



# Pang Metal Primer

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 7/27/2023 Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : Pang Metal Primer  
Product code : 960/QT, 960/GAL, 960/5GAL, 960/QTC, 960/GC

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Adhesives  
Primer  
Restrictions on use : No additional information available

#### 1.3. Supplier

##### Manufacturer

Tech International  
200 East Coshocton Street  
Johnstown, OH 43031, USA  
1-740-967-9015  
www.tech-international.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1-703-527-3887  
Local: +1 703-741-5970

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Acute toxicity (inhalation:vapor) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 2	H351	Suspected of causing cancer
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

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Hazard statements (GHS US)	: H225 - Highly flammable liquid and vapor H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H332 - Harmful if inhaled H336 - May cause drowsiness or dizziness H351 - Suspected of causing cancer H361 - Suspected of damaging fertility or the unborn child H373 - May cause damage to organs through prolonged or repeated exposure
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 and other ignition sources. No smoking. P261 - Avoid breathing vapors. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P314 - Get medical advice/attention if you feel unwell. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Comments : The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of § 1910.1200

Name	Product identifier	%	GHS US classification
Isobutyl methyl ketone	CAS-No.: 108-10-1	≥ 55 – ≤ 60	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H336
Xylene	CAS-No.: 1330-20-7	≥ 10 – ≤ 15	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315
Titanium dioxide	CAS-No.: 13463-67-7	≥ 5 – ≤ 10	Not classified

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Name	Product identifier	%	GHS US classification
Ethylbenzene	CAS-No.: 100-41-4	≥ 1 – ≤ 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304
Formaldehyde, oligomeric reaction products with phenol	CAS-No.: 9003-35-4	≥ 1 – ≤ 5	Eye Irrit. 2A, H319 Skin Sens. 1, H317
Butanone	CAS-No.: 78-93-3	≥ 1 – ≤ 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Carbon black	CAS-No.: 1333-86-4	≥ 0.1 – < 1	Not classified
Ethanol	CAS-No.: 64-17-5	≥ 0.1 – < 1	Flam. Liq. 2, H225
Toluene	CAS-No.: 108-88-3	≥ 0.1 – < 1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash skin thoroughly with mild soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth out with water. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: Harmful if inhaled. May cause drowsiness or dizziness. In high concentrations vapors cause anesthetic and narcotic effect.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction. Redness. Itching. Swelling. Skin rash/inflammation.
Symptoms/effects after eye contact	: Causes serious eye irritation. Lacrimation. redness, itching, tears. Blurred vision.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea.
Chronic symptoms	: Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Dry powder. Carbon dioxide. Water spray. Foam. Use extinguishing agent suitable for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

- Fire hazard : Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Heating will cause a rise in pressure with a risk of bursting. In case of fire and/or explosion do not breathe fumes.
- Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Evacuate the danger area. Eliminate all ignition sources if safe to do so. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. Fight fire from safe distance and protected location. Use extinguishing media appropriate for surrounding fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing. Do not attempt to take action without suitable protective equipment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : No flames, no sparks. Eliminate all sources of ignition. Use special care to avoid static electric charges. Avoid all contact with skin, eyes, or clothing.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Evacuate unnecessary personnel. Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing vapors. Do not touch or walk on the spilled product. No action shall be taken without appropriate training or involving any personal risk.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment.
- Emergency procedures : Evacuate unnecessary personnel. Use non-sparking tools. Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Stop leak, if possible without risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Remove ignition sources. Caution : this product can cause the floor to be slippery.
- Methods for cleaning up : Move containers from spill area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Clean contaminated surfaces with an excess of water. Prevent entry to sewers and public waters. Use non-sparking tools.
- Other information : Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques. Dispose of materials or solid residues at an authorized site.

