Safety Data Sheet

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier	**MEDIUM LACQUER THINNER**
Other means of identification	
Product code	**ADV 102-53**
Recommended use	Solvent

Manufacturer/Importer/Supplier/Distributor information

Company name	INTERNATIONAL AUTOBODY MARKETING GROUP
Address	1505 NORTH HAYDEN RD, SUITE 111 SCOTTSDALE, AZ 85257 UNITED STATES
Website	www.advantagerefinish.com
Telephone	1-87-REFINISH 480.451.4451
Emergency phone number	800-424-9300 ChemTrec EMERGENCY 24 Hrs.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	Category 2
Acute toxicity (Oral)	Category 4
Acute toxicity (Inhalation)	Category 4
Acute toxicity (Dermal)	Category 4
Skin irritation	Category 2
Eye irritation	Category 2A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity - single exposure	Category 1 (Eyes, Central nervous system)

Specific target organ toxicity - single exposure	Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure (Inhalation)	Category 2 (Auditory system, Eyes)
Aspiration hazard	Category 1

GHS Label element

Hazard pictograms

Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H340 May cause genetic defects. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child. H370 Causes damage to organs (Eyes, Central nervous system). H373 May cause damage to organs (Auditory system, Eyes) through prolonged or repeated exposure if inhaled.
Precautionary statements	**Prevention:** 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 and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	64742-49-0	Naphtha (pet), hydrotreated lt
	64742-89-8	Solvent naphtha (pet), lt aliph.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

Appearance	liquid
Colour	clear, colourless
Odour	petroleum distillates
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
67-64-1	Acetone	30 - 50
67-56-1	Methanol	20 - 30
108-88-3	Toluene	20 - 30
64742-49-0	Naphtha (pet), hydrotreated lt	0 - 20
64742-89-8	Solvent naphtha (pet), lt aliph.	0 - 20
68410-97-9	Distillates, pet, lt dist hydrotreat process, low-boil	0 - 20
142-82-5	Heptane	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice

Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.

	Do not leave the victim unattended.
If inhaled	Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.
In case of skin contact	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	High volume water jet
Specific hazards during firefighting	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	No hazardous combustion products are known
Specific extinguishing methods	Use a water spray to cool fully closed containers.
Further information	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be

	stored separately in closed containments.
Special protective equipment for firefighters	Wear self-contained breathing apparatus for fire-fighting if necessary.

NFPA Flammable and Combustible Liquids Classification:
Flammable Liquid Class IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Container may be opened only under exhaust ventilation hood. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and

national regulations.

Conditions for safe storage

No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully re-sealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
67-64-1	Acetone	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		TWA	250 ppm 590 mg/m3	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m3	OSHA Z-1
		TWA	750 ppm 1,800 mg/m3	OSHA P0
		STEL	1,000 ppm 2,400 mg/m3	OSHA P0
67-56-1	Methanol	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0
108-88-3	Toluene	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA Z-2

		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m3	OSHA P0
		STEL	150 ppm 560 mg/m3	OSHA P0
64742-49-0	Naphtha (pet), hydrotreat-ed lt	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
64742-89-8	Solvent naphtha (pet), lt aliph.	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
142-82-5	Heptane	TWA	85 ppm 350 mg/m3	NIOSH REL
		C	440 ppm 1,800 mg/m3	NIOSH REL
		TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
		STEL	500 ppm 2,000 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parame-ters	Biological specimen	Sam-pling time	Permissi-ble con-centration	Basis
Acetone	67-64-1	Acetone	Urine	End of shift (As soon as possible after expo-sure ceases)	50 mg/l	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after expo-sure ceases)	15 mg/l	ACGIH BEI
Toluene	108-88-3	Toluene	In blood	Prior to last shift of	0.02 mg/l	ACGIH BEI

				work-week		
		Toluene	Urine	End of shift (As soon as possible after expo-sure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after expo-sure ceases)	0.3 mg/g Creatinine	ACGIH BEI

Health effects caused by professional use of liquid organic solvents (indicated in the table).Gastro intestinal illness caused by benzene, toluene, xylene and all products in which they are contained.Haemopathic effects caused by benzene and all products in which it is contained.

