



GRADE 586 SOLVENT

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**SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION****PRODUCT NAME:** GRADE 586 SOLVENT**PRODUCT USE:** Flexographic Ink Solvent**CHEMICAL FAMILY:** Mixture**CAS NO.:** NOT AVAILABLE (MIXTURE)

Not recommended for: Consumer Use

**Manufacturer/Supplier:**

PANNIER CORPORATION

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**24 Hr Emergency Telephone Number: INFOTRAC 1-800-535-5053****SECTION 2 - HAZARDS IDENTIFICATION****Classification of the substance or mixture**

CLP Classification (EC No 1272/2008)

H226 -- Flammable liquids -- Category 3

H304 -- Aspiration Hazard -- Category 1

H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2

**Label elements****DANGER**

Flammable liquid and vapor

Repeated exposure may cause skin dryness or cracking

May be fatal if swallowed and enters airways

Toxic to aquatic life with long lasting effects

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P273 - Avoid release to the environment

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

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

P331 - Do NOT induce vomiting

P370 + P378 - In case of fire: Use dry chemical, carbon dioxide, or foam to extinguish

**Other hazards**

Electrostatic charge may be generated during pumping and other operations

Does not meet the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB) substances.

**SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CASRN	EINECS	REACH Registration	Concentration <sup>1</sup>	CLP Classification <sup>2</sup>
Hydrocarbons, C10-C12, isoalkane, <2% aromatics	None		No 01-2119471991-29	100	H226,H304,H411

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.<sup>2</sup> Regulation EC 1272/2008.**SECTION 4 - FIRST AID MEASURES****Description of first aid measures****Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

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**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation:** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

**Ingestion:** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

**Most important symptoms and effects, both acute and delayed**

Effects of overexposure can include slight irritation of the respiratory tract, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Continued exposure to high concentrations can result in vomiting, cardiac irregularities and sudden loss of consciousness. Prolonged or repeated contact may dry skin and cause irritation

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

## **SECTION 5 - FIRE FIGHTING MEASURES**

**Extinguishing media** Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

**Special hazards arising from the substance or mixture** Unusual Fire & Explosion Hazards: Flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe) Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. This product will float and can be reignited on surface water. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire. Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion.

**Special protective actions for fire-fighters**

For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate the hazard area and deny entry to unnecessary and unprotected personnel Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Cool equipment exposed to fire with water, if it can be done safely.

**See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits**

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

Flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with

material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

#### **Environmental precautions**

Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

#### **Methods and material for containment and cleaning up**

Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

### **SECTION 7 - HANDLING AND STORAGE**

#### **Precautions for safe handling**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Flammable. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes for specific bonding/grounding requirements). Do not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low-lying areas.

#### **Conditions for safe storage, including any incompatibilities**

Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum preconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to appropriate guidance pertaining to cleaning, repairing, welding, or other contemplated operations. Outdoor or detached storage is preferred. Indoor storage should meet Country or Committee standards and appropriate fire codes.

#### **Specific end use(s)**

Refer to supplemental exposure scenarios if attached.

### **SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### **Control parameters**

<b>Occupational Exposure Limits</b>			
<b>Chemical Name</b>	<b>ACGIH</b>	<b>UK-EH40</b>	<b>Other</b>
Hydrocarbons, C10-C12, isoalkane, <2% aromatics	---	---	450 ppm TWA8hr 225 ppm TWA12hr

1100 mg/m<sup>3</sup> STEL Skin

STEL = Short Term Exposure Limit (15 minutes); TWA = Time Weighted Average (8 hours); --- = No

Occupational Exposure Limit

**Relevant DNEL and PNEC:** No information available

### Exposure controls

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection that meets or exceeds EN 166 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, close fitting eye protection and a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled that comply with EN 374 is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit an approved air purifying respirator equipped with Type A, organic gases and vapour filters (as specified by the manufacturer) may be used. A respiratory protection program that follows recommendations for the selection, use, care and maintenance of respiratory protective devices in EN 529:2005 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health.

