



Grade A Solvent

Revision 11/14/2017

SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers and users of this product.

PRODUCT NAME: Grade A Solvent

PRODUCT USE: Flexographic Ink Solvent

PANNIER P/N: Grade A-I000A-S010

CAS NO.: N/A Mixture

DOT HAZARD CLASS: Alcohols N.O.S. (Ethanol, Methanol)

UN/NA ID NO.: UN 1987

HMIS CODES: 2H, 3F, 0R

Not recommended for: Consumer Use

Manufacturer/Supplier:

PANNIER CORPORATION

207 SANDUSKY STREET

PITTSBURGH, PA 15212-5823 U.S.A.

412-323-4900

SECTION I - GENERAL INFORMATION

24 Hr Emergency Telephone Number: Infotrac 1-800-535-5053

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification (GHS-US)

Flammable liquids H225

Category 2

Carcinogenicity H350

Category 1A

Specific target organ H373

toxicity (repeated exposure) Category 2

Full text of H statements: see section 16

Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

Danger

Hazard statements (GHS-US)

H225 - Highly flammable liquid and vapor

H350 - May cause cancer (oral)

H373 - May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GHS-US)

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P210 - Keep away from heat, hot surfaces, sparks, open flames. - No smoking

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical, lighting, ventilating equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

P260 - Do not breathe fume, mist, spray, vapors

P280 - Wear eye protection, face protection, face shield, protective clothing, protective gloves

P303+P361+P353 -If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P308+P313 -If exposed or concerned: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

P370+P378 - In case of fire: Use ABC-powder, alcohol resistant foam, an extinguishing blanket, carbon dioxide (CO₂), sand to extinguish

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

P405 - Store locked up

P501 - Dispose of contents/container to a hazardous or special waste collection point, an approved waste disposal plant, an authorized waste collection point, an industrial incineration plant, hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Other hazards

No additional information available

Unknown Acute Toxicity (GHS US)

Not applicable

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

NAME	PRODUCT IDENTIFIER	PERCENTAGE	OCCUPATIONAL EXPOSURE LIMITS
Ethanol	(CASNo) 64-17-5	81-100	Flam. Liq. 2, H225 Carc. 1A, H35D
methyl isobutyl ketone	(CASNo) 108-1.0-1	1,9 -1.0	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation.dust.mist). H332 Carc. 2, H351 STOT SE 3, H335
methanol	(CASNo) 67-56-1	0.9- 5	Flam. Liq. 2, H225
ethyl acetate	(CASNo) 141-78-6	1 - 5	Flam. Liq. 2, H225 STOT SE 3, H336
hexane	(CASNo) 110-54-3	1 - 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of I-i-phrases: see section 16

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

First-aid measures general Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First aid measures after inhalation Allow victim to breathe fresh air. Allow the victim to rest.

First aid measures after skin contact Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion Rinse mouth. DO NOT induce vomiting. Obtain emergency medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries Not expected to present a significant hazard under anticipated conditions of normal use.

Indication of any immediate medical attention and special treatment needed No additional information available

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SECTION 5 - FIRE FIGHTING MEASURES**Extinguishing media****Suitable extinguishing media** Foam. Dry powder. Carbon dioxide. Water spray. Sand.**Unsuitable extinguishing media** Do not use a heavy water stream**Special hazards arising from the substance or mixture** No additional information available**Advice for firefighters** Firefighting Instructions Use water spray or fog for cooling exposed containers, Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.**Protection during firefighting** Do not enter fire area without proper protective equipment, including respiratory protection,**SECTION 6 - ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Emergency procedures

Evacuate unnecessary personnel.

For emergency responders

Protective equipment

Equip cleanup crew with proper protection

Emergency procedures

Ventilate area.

Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and material for containment and cleaning up

Methods for cleaning up

Soak up spills with inert solids; such as clay or diatomaceous earth as soon as possible.

Collect spillage. Store away from other materials.

Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7 - HANDLING AND STORAGE**Precautions for safe handling****Precautions for safe handling** Wash hands and other exposed areas with mild soap and water before eating.

drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Conditions for safe storage, including any incompatibilities**Storage conditions** Keep only in the original container in a cool, well ventilated place away from: Direct sunlight.