Personal protective equipment

Respiratory protection	No personal respiratory protective equipment normally required. In the case of vapour formation use a respirator with an approved filter.
Hand protection Remarks	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	clear, colourless
Odour	petroleum distillates
Odour Threshold	No data available
pH	No data available
Freezing Point	No data available
Boiling Point (Boiling point/boiling range)	56 - 150 °C (133 - 302 °F)
Flash point	>= -20 °C (-4 °F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Burning rate	No data available
Upper explosion limit	7 - 36.5 %(V)
Lower explosion limit	0.8 - 6 %(V)
Vapour pressure	231 mmHg @ 25 °C (77 °F) Calculated Vapor Pressure
Relative vapour density	No data available
Relative density	0.797
Density	0.797 g/cm3
Bulk density	No data available
Water solubility	No data available
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available

Regulatory VOC (lbs/gal)	**4.33**
Regulatory VOC (g/l)	**518.85**
Actual VOC (lbs/gal)	**6.64**
Actual VOC (g/l)	**796.00**

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Product will not undergo hazardous polymerization. Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames and sparks. Do not allow evaporation to dryness. Extremes of temperature and direct sunlight.
Incompatible materials	Acids alkalis aluminum Amines Ammonia halogens Lead Peroxides Reducing agents Strong bases Strong oxidizing agents Zinc metal salts

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	Acute toxicity estimate : 347.25 mg/kg Method: Calculation method
Acute inhalation toxicity	Acute toxicity estimate : 10.42 mg/l Exposure time: 4 h

	Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	Acute toxicity estimate : 1,042 mg/kg Method: Calculation method

Components:

67-64-1:

Acute oral toxicity	LD50 (rat): 5,800 mg/kg
Acute inhalation toxicity	LC50 (rat): 76.0 mg/l Exposure time: 4 h
Acute dermal toxicity	LD50 : > 7,426 mg/kg

67-56-1:

Acute oral toxicity	LD50 (rat): 100 mg/kg Assessment: The component/mixture is toxic after single ingestion.
Acute inhalation toxicity	LC50 (rat): 5 mg/l Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	LD50 (rabbit): 300 mg/kg Assessment: The component/mixture is toxic after single contact with skin.

108-88-3:

Acute oral toxicity	LD50 (rat, male): > 5,580 mg/kg
Acute inhalation toxicity	LC50 (rat, male and female): 28.1 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal toxicity	LD50 (rabbit): > 5,000 mg/kg

64742-49-0:

Acute oral toxicity	LD50 (rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	Remarks: No data available
Acute dermal toxicity	LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes

64742-89-8:

Acute oral toxicity	LD50 (rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	Remarks: No data available
Acute dermal toxicity	LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes

68410-97-9:

Acute oral toxicity	LD50 (rat): > 5,000 mg/kg
Acute inhalation toxicity	Remarks: No data available
Acute dermal toxicity	LD50 (rabbit): > 2,000 mg/kg

142-82-5:

Acute oral toxicity	LD50 (rat, male and female): 5,000 mg/kg Method: OECD Test Guideline 401 Symptoms: Salivation GLP: yes Remarks: Information given is based on data obtained from similar substances.
Acute inhalation toxicity	LC50 (rat, male and female): 73.5 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal toxicity	LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

67-64-1:

Species: rabbit
Exposure time: 24 h
Method: In vivo
Result: Mild skin irritation

67-56-1:

Species: rabbit
Result: No skin irritation

108-88-3:
Species: rabbit
Exposure time: 4 h
Result: Irritating to skin.

64742-49-0:
Species: rabbit
Result: Irritating to skin.

64742-89-8:
Species: rabbit
Exposure time: 4 h
Result: Irritating to skin.

68410-97-9:
Species: rabbit
Result: Irritating to skin.