**Environmental Exposure Controls:** Refer to Sections 6, 7, 12 and 13.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Data represent typical values and are not intended to be specifications. N/A = Not Applicable; N/D = Not Determined

Appearance:	Clear and bright
Physical Form:	Liquid
Odour:	No distinct odor
Odour Threshold:	N/D
pH:	N/A
Melting/Freezing Point:	N/D
Initial Boiling Point/Range:	175 °C
Flash Point:	54 °C
Evaporation Rate (nBuAc=1):	N/D
Flammability (solid, gas):	Not applicable Flammable.
Upper Explosive Limits (vol % in air):	7.0
Lower Explosive Limits (vol % in air):	1.0
Vapour Pressure:	5.5 kPa @40°C
Relative Vapour Density (air=1):	>1
Relative Density (water=1):	0.759 @ 15.6°C
Solubility (ies): Solubility in water:	Negligible
Partition Coefficient (n-octanol/water) (Kow):	N/D
Auto-ignition Temperature:	348 °C
Decomposition Temperature:	N/D
Viscosity:	N/D
Explosive Properties:	N/D
Oxidising Properties:	N/D

### Other information

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Pour Point:

N/D

**SECTION 10 - STABILITY AND REACTIVITY****Reactivity** Not chemically reactive.**Chemical stability** Stable under normal ambient and anticipated conditions of use.**Possibility of hazardous reactions** Hazardous reactions not anticipated.**Conditions to avoid** Avoid high temperatures and all sources of ignition. Prevent vapor accumulation.**Incompatible materials** Avoid contact with strong oxidizing agents and strong reducing agents.**Hazardous decomposition products** Not anticipated under normal conditions of use.**SECTION 11 - TOXICOLOGICAL INFORMATION****Information on toxicological effects****Substance / Mixture**

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Expected to have a low degree of toxicity by inhalation		>5.2 mg/L (vapor) (rat)
Dermal	Unlikely to be harmful		>2 g/kg (rabbit)
Oral	Unlikely to be harmful		>5 g/kg (rat)

**Aspiration Hazard:** May be fatal if swallowed and enters airways**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.**Serious Eye Damage/Irritation:** Causes mild eye irritation.**Skin Sensitization:** Not expected to be a skin sensitizer.**Respiratory Sensitization:** Not expected to be a respiratory sensitizer.**Specific Target Organ Toxicity (Single Exposure):** Not expected to cause organ effects from single exposure.**Specific Target Organ Toxicity (Repeated Exposure):** Not expected to cause organ effects from repeated exposure. Two-year inhalation studies of wholly vaporized unleaded gasoline, and 90 days studies of various petroleum naphthas, did not produce significant target organ toxicity in laboratory animals. Nephropathy in male rats, characterized by the accumulation of alpha-2-u- globulin in epithelial cells of the proximal tubules was observed, however follow-up studies suggest that these changes are unique to the male rat.**Carcinogenicity:** Not expected to cause cancer. Based on component information. Two-year inhalation studies of vaporized unleaded gasoline produced an increased incidence of kidney tumors in male rats and liver tumors in female mice. Repeated skin application of various petroleum naphthas in mice for two years resulted in an increased incidence of skin tumors but only in the presence of severe skin irritation. Follow-up mechanistic studies suggest that the occurrence of these tumors may be the consequence of promotional processes and not relevant to human risk assessment. Epidemiology data collected from a study of more than 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer from gasoline exposure. Unleaded gasoline has been identified as a possible carcinogen by the International Agency for Research on Cancer.**Germ Cell Mutagenicity:** Not expected to cause heritable genetic effects. Based on component information.**Reproductive Toxicity:** Not expected to cause reproductive toxicity. Based on component information. No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to high vapor concentrations of unleaded gasoline and petroleum naphthas via inhalation. A two-generation reproductive toxicity study of vapor recovery gasoline did not adversely affect reproductive function or offspring survival and development.**SECTION 12 - ECOLOGICAL INFORMATION****Toxicity** Acute aquatic toxicity studies on samples of gasoline and naphtha streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions, in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. These substances

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should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.