Heat sources. open flames. Sources of ignition. Keep container closed when not in use.

Incompatible products Strong bases. Strong acids.**Incompatible materials** Sources of ignition. Direct sunlight.**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****ethanol (64-17-5)**

ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

methanol (67-56-1)

ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
OSHA	OSHA PEL (TWA) (mg/m ³)	260 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm

methyl isobutyl ketone (108-10-1)

ACGIH	ACGIH TWA (ppm)	20ppm
ACGIH	ACGIH STEL (ppm)	75ppm
ACGIH	Remark (ACGIH)	URT irr; dizziness; headache
OSHA	OSHA PEL (TWA) (mg/m ³)	410 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

ethyl acetate (141-78-6)

ACGIH	ACGIH TWA (ppm)	400 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm

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ACGIH	Remark (ACGIH)	URT & eye irr
ethyl acetate (141-78-6)		
OSHA	OSHA PEL (TWA) (mg/m ³)	1400 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
hexane (110-54-3)		
ACGIH	ACGIH TWA (ppm)	50ppm
ACGIH	ACGIH STEL (ppm)	50 ppm
ACGIH	Remark (ACGIH)	CNS impair; peripheral
OSHA	OSHA PEL (TWA) (mg/m ³)	1800 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	500 ppm

Exposure controls**Personal protective equipment**

Avoid all unnecessary exposure

Hand protection

Wear protective gloves

Eye protection

Chemical goggles or safety glasses

Respiratory protection

Wear appropriate mask.

Other information

Do not eat, drink or smoke during use

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Liquid.
Color	Colorless
Odor	characteristic
Odor threshold	100 ppm
	188 mg/m ³
pH	7 (10 g/l)
pH solution	10 g/l
Melting point	-114 .C
Freezing point	No data available
Boiling point	78.2 .C
Critical temperature	243 .C
Critical pressure	63840 hPa
Flash point	12 .C
Relative evaporation rate (butyl acetate= 1)	2.4
Relative evaporation rate (ether=l)	8.3
Flammability (solid, gas)	No data available
Explosion limits	3.3 - 15.0 vol %
Explosive properties	No data available
Oxidizing properties	No data available
Vapor pressure	59 hPa
Relative density	0.79
Relative vapor density at 20 .C	1.03
Relative density of saturated gas/air mixture	1.04
Specific gravity / density	785 kg/m ³
Molecular mass	46.07 g/mol
Solubility	Soluble in water. Soluble in ether, Soluble in acetone. Soluble in chloroform. Soluble in oils/fats. Soluble in methanol. Soluble in acids
Log Pow	-0.35 (Experimental value; OECD 107: Partition Coefficient -(n-octanol/water): Shake Flask Method; 24° C)
Auto-ignition temperature	363° C
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Other information	1.19 mPa.s (20° C)
specific conductivity.	130000 pS/m
Saturation concentration	112g/m ³
VOC content	100% (By volume calculated)

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SECTION 10 - STABILITY AND REACTIVITY**Reactivity**

No additional information available

Chemical Stability

Not established.

Possibility of hazardous reactions

Not established.

Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

Incompatible materials

Strong acids. Strong bases.

Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION**information on toxicological effects**

Acute toxicity Not classified

ethanol (64-17-5)

LD50 oral rat 10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)

LD50 dermal rabbit > 16000 mg/kg (Rabbit; Literature study)

ATE US (oral) 10740.000 mg/kg body weight

methanol (67-56-1)

L050 oral rat > 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)

LD50 dermal rabbit 15800 mg/kg (Rabbit; Literature study)

Le50 inhalation rat (mg/l) 85 mg/l/4h (Rat; Literature study)

LC50 inhalation rat (ppm) 64000 ppm/4h (Rat; Literature study)

ATE US (dermal) 15800.000 mg/kg body weight

ATE US (gases) 64000.000 ppmV/4h

ATE US (vapors) 85.000 mg/l/4h

ATE US (dust, mist) 85.000 mg/l/4h

methyl isobutyl ketone (108-10-1)

L050 oral rat 2080 mg/kg (Rat; Equivalent or similar to OECD 401: Experimental value)