142-82-5:
Species: rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: yes
Remarks: Based on a similar product formulation.

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.

Components:

67-64-1:
Species: rabbit
Result: Irritating to eyes.
Exposure time: 24 h

67-56-1:
Species: rabbit
Result: No eye irritation

108-88-3:
Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

64742-49-0:

Species: rabbit
Result: Irritating to eyes.

64742-89-8:
Species: rabbit
Result: Irritating to eyes.

68410-97-9:
Species: rabbit
Result: Irritating to eyes.

142-82-5:
Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation

Components:

67-64-1:
Test Type: Maximization test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

67-56-1:
Test Type: Maximisation Test (GPMT)
Species: guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.

108-88-3:
Test Type: Maximisation Test (GPMT)
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.
GLP: yes

64742-49-0:
Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

64742-89-8:
Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

142-82-5:
Test Type: Maximization test

Species: guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
Remarks: Based on a similar product formulation.

Germ cell mutagenicity

Components:

67-64-1:

Genotoxicity in vitro	Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: Without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative
Genotoxicity in vivo	Test Type: In vivo micronucleus test Test species: mouse Application Route: Oral Exposure time: 13 wk Dose: 5,000, 10,000, 20,000 ppm Result: negative
Germ cell mutagenicity-Assessment	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

67-56-1:

Genotoxicity in vitro	Test Type: DNA damage and/or repair Metabolic activation: with and without metabolic activation Result: Ambiguous
Genotoxicity in vivo	Test Type: In vivo micronucleus test Test species: mouse (male and female) Cell type: Bone marrow Application Route: Intraperitoneal Exposure time: Single Dose: 0, 1920, 3200, 4480 mg/kg

	Result: negative
Germ cell mutagenicity-Assessment	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
108-88-3:	
Genotoxicity in vitro	Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	Test Type: Dominant lethal assay Test species: mouse (male) Application Route: inhalation (vapour) Exposure time: 6 h/d, 5 d/wk for 8 wks Dose: 0, 100, 400 ppm Method: OECD Test Guideline 478 Result: negative
Germ cell mutagenicity-Assessment	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
64742-49-0:	
Germ cell mutagenicity-Assessment	Mutagenicity classification not possible from current data
64742-89-8:	
Germ cell mutagenicity-Assessment	Mutagenicity classification not possible from current data
68410-97-9:	
Genotoxicity in vitro	Test Type: Mammalian cell gene mutation assay Test species: mouse lymphoma cells Result: positive
Genotoxicity in vivo	Test Type: In vivo micronucleus test Test species: mouse Method: OECD Test Guideline 474 Result: positive
Germ cell mutagenicity-Assessment	Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals
142-82-5:	
Genotoxicity in vitro	Test Type: Chromosome aberration test in vitro Test species: Rat liver Metabolic activation: Without metabolic activation Method: OECD Test Guideline 473

	Result: negative
	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
Germ cell mutagenicity-Assessment	Did not show mutagenic effects in animal experiments.

Carcinogenicity

Components:

67-64-1:
Species: mouse, (female)
Application Route: Dermal
Exposure time: 365 d (90%) or 424 d (100%)
Dose: 0.1ml 90(71mg) or 100% (79mg)
Frequency of Treatment: 3 times per wk
NOAEL: 79

Result: did not display carcinogenic properties

Carcinogenicity - Assessment	Carcinogenicity classification not possible from current data.

67-56-1:

Carcinogenicity - Assessment	Suspected human carcinogens

108-88-3:
Species: rat, (male and female)
Application Route: inhalation (vapour)
Exposure time: 103 wks
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 6.5 h/d, 5 d/wk
NOAEL: No observed adverse effect level: 1,200 ppm

Method: OECD Test Guideline 453
Result: did not display carcinogenic properties
Symptoms: Erosion of nasal epithelium
GLP: yes

Carcinogenicity - Assessment	Not classifiable as a human carcinogen.

64742-49-0:

Carcinogenicity - Assessment	Not classifiable as a human carcinogen.