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### 6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Do not breathe vapors. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid contact during pregnancy and while nursing. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge. Use explosion-proof equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not re-use container for any purpose.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

### 7.2. 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, Strong oxidizers. Store in a dry place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food, drink and animal feedingstuffs. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in accordance with local, regional, national or international regulation. Do not store in unlabelled containers.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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No additional information available	
Isobutyl methyl ketone (108-10-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl isobutyl ketone
ACGIH OEL TWA [ppm]	20 ppm
ACGIH OEL STEL [ppm]	75 ppm
Remark (ACGIH)	TLV® Basis: URT irr; dizziness; headache. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2023
USA - ACGIH - Biological Exposure Indices	
Local name	METHYL ISOBUTYL KETONE
BEI (BLV)	1 mg/l Parameter: Methyl isobutyl ketone - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2023

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<b>Isobutyl methyl ketone (108-10-1)</b>	
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Hexone (Methyl isobutyl ketone)
OSHA PEL (TWA) [1]	410 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Xylene (1330-20-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Xylene, mixed isomers (Dimethylbenzene)
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; hematologic eff; ototoxicity (for mixtures containing p-xylene); CNS impair. Notations: OTO (for mixtures containing p-xylene); A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2023
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	XYLENES (Technical or commercial grade)
BEI (BLV)	1.5 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Xylenes (o-, m-, p-isomers)
OSHA PEL (TWA) [1]	435 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Carbon black (1333-86-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Carbon black
ACGIH OEL TWA	3 mg/m <sup>3</sup> (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Bronchitis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Carbon black
OSHA PEL (TWA) [1]	3.5 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Ethylbenzene (100-41-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Ethylbenzene
ACGIH OEL TWA [ppm]	20 ppm

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<b>Ethylbenzene (100-41-4)</b>	
Remark (ACGIH)	TLV® Basis: URT & eye irr; ototoxicity; kidney eff; CNS impair. Notations: OTO (Ototoxicant); A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2023
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	ETHYLBENZENE
BEI (BLV)	0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: Ns
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Ethyl benzene
OSHA PEL (TWA) [1]	435 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Titanium dioxide (13463-67-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Titanium dioxide
ACGIH OEL TWA	0.2 mg/m <sup>3</sup> (Nanoscale particles. R - Repirable particulate matter) 2.5 mg/m <sup>3</sup> (Finescale particles. R - Repirable particulate matter)
Remark (ACGIH)	TLV® Basis: LRT irr; pneumoconiosis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Titanium dioxide (Total dust)
OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Ethanol (64-17-5)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Ethanol
ACGIH OEL STEL [ppm]	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL (TWA) [1]	1900 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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<b>Toluene (108-88-3)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Toluene
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: CNS, visual & hearing impair; female repro system eff; pregnancy loss. Notations: OTO; A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2023
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	TOLUENE
BEI (BLV)	0.3 mg/g Kreatinin Parameter: o-Cresol (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: B 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: End of shift 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: Prior to last shift of workweek
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Toluene
OSHA PEL (TWA) [2]	200 ppm
OSHA PEL C [ppm]	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
<b>Formaldehyde, oligomeric reaction products with phenol (9003-35-4)</b>	
No additional information available	
<b>Butanone (78-93-3)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Methyl ethyl ketone (MEK)
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	300 ppm
Remark (ACGIH)	TLV® Basis: URT irr; CNS & PNS impair. Notations: BEI
Regulatory reference	ACGIH 2023
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	METHYL ETHYL KETONE
BEI (BLV)	2 mg/l Parameter: Methyl ethyl ketone - Medium: urine - Sampling time: End of shift - Notations: Ns
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	2-Butanone (Methyl ethyl ketone)
OSHA PEL (TWA) [1]	590 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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### Monitoring methods

Monitoring methods

Refer to all applicable national, international and local regulations or provisions.

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure exposure is below occupational exposure limits (where available). Handle in accordance with good industrial hygiene and safety procedures. Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Environmental exposure controls : Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the NIOSH standards and in discussion with the supplier of the protective equipment.

#### Hand protection:

Wear suitable gloves resistant to chemical penetration. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing. Skin protection appropriate to the conditions of use should be provided

#### Respiratory protection:

An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Gray
Odor	: solvent-like
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 114 – 141 °C (237 - 286 °F)
Flash point	: 14 °C (57 °F, closed cup)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: Heavier than air
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.93 g/cm <sup>3</sup>
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

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Viscosity, kinematic	: $\geq 91$ mm <sup>2</sup> /s (25 °C, 77 °F)
Viscosity, dynamic	: $\geq 85$ mPa·s (25 °C, 77 °F)
Explosion limits	: Lower explosion limit: 1 vol % Upper explosion limit: 7.5 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