L050 dermal rat >= 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)

LD50 dermal rabbit > 16000 mg/kg (Rabbit)

LC50 inhalation rat (mg/l) 8.2- 16.4, Rat; Experimental value

LCSO inhalation rat (ppm) 2000 - 4000 ppm/4h (Rat; Experimental value)

ATE US (oral) 2080.000 mg/kg body weight

ATE US (gases) 2000.000 ppmV/4h

ATE US (dust, mist) 1.500 mg/l/4h

ethyl acetate (141-78-6)

LD50 oral rat 5620 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; 10200 mg/kg bodyweight; Rat)

LD50 dermal rabbit > 18000 mg/kg (Rabbit; Experimental value; 24-hour cuff method; >20000 mg/kg bodyweight; Rabbit)

LC50 inhalation rat (mg/l) 70,56 mg/l/4h (Rat)

LC50 inhalation rat (ppm) 19600 ppm/4h (Rat)

ATE US (oral) 5620.000 mg/kg body weight

ATE US (gases)' 19600.000 ppmV/4h

ATE US (vapors) 70.560 mg/U4h

ATE US (dust, mist) 70.560 mg/l/4h

hexane (110-54-3)

LD50 oral rat 25000 mg/kg (Rat; Literature study)

LD50 dermal rabbit 3000 mg/kg (Rabbit; Literature study)

LC50 inhalation rat (ppm) 48000 ppm/4h (Rat; Literature study)

ATE US (oral) 25000.000 mg/kg body weight

ATE US (dermal) 3000.000 mg/kg body weight

ATE US (gases) 48000,000 ppmV/4h

Skin corrosion/irritation Not classified pH: 7 (10 g/)

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Serious eye damage/irritation
Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity

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Not classified pH: 7 (10 g/l)
Not classified
Not classified
May cause cancer (oral).

ethanol (64-17-5)

IARC group 1 - Carcinogenic to humans

methyl isobutyl ketone (108-10-1)

IARC group 2B - Possibly carcinogenic to humans

Reproductive toxicity Not classified

Specific target organ toxicity (Single exposure) Not classified

Specific target organ toxicity (repeated exposure) May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard Not classified

Potential Adverse human health effects and symptoms Based on available data, the classification criteria are not met.

SECTION 12 - ECOLOGICAL INFORMATION**Toxicity****ethanol (64-17-5)**

LC50 fish 1 14200 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1 9300 mg/l (48 h; Daphnia magna)
LC50 fish 2 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2 10800 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1 65 mg/l (72 h; Protozoa)
Threshold limit algae 1 1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)
Threshold limit algae 2 5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)

methanol (67-56-1)

LC50 fish 1 15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1 > 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2 10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2 24500 mg/l (48 h; Daphnia magna; Locomotor effect)
Threshold limit other aquatic organisms 1 6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1 530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2 8000 mg/l (168 h; Scenedesmus quadricauda)

methyl isobutyl ketone (108-10-1)

LC50 fish 1 505 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1 170 mg/l (48 h; Daphnia magna; Static system)
EC50 other aquatic organisms 1 400 mg/l (96 h; Selenastrum capricornutum; Growth rate) 600
LC50 fish 2 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2 > 1000 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1 136 mg/l (Microcystis aeruginosa)
Threshold limit algae 2 725 mg/l (8 days; Scenedesmus quadricauda; Nominal concentration)

ethyl acetate (141-78-6)

LC50 fish 1 454.7 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1 2500 mg/l (24 h; Daphnia magna)
LC50 fish 2 230 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2 154 mg/l (48 h; Daphnia magna)
TLM fish 1 100 - 1000, 96 h; Pisces
TLM other aquatic organisms 1 100 - 1000, 96 h
Threshold limit algae 1 2000 mg/l (96 h; Selenastrum capricornutum; Biomass)
Threshold limit algae 2 15 mg/l (192 h; Scenedesmus quadricauda; Growth rate)

hexane (110-54-3)