**Persistence and degradability** the hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.

**Persistence per IOPC Fund definition:** Non-Persistent

**Bioaccumulative potential** Log Kow values measured for the hydrocarbon components of this material range from 3 to greater than 6 and therefore are regarded as having the potential to bioaccumulate. In practice, metabolic processes or physical properties may prevent this effect or limit bioavailability.

**Mobility in soil** on release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilization to air. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half-lives varying from 6.5 days for benzene to 0.5 days for n-dodecane.

**Results of PBT and vPvB assessment** Not a PBT or vPvB substance.

**Other adverse effects** None anticipated.

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

### **Waste treatment methods**

**European Waste Code:** 14 06 03\* other solvents and solvent mixtures

This material, if discarded as produced, would be considered as hazardous waste pursuant to Directive 2008/98/EC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies. This code has been assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste generators/producers are responsible for assessing the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code.

Disposal must be in accordance with Directive 2008/98/EC and other applicable national or regional provisions, and based upon material characteristics at time of disposal. For incineration of waste, follow Directive 2000/76/EC. For landfill of waste, follow Directive 1999/31/EC. Product is suitable for burning in an enclosed controlled burner for fuel value if >5000 BTU, or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Follow Directive 2000/76/EC.

**Empty Containers:** Container contents should be completely used and containers emptied prior to discard. Empty drums should be properly sealed and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with applicable regulations.

## **SECTION 14 - TRANSPORT INFORMATION**

**UN number** UN1268

**UN proper shipping name** PETROLEUM DISTILLATES, N.O.S.

**Transport hazard class(s)** 3

**Packing group** III

**Environmental hazards** Marine pollutant - Environmentally Hazardous

**Special precautions for user** If transported in bulk by marine vessel in international waters, product is being carried under the scope of MARPOL Annex I.

**Transport in bulk according to Annex II of MARPOL**

**73/78 and the IBC Code** Not applicable

## **SECTION 15 - REGULATORY INFORMATION**

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

EC 1272/2008 - Classification, labelling and packaging of substances and mixtures

EN166:2002 Eye Protection

EN 529:2005 Respiratory Protective devices

BS EN 374-1:2003 Protective gloves against chemicals and micro-organisms

Occupational Exposure Limits, Technical Rules for Dangerous Substances

Occupational Exposure Limits, Health and Safety Authority

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Workplace Exposure Limits, EH40/2005, Control of Substances Hazardous to Health

Directive 2008/98/EC (Waste Framework Directive)

Directive 2000/76/EC on incineration of waste

Directive 1999/31/EC on landfill of waste

**Export Rating:** NLR (No License Required)**Chemical safety assessment**

A chemical safety assessment has been carried out for the substance/mixture.

**SECTION 16 - OTHER INFORMATION****List of Relevant Hazard Statements:**

H226 - Flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H411 - Toxic to aquatic life with long lasting effects

EUH066 - Repeated exposure may cause skin dryness or cracking

**Regulatory Basis of Classification**

CLP Classification (EC No 1272/2008)

H226 -- Flammable liquids -- Category 3

H304 -- Aspiration Hazard -- Category 1

H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2

Regulatory Basis

Based on test data

Based on component information.

Based on component information.

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Agreement on Dangerous Goods by Road; BMGV = Biological Monitoring Guidance Value; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA = [US] Environmental Protection Agency; Germany-TRGS = Technical Rules for Dangerous Substances; IARC = International Agency for Research on Cancer; ICAO/IATA = International Civil Aviation Organization / International Air Transport Association; INSHT = National Institute for Health and Safety at Work; IMDG = International Maritime Dangerous Goods; Ireland-HSA = Ireland's National Health and Safety Authority; LEL = Lower Explosive Limit; MARPOL = Marine Pollution; N/A = Not Applicable; N/D = Not Determined; NTP = [US] National Toxicology Program; PBT = Persistent, Bioaccumulative and Toxic; RID = Regulations Concerning the International Transport of Dangerous Goods by Rail; STEL = Short Term Exposure Limit; TLV = Threshold Limit Value; TRGS 903 = Technical rules for hazardous substances; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UK-EH40 = United Kingdom EH40/2005 OEL; vPvB = very Persistent, very Bioaccumulative

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