-3470, 87332-3480, 87332-3490, 87332-3500, 87332-3510, 87332-3520, 87332-3530, 87332-3540, 87332-3550, 87332-3560, 87332-3570, 87332-3580, 87332-3590, 87332-3600, 87332-3610, 87332-3620, 87332-3630, 87332-3640, 87332-3650, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3700, 87332-3710, 87332-3720, 87332-3730, 87332-3740, 87332-3750, 87332-3760, 87332-3770, 87332-3780, 87332-3790, 87332-3800, 87332-3810, 87332-3820, 87332-3830, 87332-3840, 87332-3850, 87332-3860, 87332-3870, 87332-3880, 87332-3890, 87332-3900, 87332-3910, 87332-3920, 87332-3930, 87332-3940, 87332-3950, 87332-3960, 87332-3970, 87332-3980, 87332-3990, 87332-4000, 87332-4010, 87332-4020, 87332-4030, 87332-4040, 87332-4050, 87332-4060, 87332-4070, 87332-4080, 87332-4090, 87332-4100, 87332-4110, 87332-4120, 87332-4130, 87332-4140, 87332-4150, 87332-4160, 87332-4170, 87332-4180, 87332-4190, 87332-4200, 87332-4210, 87332-4220, 87332-4230, 87332-4240, 87332-4250, 87332-4260, 87332-4270, 87332-4280, 87332-4290, 87332-4300, 87332-4310, 87332-4320, 87332-4330, 87332-4340, 87332-4350, 87332-4360, 87332-4370, 87332-4380, 87332-4390, 87332-4400, 87332-4410, 87332-4420, 87332-4430, 87332-4440, 87332-4450, 87332-4460, 87332-4470, 87332-4480, 87332-4490, 87332-4500, 87332-4510, 87332-4520, 87332-4530, 87332-4540, 87332-4550, 87332-4560, 87332-4570, 87332-4580, 87332-4590, 87332-4600, 87332-4610, 87332-4620, 87332-4630, 87332-4640, 87332-4650, 87332-4660, 87332-4670, 87332-4680, 87332-4690, 87332-4700, 87332-4710, 87332-4720, 87332-4730, 87332-4740, 87332-4750, 87332-4760, 87332-4770, 87332-4780, 87332-4790, 87332-4800, 87332-4810, 87332-4820, 87332-4830, 87332-4840, 87332-4850, 87332-4860, 87332-4870, 87332-4880, 87332-4890, 87332-4900, 87332-4910, 87332-4920, 87332-4930, 87332-4940, 87332-4950, 87332-4960, 87332-4970, 87332-4980, 87332-4990, 87332-5000, 87332-5010, 87332-5020, 87332-5030, 87332-5040, 87332-5050, 87332-5060, 87332-5070, 87332-5080, 87332-5090, 87332-5100, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5180, 87332-5190, 87332-5200, 87332-5210, 87332-5220, 87332-5230, 87332-5240, 87332-5250, 87332-5260, 87332-5270, 87332-5280, 87332-5290, 87332-5300, 87332-5310, 87332-5320, 87332-5330, 87332-5340, 87332-5350, 87332-5360, 87332-5370, 87332-5380, 87332-5390, 87332-5400, 87332-5410, 87332-5420, 87332-5430, 87332-5440, 87332-5450, 87332-5460, 87332-5470, 87332-5480, 87332-5490, 87332-5500, 87332-5510, 87332-5520, 87332-5530, 87332-5540, 87332-5550, 87332-5560, 87332-5570, 87332-5580, 87332-5590, 87332-5600, 87332-5610, 87332-5620, 87332-5630, 87332-5640, 87332-5650, 87332-5660, 87332-5670, 87332-5680, 87332-5690, 87332-5700, 87332-5710, 87332-5720, 87332-5730, 87332-5740, 87332-5750, 87332-5760, 87332-5770, 87332-5780, 87332-5790, 87332-5800, 87332-5810, 87332-5820, 87332-5830, 87332-5840, 87332-5850, 87332-5860, 87332-5870, 87332-5880, 87332-5890, 87332-5900, 87332-5910, 87332-5920, 87332-5930, 87332-5940, 87332-5950, 87332-5960, 87332-5970, 87332-5980, 87332-5990, 87332-6000, 87332-6010, 87332-6020, 87332-6030, 87332-6040, 87332-6050, 87332-6060, 87332-6070, 87332-6080, 87332-6090, 87332-6100, 87332-6110, 87332-6120, 87332-6130, 87332-6140, 87332-6150, 87332-6160, 87332-6170, 87332-6180, 87332-6190, 87332-6200, 87332-6210, 