LC50 fish 1 2.5 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1 2.1 mg/l (48 h; Daphnia magna)
LCSO fish 2 4 mg/l (24 h; Carassius auratus)
EC50 Daphnia 2 0.4 mg/l (96 h; Chaetogammarus marinus)
Threshold limit other aquatic organisms 1 9.049 mg/l (Protozoa)
Threshold limit algae 1 10 mg/l (Laminariales; Photosynthesis)
Threshold limit algae 2 26 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)

Grade A Solvent**Persistence and degradability****Grade A Solvent (Mixture)**

Persistence and degradability

ethanol (64-17-5)

Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

ThOD

methanol (67-56-1)

Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

ThOD

BOD (% of ThOD)

methyl isobutyl ketone (108-10-1)

Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

ThOD

BOD (% of ThOD)

ethyl acetate (141-78-6)

Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

ThOD

hexane (110-54-3)

Persistence and degradability

ThOD

BOD (% of ThOD)

Grade A Solvent (Mixture)

Log Pow

Bioaccumulative potential Not established.

ethanol (64-17-5)

Log Pow

Bioaccumulative potential

methanol (67-56-1)

BCF fish 1

BCF fish 2

Log Pow

Bioaccumulative potential

methyl isobutyl ketone (108-10-1)

BCF fish 1

Log Pow

Bioaccumulative potential

ethyl acetate (141-78-6)

BCF fish 1

Log Pow

Bioaccumulative potential

hexane (110-54-3)

BCF fish 1

Log Pow

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Not established.

Readily biodegradable in water. Biodegradable in the soil. No (test) data on mobility of the substance available.

0.8 - 0.967 g O₂/g substance1.70 g O₂/g substance2.10 g O₂/g substance

Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.

0.6 - 1.12 g O₂/g substance1.42 g O₂/g substance1.5 g O₂/g substance

0.8% ThOD

Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Low potential for adsorption in soil. Photolysis in the air.

2.06 g O₂/g substance2.16 g O₂/g substance2.72 g O₂/g substance

0.76 % ThOD

Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.

0.293 g O₂/g substance1.69 g O₂/g substance1.82 g O₂/g substance

Readily biodegradable in water. Photo oxidation in water. Biodegradable in the soil.

3.52 g O₂/g substance

0.63% THOD

-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24° C)

-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24° C)

Low potential for bio-accumulation (Log Kow < 4).

< 10 (72 h; Leuciscus idus)

1 (72 h; Cyprinus carpio; Blood)

-0.77 (Experimental value; Other)

Low potential for bio-accumulation (BCF < 500).

2 - 5 (Pisces)

1.9 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water). HPLC method)

Low potential for bio-accumulation (BCF < 500).

30 (3 days; Leuciscus idus)

0.68 (Experimental value; EPA OPPTS 830.7560; 25 °C)

Low potential for bio-accumulation (BCF < 500).

501.187 (Pimephales promelas)

3.5 - 3.94 (Calculated)

Grade A Solvent

Bio accumulative potential

Mobility In soil

ethanol (64-17-5)

Surface tension I 0.0245 N/m (20° C)

methanol (67-56-1)

Surface tension

methyl isobutyl ketone (108-10.1)

Surface tension

ethyl acetate (141-78-6)

Surface tension

hexane (110.54-3)

Surface tension

Other adverse effects

Effect on the global warming

Other information

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Bioaccumulate.

0.023 N/m (20° C)

0.024 N/m (20° C)

0.024 N/m (20° C)

0.018 N/m

No known ecological damage caused by this product.

Avoid release to the environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste disposal recommendations Dispose in a safe manner in accordance with local/national regulations. an approved hazardous waste plant and/or drum reconditioner.

Ecology - waste materials Avoid release to the environment.**SECTION 14 - TRANSPORT INFORMATION****Department of Transportation (DOT)**

In accordance with DOT

Transport document description

UN-No.(DOT)

Proper Shipping Name (DOT)

Class (DOT)

Hazard labels (DOT)

UN,1987 Alcohols, N.O.S., 3, II

UN1987

Alcohols, N.O.S.