64742-89-8:

Carcinogenicity - Assessment	Not classifiable as a human carcinogen.

68410-97-9:
Species: mouse
NOAEL: 50 mg/kg bw/day

Method: OECD Test Guideline 451
Result: evidence of carcinogenic activity

Carcinogenicity - Assessment	: Possible human carcinogen

142-82-5:
Remarks: This information is not available.

Carcinogenicity - Assessment	Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

67-64-1:

Effects on fertility	Species: rat, male Application Route: oral Dose: 0, 5000, 10000 mg/L Frequency of Treatment: 7 days/week General Toxicity - Parent: LOAEL: 10,000 Fertility: 10,000
Effects on foetal development	Species: rat Application Route: Inhalation Dose: 0, 440, 2200, 11000 ppm Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEC: 2,200 ppm Teratogenicity: NOAEC: 11,000 ppm Embryo-foetal toxicity.: NOAEC: 2,200 ppm Method: OECD Test Guideline 414 Result: No teratogenic potential. GLP: No data available
Reproductive toxicity - Assessment	No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

67-56-1:

Effects on fertility	Test Type: Two-generation study Species: rat, male and female

	Application Route: Inhalation Dose: 0, 0.013, 0.13, 1.3 mg/L Duration of Single Treatment: 20 h General Toxicity - Parent: NOAEC: 1.3 mg/l General Toxicity F1: NOAEC: 0.13 mg/l Fertility: NOAEC: 1.3 mg/l Symptoms: Effects on postnatal development. Result: Animal testing did not show any effects on fertility.
Effects on foetal development	Species: rat Application Route: inhalation (vapour) Dose: 0, 6.65, 13.3, 26.6 mg/L Duration of Single Treatment: 20 d Frequency of Treatment: 7 hr/day General Toxicity Maternal: NOAEC: 13.3 mg/L Teratogenicity: NOAEC: 6.65 mg/L Result: Teratogenic effects.
Reproductive toxicity - Assessment	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
108-88-3:	
Effects on fertility	Test Type: Two-generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 100, 500, 2000 ppm Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: 500 ppm General Toxicity F1: NOAEC: 500 ppm Fertility: NOAEC: 2,000 ppm Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain. Method: OECD Test Guideline 416 Result: Animal testing did not show any effects on fertility. GLP: yes Test Type: Fertility Species: rat, male and female Application Route: inhalation (vapour) Dose: 0, 600, 1200 ppm Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: 600 ppm Symptoms: Decreased sperm count Result: Animal testing did not show any effects on fertility.
Effects on foetal devel-	Species: rat

opment	Application Route: inhalation (vapour) Dose: 0, 250, 750, 1500, 3000 ppm Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 750 ppm Developmental Toxicity: NOAEC: 750 ppm Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations. GLP: yes
Reproductive toxicity - Assessment	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
64742-49-0:	
Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
64742-89-8:	
Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
68410-97-9:	
Reproductive toxicity - Assessment	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.
142-82-5:	
Effects on fertility	Test Type: Two-generation study Species: rat, male and female Application Route: vapour Dose: 0, 900, 3000, 9000 ppm Frequency of Treatment: 5 days/week General Toxicity - Parent: NOAEC: 3,000 ppm General Toxicity F1: NOAEC: 3,000 ppm Fertility: NOAEC: 9,000 ppm Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain. Method: OECD Test Guideline 416 Result: No reproductive effects. GLP: yes Remarks: Information given is based on data obtained from similar substances.
Effects on foetal development	Species: mouse Application Route: inhalation (vapour) Dose: 0, 900, 3000, 9000 ppm Duration of Single Treatment: 10 d

Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 900 ppm
Developmental Toxicity: NOAEC: 3,000 ppm
Symptoms: Skeletal malformations.
Method: OECD Test Guideline 414
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity - Assessment: Animal testing did not show any effects on fertility. Embryotoxicity classification not possible from current data.

STOT - single exposure

Product: No data available

Components:

67-64-1:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

67-56-1:

Exposure routes:	Target Organs:	Assessment:	Remarks:
	Eyes, Central nervous system	Causes damage to organs., The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.	