87332-6220, 87332-6230, 87332-6240, 87332-6250, 87332-6260, 87332-6270, 87332-6280, 87332-6290, 87332-6300, 87332-6310, 87332-6320, 87332-6330, 87332-6340, 87332-6350, 87332-6360, 87332-6370, 87332-6380, 87332-6390, 87332-6400, 87332-6410, 87332-6420, 87332-6430, 87332-6440, 87332-6450, 87332-6460, 87332-6470, 87332-6480, 87332-6490, 87332-6500, 87332-6510, 87332-6520, 87332-6530, 87332-6540, 87332-6550, 87332-6560, 87332-6570, 87332-6580, 87332-6590, 87332-6600, 87332-6610, 87332-6620, 87332-6630, 87332-6640, 87332-6650, 87332-6660, 87332-6670, 87332-6680, 87332-6690, 87332-6700, 87332-6710, 87332-6720, 87332-6730, 87332-6740, 87332-6750, 87332-6760, 87332-6770, 87332-6780, 87332-6790, 87332-6800, 87332-6810, 87332-6820, 87332-6830, 87332-6840, 87332-6850, 87332-6860, 87332-6870, 87332-6880, 87332-6890, 87332-6900, 87332-6910, 87332-6920, 87332-6930, 87332-6940, 87332-6950, 87332-6960, 87332-6970, 87332-6980, 87332-6990, 87332-7000, 87332-7010, 87332-7020, 87332-7030, 87332-7040, 87332-7050, 87332-7060, 87332-7070, 87332-7080, 87332-7090, 87332-7100, 87332-7110, 87332-7120, 87332-7130, 87332-7140, 87332-7150, 87332-7160, 87332-7170, 87332-7180, 87332-7190, 87332-7200, 87332-7210, 87332-7220, 87332-7230, 87332-7240, 87332-7250, 87332-7260, 87332-7270, 87332-7280, 87332-7290, 87332-7300, 87332-7310, 87332-7320, 87332-7330, 87332-7340, 87332-7350, 87332-7360, 87332-7370, 87332-7380, 87332-7390, 87332-7400, 87332-7410, 87332-7420, 87332-7430, 87332-7440, 87332-7450, 87332-7460, 87332-7470, 87332-7480, 87332-7490, 87332-7500, 87332-7510, 87332-7520, 87332-7530, 87332-7540, 87332-7550, 87332-7560, 87332-7570, 87332-7580, 87332-7590, 87332-7600, 87332-7610, 87332-7620, 87332-7630, 87332-7640, 87332-7650, 87332-7660, 87332-7670, 87332-7680, 87332-7690, 87332-7700, 87332-7710, 87332-7720, 87332-7730, 87332-7740, 87332-7750, 87332-7760, 87332-7770, 87332-7780, 87332-7790, 87332-7800, 87332-7810, 87332-7820, 87332-7830, 87332-7840, 87332-7850, 87332-7860, 87332-7870, 87332-7880, 87332-7890, 87332-7900, 87332-7910, 87332-7920, 87332-7930, 87332-7940, 87332-7950, 87332-7960, 87332-7970, 87332-7980, 87332-7990, 87332-8000, 87332-8010, 87332-8020, 87332-8030, 87332-8040, 87332-8050, 87332-8060, 87332-8070, 87332-8080, 87332-8090, 87332-8100, 87332-8110, 87332-8120, 87332-8130, 87332-8140, 87332-8150, 87332-8160, 87332-8170, 87332-8180, 87332-8190, 87332-8200, 87332-8210, 87332-8220, 87332-8230, 87332-8240, 87332-8250, 87332-8260, 87332-8270, 87332-8280, 87332-8290, 87332-8300, 87332-8310, 87332-8320, 87332-8330, 87332-8340, 87332-8350, 87332-8360, 87332-8370, 87332-8380, 87332-8390, 87332-8400, 87332-8410, 87332-8420, 87332-8430, 87332-8440, 87332-8450, 87332-8460, 87332-8470, 87332-8480, 87332-8490, 87332-8500, 87332-8510, 87332-8520, 87332-8530, 87332-8540, 87332-8550, 87332-8560, 87332-8570, 87332-8580, 87332-8590, 87332-8600, 87332-8610, 87332-8620, 87332-8630, 87332-8640, 87332-8650, 87332-8660, 87332-8670, 87332-8680, 87332-8690, 87332-8700, 87332-8710, 87332-8720, 87332-8730, 87332-8740, 87332-8750, 87332-8760, 87332-8770, 87332-8780, 87332-8790, 87332-8800, 87332-8810, 87332-8820, 87332-8830, 87332-8840, 87332-8850, 87332-8860, 87332-8870, 87332-8880, 87332-8890, 87332-8900	LOW (42-100 days)	LOW (4-900 days)