3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

3 - Flammable liquid



Packing group (DOT)

T7 - 4 178.274(d)(2) Normal. 178.275(d){3}

DOT Packaging Non-Bulk (49 CFR 173.xxx)

DOT Packaging Bulk (49 CFR 173.xxx)

DOT Special Provisions (49 CFR 172.102)

II -

Medium Danger

202

242

172 - This entry includes alcohol mixtures containing up to 5% petroleum products IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50° C (1.1 bar at 122° F), or 130 kPa at 55° C (1.3 bar at 131° F) are authorized

T7 - 4 178.274(d)(2) Normal..... 178.275(d){3}

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 \frac{11 + a}{11 + a + tr - lf}$
Where: tr is the maximum mean bulk temperature during transport, and lf is the temperature in degrees Celsius of the liquid during filling

TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32° F)

TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this sub-chapter, where the test pressure is 1.5 times the MAWP

DOT Packaging Exceptions (49 CFR 173.xxx)

4b;150

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DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	60 L
DOT Vessel Stowage Location	B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (II) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(I) of this section is exceeded
Emergency Response Guide (ERG) Number	127
Other information	No supplementary information available
TOG	No additional information available
Transport by sea	No additional information available
Air transport	No additional information available

SECTION 15 - REGULATORY INFORMATION**US Federal regulations****ethanol (64-17-5)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

CERCLARQ I 5000lb

methyl Isobutyl ketone (108-10-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

CERCLARQ 5000lb

ethyl acetate (141-78-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

CERCLARQ 5000lb

hexane (110-54-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

CERCLARQ 5000lb

international regulations**Canada**

No additional information available

EU-Regulations

No additional information available

National regulations**ethanol (64-17-5)**

Listed on IARC (international Agency for Research on Cancer)

methyl isobutyl ketone (108-10-1)

Listed on IARC (International Agency for Research on Cancer)

US State regulations**methanol (67-56-1)**

U.S. - California – Proposition 65 - Carcinogens List

No

U.S. - California – Proposition 65 - Developmental Toxicity

Yes

U.S. - California – Proposition 65 - Reproductive Toxicity - Female

No

U.S. - California – Proposition 65 - Reproductive Toxicity - Male

No

No significant risk level (NSRL)

methyl isobutyl ketone (108-10-1)

U.S. - California – Proposition 65 - Carcinogens List

Yes

U.S. - California – Proposition 65 - Developmental Toxicity

No

U.S. - California – Proposition 65 - Reproductive Toxicity - Female

No

U.S. - California – Proposition 65 - Reproductive Toxicity - Male

No

No significant risk level (NSRL)

ethanol (64-17-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

Grade A Solvent**Revision 11/14/2017****methanol (67-56-1)**

U.S. - Massachusetts - Right to Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

methyl isobutyl ketone (108-10-1)

U.S. - Massachusetts - Right to Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

ethyl acetate (141-78-6)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

hexane (110-54-3)

U.S. - Massachusetts - Right to Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 - OTHER INFORMATION

Abbreviations and acronyms

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. Derived Minimal Effect level. Derived-No Effect Level. Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC. Median effective concentration. International Agency for Research on Cancer. International Air Transport Association. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Organisation for Economic Co-operation and Development. Persistent Bio accumulative Toxic. Predicted No-Effect Concentration. Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EC) No 1907/2006. Regulations concerning the International Carriage of Dangerous Goods by Rai. Safety Data Sheet. Sewage treatment plant. Median Tolerance Limit. Very Persistent and Very Bio accumulative. Other information None.

Full text of H-phrases:

H225 Highly flammable liquid and vapor

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H332 Harmful if inhaled

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H350 May cause cancer

H351 Suspected of causing cancer

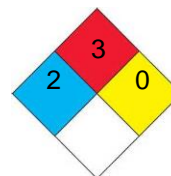
H373 May cause damage to organs through prolonged or repeated exposure

H411 Toxic to aquatic life with long lasting effects

NFPA health hazard 2 - Intense or continued exposure could cause Temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

**HMIS III Rating**

Health 2 Moderate Hazard - Temporary or minor injury may occur

Flammability 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73° F and boiling points above 100° F. as well as liquids with flash points between 73° F and 100° F. (Classes IB & IC)

Physical 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT

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Personal Protection react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
D,n
D- Face shield and eye protection, Gloves, Synthetic apron
n - Splash goggles

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