VOC content	: 711 g/l (76.65 % w/w, 87.98 % v/v)
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapor. Can form explosive mixtures with air. Heating may cause a fire or explosion.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization: Will not occur.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Protect from sunlight. Overheating. Extremely high or low temperatures. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Oxidising agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

Pang Metal Primer	
ATE US (vapors)	14.086 mg/l/4h
Isobutyl methyl ketone (108-10-1)	
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
Xylene (1330-20-7)	
LD50 oral rat	3523 mg/kg
LD50 dermal rabbit	1700 mg/kg

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<b>Xylene (1330-20-7)</b>	
LC50 Inhalation - Rat [ppm]	5100 ppmV/4h
ATE US (oral)	3523 mg/kg body weight
ATE US (dermal)	1700 mg/kg body weight
ATE US (gases)	5100 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
<b>Carbon black (1333-86-4)</b>	
LD50 oral rat	> 15400 mg/kg
LD50 oral	8000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
<b>Ethylbenzene (100-41-4)</b>	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	15400 mg/kg
LC50 Inhalation - Rat (Vapours)	17.8 mg/l/4h
ATE US (oral)	3500 mg/kg body weight
ATE US (dermal)	15400 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	17.8 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
<b>Toluene (108-88-3)</b>	
LD50 oral rat	5000 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 Inhalation - Rat	25.7 mg/l
ATE US (oral)	5000 mg/kg body weight
ATE US (dermal)	12000 mg/kg body weight
ATE US (vapors)	25.7 mg/l/4h
ATE US (dust, mist)	25.7 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
<b>Isobutyl methyl ketone (108-10-1)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>Xylene (1330-20-7)</b>	
IARC group	3 - Not classifiable

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<b>Carbon black (1333-86-4)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>Ethylbenzene (100-41-4)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>Titanium dioxide (13463-67-7)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>Ethanol (64-17-5)</b>	
IARC group	1 - Carcinogenic to humans
<b>Toluene (108-88-3)</b>	
IARC group	3 - Not classifiable
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: May cause drowsiness or dizziness.
<b>Isobutyl methyl ketone (108-10-1)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
<b>Toluene (108-88-3)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
<b>Butanone (78-93-3)</b>	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
<b>Carbon black (1333-86-4)</b>	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0071 mg/l air (rat, male)
NOAEL (oral, rat, 90 days)	> 1000 mg/kg body weight (rat, OECD408, Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0011 mg/l air (rat, male)
<b>Ethylbenzene (100-41-4)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>Toluene (108-88-3)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Viscosity, kinematic	: $\geq 91 \text{ mm}^2/\text{s}$ (25 °C, 77 °F)
Symptoms/effects after inhalation	: Harmful if inhaled. May cause drowsiness or dizziness. In high concentrations vapors cause anesthetic and narcotic effect.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction. Redness. Itching. Swelling. Skin rash/inflammation.
Symptoms/effects after eye contact	: Causes serious eye irritation. Lacrimation. redness, itching, tears. Blurred vision.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea.
Chronic symptoms	: Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.
Other information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Do not allow product to spread into the environment.

<b>Xylene (1330-20-7)</b>	
LC50 - Fish [1]	2.6 mg/l
EC50 - Crustacea [1]	1.8 mg/l Daphnia magna
EC50 72h - Algae [1]	3.2 mg/l
<b>Carbon black (1333-86-4)</b>	
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna
<b>Ethylbenzene (100-41-4)</b>	
LC50 - Fish [1]	5.1 Menidia menidia
EC50 - Crustacea [1]	1.8 – 2.4 mg/l Daphnia magna
EC50 72h - Algae [1]	4.9 mg/l Skeletonema costatum
<b>Titanium dioxide (13463-67-7)</b>	
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

#### 12.2. Persistence and degradability

<b>Pang Metal Primer</b>	
Persistence and degradability	Biodegradability in water: no data available.
<b>Xylene (1330-20-7)</b>	
Persistence and degradability	Readily biodegradable.
<b>Carbon black (1333-86-4)</b>	
Not rapidly degradable	
<b>Ethylbenzene (100-41-4)</b>	
Persistence and degradability	Readily biodegradable.
Biodegradation	70 – 80 % 28d

#### 12.3. Bioaccumulative potential

<b>Pang Metal Primer</b>	
Bioaccumulative potential	No data available concerning bioaccumulation.
<b>Xylene (1330-20-7)</b>	
Bioconcentration factor (BCF REACH)	>8.1-<25.9

#### 12.4. Mobility in soil

<b>Pang Metal Primer</b>	
Ecology - soil	No additional information available.