Continued...

MSDS for #87332 - ARTPP INFTY BRSH MRK
Alcohol based Color mark ink

Ingredient	Persistence: Water/Soil	Persistence: Air
propylene glycol monomethyl ether - alpha isomer	LOW (Half-life = 56 days)	LOW (Half-life = 1.7 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
ethanol	LOW (LogKOW = -0.31)
propylene glycol monomethyl ether - alpha isomer	LOW (BCF = 2)

Mobility in soil

Ingredient	Mobility
ethanol	HIGH (KOC = 1)
propylene glycol monomethyl ether - alpha isomer	HIGH (KOC = 1)


SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	Waste treatment methods
	<ul style="list-style-type: none"> ▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. ▸ DO NOT allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ Recycle wherever possible. ▸ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	NO

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Limited Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

Land transport (DOT)

14.1. UN number or ID number	1993				
14.2. UN proper shipping name	Flammable liquids, n.o.s.				
14.3. Transport hazard class(es)	<table border="1"> <tbody> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subsidiary Hazard</td> <td>Not Applicable</td> </tr> </tbody> </table>	Class	3	Subsidiary Hazard	Not Applicable
Class	3				
Subsidiary Hazard	Not Applicable				
14.4. Packing group	III				
14.5. Environmental hazard	Not Applicable				
14.6. Special precautions for user	<table border="1"> <tbody> <tr> <td>Hazard Label</td> <td>3</td> </tr> <tr> <td>Special provisions</td> <td>B1, B52, IB3, T4, TP1, TP29</td> </tr> </tbody> </table>	Hazard Label	3	Special provisions	B1, B52, IB3, T4, TP1, TP29
Hazard Label	3				
Special provisions	B1, B52, IB3, T4, TP1, TP29				

Air transport (ICAO-IATA / DGR)

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

Continued...

Page 13 of 18

MSDS for #87332 - ARTPP INFTY BRSH MRK
Alcohol based Color mark ink

14.1. UN number	1993	
14.2. UN proper shipping name	Flammable liquid, n.o.s. *	
14.3. Transport hazard class(es)	ICAO/IATA Class	3
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	3L
14.4. Packing group	III	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	A3
	Cargo Only Packing Instructions	366
	Cargo Only Maximum Qty / Pack	220 L
	Passenger and Cargo Packing Instructions	355
	Passenger and Cargo Maximum Qty / Pack	60 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y344
	Passenger and Cargo Limited Maximum Qty / Pack	10 L

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1993	
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S.	
14.3. Transport hazard class(es)	IMDG Class	3
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	F-E , S-E
	Special provisions	223 274 955
	Limited Quantities	5 L

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
ethanol	Not Available
propylene glycol monomethyl ether - alpha isomer	Not Available
formaldehyde/ cyclohexanone copolymer	Not Available
C.I. Solvent Yellow 79	Not Available
3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)	Not Available
C.I. Acid Orange 92	Not Available
C.I. Solvent Red 118	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Solvent Blue 45	Not Available
Acid Violet 66	Not Available
C.I. Solvent Black 29	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type	
Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930		Continued...