108-88-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, cate-	

	gory 3 with narcotic effects.

64742-49-0:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

64742-89-8:No data available

68410-97-9:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

142-82-5:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

STOT - repeated exposure

Product: No data available

Components:

67-64-1: No data available

67-56-1: No data available

108-88-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Auditory system, Eyes	May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.	

64742-49-0: No data available

64742-89-8: No data available

68410-97-9: No data available

142-82-5: No data available

Repeated dose toxicity

Components:

67-64-1:
Species: mouse, male
NOAEL: 20000
Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 1250, 2500, 5000, 10000, 20000
Method: OECD Test Guideline 408
GLP: No data available

Species: mouse, female
NOAEL: 20000
LOAEL: 50000

Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 2500, 5000, 10000, 20000, 5000
Method: OECD Test Guideline 408
GLP: No data available

Repeated dose toxicity - Assessment	Causes mild skin irritation., Causes serious eye irritation.

67-56-1:
Species: mouse, male and female
NOAEL: 1.3 mg/l
Application Route: Inhalation
Exposure time: 12 mths
Number of exposures: Continuous
Dose: 0, 0.013, 0.13, 1.3 mg/L

108-88-3:
Species: rat, male and female
NOAEL: 300
Application Route: inhalation (vapour)
Exposure time: 6, 12, or 18 mths
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 30, 100, 300 ppm
Method: OECD Test Guideline 453

Repeated dose toxicity - Assessment	: Causes skin irritation.

64742-89-8:
Species: rat, male and female
NOAEL: 1402
Application Route: inhalation (vapour)
Test atmosphere: vapour
Exposure time: 13 weeks
Number of exposures: 6 hours/day, 5 days/week
Dose: 322, 1402, 9869 mg/m3
GLP: yes
Target Organs: Kidney
Symptoms: Nasal and ocular discharge

142-82-5:
Species: rat, male
NOAEL: 12470 mg/m3
Application Route: inhalation (vapour)
Exposure time: 16 wks
Number of exposures: 12 h/d, 7 d/wk
Dose: 0, 12470 mg/3

Repeated dose toxicity - Assessment	Causes skin irritation.

Aspiration toxicity

Components:

108-88-3:
Aspiration Toxicity - Category 1

64742-49-0:
May be fatal if swallowed and enters airways.

64742-89-8:
May be fatal if swallowed and enters airways.

68410-97-9:
May be fatal if swallowed and enters airways.

142-82-5:
Aspiration Toxicity - Category 1

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

67-64-1:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 6,100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 7,630 mg/l Exposure time: 48 h Test substance: Acetone
Toxicity to algae	Remarks: No data available

67-56-1:

Toxicity to fish	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	EC50 (Scenedesmus capricornutum (fresh water algae)): 22,000 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to bacteria	IC50 (activated sludge): > 1,000 mg/l End point: Growth rate Exposure time: 3 h Test Type: Static Method: OECD Test Guideline 209

108-88-3:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 (Ceriodaphnia dubia): 3.78 mg/l Exposure time: 48 h Test Type: Renewal
Toxicity to algae	EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l Exposure time: 3 h Test Type: static test
Toxicity to bacteria	IC50 (Bacteria): 84 mg/l Exposure time: 24 h Test Type: Static
Ecotoxicology Assessment	
Acute aquatic toxicity	Toxic to aquatic life.
Chronic aquatic toxicity	Toxic to aquatic life with long lasting effects.

64742-49-0:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata (green algae)): 3.71 mg/l Exposure time: 96 h
Ecotoxicology Assessment Acute aquatic toxicity	Toxic to aquatic life.
Chronic aquatic toxicity	Toxic to aquatic life with long lasting effects.

64742-89-8:

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)): 8.2 mg/l Exposure time: 96 h Test Type: semi-static test
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h Test Type: Immobilization Analytical monitoring: yes
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata (green algae)): 3.7 mg/l Exposure time: 96 h Test Type: static test
Ecotoxicology Assessment Acute aquatic toxicity	Toxic to aquatic life.
Chronic aquatic toxicity	Toxic to aquatic life with long lasting effects.