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### Xylene (1330-20-7)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73
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### 12.5. Other adverse effects

Other adverse effects : No other effects known.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not dispose of the packaging without first carrying out the necessary cleaning. Do not pierce or burn, even after use.
Additional information	: Flammable vapors may accumulate in the container.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

DOT NA No	: UN1133
UN-No. (TDG)	: UN1133
UN-No. (IMDG)	: 1133
UN-No. (IATA)	: 1133

### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Adhesives
Proper Shipping Name (TDG)	: ADHESIVES
Proper Shipping Name (IMDG)	: ADHESIVES
Proper Shipping Name (IATA)	: Adhesives

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT)	: 3
Hazard labels (DOT)	: 3



#### TDG

Transport hazard class(es) (TDG)	: 3
Hazard labels (TDG)	: 3



#### IMDG

Transport hazard class(es) (IMDG)	: 3
Hazard labels (IMDG)	: 3

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### IATA

Transport hazard class(es) (IATA) : 3  
Hazard labels (IATA) : 3



### 14.4. Packing group

Packing group (DOT) : II  
Packing group (TDG) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN1133  
DOT Special Provisions (49 CFR 172.102) : 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packaging may be increased to 5 L (1.3 gallons).  
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.  
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.  
T4 - 2.65 178.274(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 =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf 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).  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 173  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L  
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.

#### TDG

UN-No. (TDG) : UN1133  
Explosive Limit and Limited Quantity Index : 5 L  
Excepted quantities (TDG) : E2

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Passenger Carrying Road Vehicle or Passenger : 5 L  
Carrying Railway Vehicle Index  
Emergency Response Guide (ERG) Number : 128

**IMDG**  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
Packing provisions (IMDG) : PP1  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP8  
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS  
EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS  
Stowage category (IMDG) : B  
Properties and observations (IMDG) : Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.

**IATA**  
PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 353  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
Special provision (IATA) : A3  
ERG code (IATA) : 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Isobutyl methyl ketone	CAS-No. 108-10-1	≥ 55 – ≤ 60%
Xylene	CAS-No. 1330-20-7	≥ 10 – ≤ 15%
Ethylbenzene	CAS-No. 100-41-4	≥ 1 – ≤ 5%
Toluene	CAS-No. 108-88-3	≥ 0.1 – < 1%

### Isobutyl methyl ketone (108-10-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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### Xylene (1330-20-7)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	100 lb
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### Ethylbenzene (100-41-4)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
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### Toluene (108-88-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
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### Butanone (78-93-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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## 15.2. International regulations

### CANADA

#### Isobutyl methyl ketone (108-10-1)

Listed on the Canadian DSL (Domestic Substances List)

#### Xylene (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

#### Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Ethylbenzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Titanium dioxide (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

#### Ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Toluene (108-88-3)

Listed on the Canadian DSL (Domestic Substances List)

#### Formaldehyde, oligomeric reaction products with phenol (9003-35-4)

Listed on the Canadian DSL (Domestic Substances List)

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### Butanone (78-93-3)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

#### Isobutyl methyl ketone (108-10-1)

Listed on IARC (International Agency for Research on Cancer)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Xylene (1330-20-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Carbon black (1333-86-4)

Listed on IARC (International Agency for Research on Cancer)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Titanium dioxide (13463-67-7)

Listed on IARC (International Agency for Research on Cancer)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Toluene (108-88-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Formaldehyde, oligomeric reaction products with phenol (9003-35-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### Butanone (78-93-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations



#### WARNING:

This product can expose you to Methyl isobutyl ketone, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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### SECTION 16: Other information

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Data sources : ECHA (European Chemicals Agency). Supplier's safety documents.

Training advice : Training staff on good practice.

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level

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<b>Abbreviations and acronyms</b>	
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.