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

Product name	Ship Type
ethanol	Not Available
propylene glycol monomethyl ether - alpha isomer	Not Available
formaldehyde/ cyclohexanone copolymer	Not Available
C.I. Solvent Yellow 79	Not Available
3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1)	Not Available
C.I. Acid Orange 92	Not Available
C.I. Solvent Red 118	Not Available
C.I. Acid Red 52, sodium salt	Not Available
C.I. Solvent Blue 45	Not Available
Acid Violet 66	Not Available
C.I. Solvent Black 29	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

ethanol is found on the following regulatory lists

- US - Massachusetts - Right To Know Listed Chemicals
- US DOE Temporary Emergency Exposure Limits (TEELs)
- US NIOSH Recommended Exposure Limits (RELs)
- US OSHA Permissible Exposure Limits (PELs) Table Z-1
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

propylene glycol monomethyl ether - alpha isomer is found on the following regulatory lists

- US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
- US - Massachusetts - Right To Know Listed Chemicals
- US DOE Temporary Emergency Exposure Limits (TEELs)
- US EPA Integrated Risk Information System (IRIS)
- US EPCRA Section 313 Chemical List
- US NIOSH Recommended Exposure Limits (RELs)
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

formaldehyde/ cyclohexanone copolymer is found on the following regulatory lists

- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Solvent Yellow 79 is found on the following regulatory lists

- US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
- US Clean Air Act - Hazardous Air Pollutants
- US CWA (Clean Water Act) - Priority Pollutants
- US CWA (Clean Water Act) - Toxic Pollutants
- US EPCRA Section 313 Chemical List
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1) is found on the following regulatory lists

Not Applicable

C.I. Acid Orange 92 is found on the following regulatory lists

- US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
- US Clean Air Act - Hazardous Air Pollutants
- US CWA (Clean Water Act) - Priority Pollutants
- US CWA (Clean Water Act) - Toxic Pollutants
- US EPCRA Section 313 Chemical List
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Solvent Red 118 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants

2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

MSDS for #87332 - ARTPP INFY BRSH MRK
Alcohol based Color mark ink

- US Clean Air Act - Hazardous Air Pollutants
- US EPA Integrated Risk Information System (IRIS)
- US EPCRA Section 313 Chemical List
- US National Toxicology Program (NTP) 15th Report Part B. Reasonably Anticipated to be a Human Carcinogen

C.I. Acid Red 52, sodium salt is found on the following regulatory lists

- US Clean Air Act - Hazardous Air Pollutants
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

C.I. Solvent Blue 45 is found on the following regulatory lists

- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Acid Violet 66 is found on the following regulatory lists

Not Applicable

C.I. Solvent Black 29 is found on the following regulatory lists

- International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
- US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
- US EPCRA Section 313 Chemical List
- US NIOSH Recommended Exposure Limits (RELs)
- US OSHA Permissible Exposure Limits (PELs) Table Z-1
- US OSHA Permissible Exposure Limits (PELs) Table Z-3

Additional Regulatory Information

Not Applicable

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

MSDS for #87332 - ARTPP INFTY BRSH MRK

Alcohol based Color mark ink

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

CAS No	%[weight]	Name
107-98-2	10-25	propylene glycol monomethyl ether - alpha isomer
12237-31-9	1	C.I. Solvent Yellow 79
52256-37-8	1	C.I. Acid Orange 92
73297-17-3	5	C.I. Solvent Red 118
61901-87-9*	8	C.I. Solvent Black 29

This information must be included in all SDSs that are copied and distributed for this material.