68410-97-9:

Toxicity to fish	LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Ecotoxicology Assessment Acute aquatic toxicity	Toxic to aquatic life.

Chronic aquatic toxicity	Toxic to aquatic life with long lasting effects.

142-82-5:

Toxicity to fish	LC50 (Carassius auratus (goldfish)): 4 mg/l Exposure time: 24 h Remarks: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 1.5 mg/l Exposure time: 48 h Test Type: static test Remarks: Very toxic to aquatic organisms.
Toxicity to algae	Remarks: No data available
Ecotoxicology Assessment Acute aquatic toxicity	Very toxic to aquatic life.
Chronic aquatic toxicity	Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

67-64-1:

Biodegradability	Remarks: Readily biodegradable

67-56-1:

Biodegradability	aerobic Result: Readily biodegradable. Biodegradation: 72 % Remarks: Readily biodegradable
Biochemical Oxygen Demand (BOD)	600 - 1,120 mg/g
Chemical Oxygen Demand (COD)	1,420 mg/g
BOD/COD	BOD: 600 - 1120COD: 1420
Stability in water	Hydrolysis: 91 % at19 °C(72 h) Remarks: Hydrolyses on contact with water. Hydrolyses readily.

108-88-3:

Biodegradability	Inoculum: Sewage Biodegradation: 100 % Remarks: Readily biodegradable

64742-49-0:

Biodegradability	aerobic Inoculum: activated sludge Concentration: 20 mg/l Biodegradation: 74.30 % Exposure time: 56 d GLP: yes Remarks: Inherently biodegradable.

64742-89-8:

Biodegradability	Concentration: 49.2 mg/l Result: Readily biodegradable. Biodegradation: 77 % Testing period: 2 d Exposure time: 28 d GLP: yes

142-82-5:

Biodegradability	Primary biodegradation Inoculum: activated sludge Concentration: 100 mg/l Biodegradation: 100 % Testing period: 2 d Exposure time: 25 d Remarks: Readily biodegradable

Bioaccumulative potential

Components:

67-64-1:

Partition coefficient: n-octanol/water	log Pow: -0.24

67-56-1:

Bioaccumulation	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 1.0 Exposure time: 72 d Temperature: 20 °C Concentration: 5 mg/l Remarks: This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Partition coefficient: n-octanol/water	log Pow: -0.77

108-88-3:

Partition coefficient: n-octanol/water	log Pow: 2.73

64742-49-0:

Partition coefficient: n-octanol/water	Remarks: No data available

64742-89-8:

Partition coefficient: n-octanol/water	log Pow: 2.13 - 4.85 (25 °C)

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated packaging	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN1263, PAINT RELATED MATERIAL, 3, II, Flash Point:-20 °C(-4 °F)

IMDG (International Maritime Dangerous Goods): UN1263, PAINT RELATED MATERIAL, 3, II

DOT (Department of Transportation): UN1263, PAINT RELATED MATERIAL, 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Carcinogen, Toxic by ingestion, Toxic by skin absorption, Moderate skin irritant, Moderate eye irritant, Teratogen, Reproductive hazard, Mutagen

WHMIS Classification B2: Flammable liquid
D1B: Toxic Material Causing Immediate and Serious Toxic Effects
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Toluene	108-88-3	1000	4823

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards Fire Hazard
Chronic Health Hazard
Acute Health Hazard

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

67-56-1	Methanol	28.7936 %
108-88-3	Toluene	20.7339 %
71-43-2	Benzene	0.0335 %
100-41-4	Ethylbenzene	0.0315 %
110-54-3	Hexane	0.0021 %
91-20-3	Naphthalene	0.0002 %