Additional Federal Regulatory Information

Not Applicable

State Regulations**US. California Proposition 65**

None Reported

Additional State Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); Acid Violet 66)
Canada - DSL	No (3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Acid Orange 92; C.I.
Canada - NDSL	No (ethanol; propylene glycol monomethyl ether - alpha isomer; formaldehyde/ cyclohexanone copolymer; C.I. Solvent Yellow 79; 3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Acid Red 52, sodium salt; C.I.
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (formaldehyde/ cyclohexanone copolymer; C.I. Solvent Yellow 79; 3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Solvent Red 118; Acid Violet 66; C.I.
Japan - ENCS	Yes
Korea - KECI	No (C.I. Solvent Red 118)
New Zealand - NZIoC	No (3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); Acid Violet 66)
Philippines - PICCS	No (C.I. Solvent Red 118; Acid Violet 66)
USA - TSCA	No (3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Solvent Red 118; Acid Violet 66; C.I.
Taiwan - TCSI	No (C.I. Solvent Red 118)
Mexico - INSQ	No (formaldehyde/ cyclohexanone copolymer; C.I. Solvent Yellow 79; 3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Acid Orange 92; C.I.
Vietnam - NCI	No (3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1))
Russia - FBEPH	No (formaldehyde/ cyclohexanone copolymer; C.I. Solvent Yellow 79; 3H-Indolium, 1,3,3-trimethyl-2-[[2-methyl-2-(4-methylphenyl)hydrazinylidene]methyl]-, chloride (1:1); C.I. Acid Orange 92; C.I.
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	16/12/2023
Initial Date	16/12/2023

Continued...

Item Numbers: 87332-1009, 87332-1019, 87332-1029, 87332-1039, 87332-1049, 87332-1100, 87332-1110, 87332-1170, 87332-1250, 87332-2020, 87332-2120, 87332-2610, 87332-2630, 87332-2650, 87332-2670, 87332-2690, 87332-2710, 87332-2730, 87332-2740, 87332-2750, 87332-2770, 87332-2790, 87332-2810, 87332-2830, 87332-2850, 87332-2870, 87332-2890, 87332-3010, 87332-3040, 87332-3060, 87332-3130, 87332-3140, 87332-3150, 87332-3160, 87332-3170, 87332-3180, 87332-3190, 87332-3230, 87332-3240, 87332-3250, 87332-3280, 87332-3300, 87332-3310, 87332-3340, 87332-3360, 87332-3450, 87332-3520, 87332-3540, 87332-3550, 87332-3660, 87332-3670, 87332-3680, 87332-3690, 87332-3720, 87332-3730, 87332-3740, 87332-3760, 87332-3770, 87332-3790, 87332-3990, 87332-4010, 87332-4020, 87332-4040, 87332-4060, 87332-4130, 87332-4270, 87332-4360, 87332-4380, 87332-4390, 87332-4500, 87332-4510, 87332-4580, 87332-4600, 87332-4620, 87332-4700, 87332-4880, 87332-4910, 87332-4960, 87332-5040, 87332-5050, 87332-5070, 87332-5090, 87332-5110, 87332-5120, 87332-5130, 87332-5140, 87332-5150, 87332-5160, 87332-5170, 87332-5210, 87332-5230, 87332-5240, 87332-5250, 87332-5290, 87332-5300, 87332-5360, 87332-5380, 87332-5390, 87332-5420, 87332-5430, 87332-5440, 87332-5770, 87332-5920, 87332-6030, 87332-6170, 87332-6400, 87332-6410, 87332-6440, 87332-6510, 87332-6720, 87332-7010, 87332-7030, 87332-7070, 87332-7090, 87332-7170, 87332-7220, 87332-7230, 87332-7270, 87332-7400, 87332-7410, 87332-7480, 87332-7500, 87332-7510, 87332-7530, 87332-7630, 87332-7730, 87332-7760, 87332-7840, 87332-7940, 87332-7960, 87332-7970, 87332-8000, 87332-8080, 87332-8100, 87332-8120, 87332-8150, 87332-8180, 87332-8220, 87332-8230, 87332-8260, 87332-8340, 87332-8380, 87332-8430, 87332-8530, 87332-8540, 87332-8660, 87332-8850, 87332-8890, 87332-8930

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Disclaimer: "The information in SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product."

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 Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit.
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration

- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European Inventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECl: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.

end of SDS