98-82-8	Cumene	0.0001 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

67-64-1	Acetone	39.6407 %
67-56-1	Methanol	28.7936 %
108-88-3	Toluene	20.7339 %
110-82-7	Cyclohexane	0.2711 %
71-43-2	Benzene	0.0335 %
100-41-4	Ethylbenzene	0.0315 %
1330-20-7	Mixed xylenes	0.014 %
98-82-8	Cumene	0.0001 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

108-88-3	Toluene	20.7339 %
110-82-7	Cyclohexane	0.2711 %
71-43-2	Benzene	0.0335 %
100-41-4	Ethylbenzene	0.0315 %
1330-20-7	Mixed xylenes	0.014 %
91-20-3	Naphthalene	0.0002 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

108-88-3	Toluene	20.7339 %
110-82-7	Cyclohexane	0.2711 %
71-43-2	Benzene	0.0335 %
100-41-4	Ethylbenzene	0.0315 %
1330-20-7	Mixed xylenes	0.014 %
91-20-3	Naphthalene	0.0002 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

108-88-3	Toluene	20.7339 %

US State Regulations

Massachusetts Right To Know

67-64-1	Acetone	30 - 50 %
67-56-1	Methanol	20 - 30 %
108-88-3	Toluene	20 - 30 %
71-43-2	Benzene	0 - 0.1 %

Pennsylvania Right To Know

67-64-1	Acetone	30 - 50 %
67-56-1	Methanol	20 - 30 %
108-88-3	Toluene	20 - 30 %
64742-49-0	Naphtha (pet), hydrotreated lt	0 - 20 %
64742-89-8	Solvent naphtha (pet), lt aliph.	0 - 20 %
68410-97-9	Distillates, pet, lt dist hydrotreat	0 - 20 %

	process, low-boil	
110-82-7	Cyclohexane	0.1 - 1 %
71-43-2	Benzene	0 - 0.1 %
100-41-4	Ethylbenzene	0 - 0.1 %
1330-20-7	Mixed xylenes	0 - 0.1 %

New Jersey Right To Know

67-64-1	Acetone	30 - 50 %
67-56-1	Methanol	20 - 30 %
108-88-3	Toluene	20 - 30 %
64742-49-0	Naphtha (pet), hydrotreated lt	10 - 20 %
64742-89-8	Solvent naphtha (pet), lt aliph.	10 - 20 %
68410-97-9	Distillates, pet, lt dist hydrotreat process, low-boil	10 - 20 %

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

71-43-2	Benzene
100-41-4	Ethylbenzene
91-20-3	Naphthalene
98-82-8	Cumene

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

67-56-1	Methanol
108-88-3	Toluene
71-43-2	Benzene

The components of this product are reported in the following inventories:

Switzerland. New notified substances and declared preparations		y (positive listing) (The formulation contains substances listed on the Swiss Inventory)
United States TSCA Inventory		y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)		y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)		y (positive listing) (On the inventory, or in compliance with the inventory)

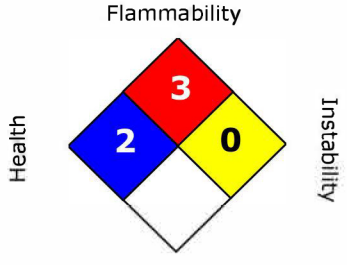
New Zealand. Inventory of Chemical Substances		n (Negative listing) (Not in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory		n (Negative listing) (Not in compliance with the inventory)
Japan. ISHL - Inventory of Chemical Substances (METI)		n (Negative listing) (Not in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)		y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)		y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)		y (positive listing) (On the inventory, or in compliance with the inventory)

Safety Data Sheet

SECTION 16. OTHER INFORMATION

Version 3.0
Revision Date 06/19/2019

NFPA:



Special hazard.

HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 =Extreme, * = Chronic

Our Company cannot anticipate under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the street was written based on the best knowledge and experience currently available.

Legecy MSDS: 000000083805

Material number:
616861, 616767

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure	OSHA	Occupational Safety & Health Admin-

	Scenario Tool		istration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philipines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Compositon, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50		Lethal Concentration 50%	