

Material Safety Data Sheet


Product name

9009 Opaque PU NEON

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	9009 Opaque PU NEON
Recommended use of the chemical and restrictions on use	
Recommended use	Not available
Restrictions on use	Not available
available Supplier	
Name	FDC Graphic Films, Inc.
Address	3820 William Richardson Dr. South Bend, IN 46628
Telephone No	(Tel) 800-634-7523

2. HAZARDS IDENTIFICATION

Hazard Classification	<p>Flammable liquid: Category 2</p> <p>Self-heating substances and mixtures: Category 1</p> <p>Serious eye damage / eye irritation: Category 1</p> <p>Carcinogenic: Category 2</p> <p>Reproductive toxicity: Category 1B</p> <p>Specific target organ toxicity (single exposure): Category 1</p> <p>Specific target organ toxicity (repeated exposure): Category 1</p>
Label elements including precautionary statements	
Symbol	
Signal word	Danger
Hazard statements	<p>H225 Highly flammable liquid and vapor</p> <p>H251 Self-heating; It may catch fire</p> <p>H318 Causes serious eye damage</p> <p>H351 Suspected of causing cancer</p> <p>H360 May cause damage to the fetus or reproductive ability</p> <p>H370 Causes damage to the body of the (...)</p> <p>If prolonged or repeated exposure H372 Causes damage to (...) of the body</p>
Precautionary statements	
Prevention	<p>P201 Obtain special instructions before use.</p> <p>All safety precautions have been read and understood</p> <p>P202 Do not handle</p>



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

P233 Keep container tightly closed.

And maintain a low temperature P235 + P410 Avoid direct sunlight.



Bonded to the container and receiving equipment P240 Keep or ground.

Prevention

P241 explosion-proof electrical, ventilating, lighting, (...), please use the equipment.
 Please use only non-sparking tools P242.
 P243 Take precautionary measures against static discharge.
 (A) to P260 (dust, fumes, gas, vapor, mist, spray) Do not breathe.
 P264 Wash thoroughly after handling the treated area.
 When using this product P270 Do not eat, drink, or smoke.
 Wear P280 (eye or face protection, protective gloves, protective) (a).

Corresponding off.

P303 + P361 + P353 IF ON SKIN (or hair) all contaminated clothing IF ON Take
 off.
 Rinse skin with water / shower.
 Wash IF ON P305 + P351 + P338 eyes cautiously with water for several minutes. Remove contact lenses, if possible. Continue rinsing.
 P308 + P311 If exposed or concerns, call a poison center or physician.
 P308 + P313 If exposed or concerned about exposure Get medical attention.
 P310 Immediately call a poison center or physician.
 If you feel uncomfortable P314 Get medical attention.
 Keep the P321 (...) treatment.

Storage

To turn off the lights when P370 + P378 fire (...) to (a) Please use.
 Keep the P403 + P235 Keep cool and well-ventilated.
 Store in a storage place with P405 lock.
 Please maintain the distance between P407 cargo.
 Since the P413 highly reactive substances (...) while it is kept in kg or more (...) Please be careful not to exceed °C.
 P420 Store in the quarantine and other materials.

Disposal

(Depending on the content specified in the relevant legislation) P501
 Dispose of contents of the container.

Hazard classification not included in other Hazard (NFPA)

Carbon Black

Health	Not available
Fire	Not available
Reactivity	Not available

Dimethylformamide

Health	2
Fire	2
Reactivity	0

Methylethylketone

Health	1
Fire	3
Reactivity	0

POLY URETHANE RESIN

Health	Not available
Fire	Not available
Reactivity	Not available

SATURATED COPOLYESTER RESIN

Health	Not available
Fire	Not available
Reactivity	Not available



3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	Synonym	CAS No	Content (%)
C.I. PIGMENT FLUORESCENT		Trade secret	1~15
Dimethylformamide	N, N-Dimethylformamide Dimethyl formamide	68-12-2	1~15
Methylethylketone	N, N-Dimethylformamide Methylethylketone 2-Butanone Methyl ethyl ketone (M.E.K) Methyl ethyl ketone (M.E.K)	78-93-3	1~10
POLY URETHANE RESIN		Trade secret	10~30
SATURATED COPOLYESTER RESIN		Trade secret	30~60

4. FIRST AID MEASURES

In case of eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if possible. Continue rinsing. : Get emergency medical aid
In case of skin contact /	SKIN (or hair) all contaminated clothing IF ON Take off. Rinse skin with water shower. If you feel uncomfortable Get medical attention. Remove contaminated clothing and shoes and please isolate the contaminated area Prevent the spread when contaminated sites please contact Minor skin For a long time burned, immediately cool the affected area as soon as possible with cold water, clothes stuck to the skin. Do not remove Wash skin with soap and water
If inhaled	Immediately call a poison center or physician. Please move to a place with fresh air.
If swallowed	Exposure or exposure concerns Get medical attention. If eaten or inhale the substance, not the artificial respiration mouth-to-resuscitation Please use appropriate respiratory medical equipment
Other medical attention	Contact staff when exposed to document and keep track of such investigations. Keep medical personnel to recognize and take protective measures for those substances

5. FIRE – FIGHTING MEASURES

Proper (improper) extinguishing	
Proper (improper) extinguishing spray	This material digestion associated with alcohol foam, carbon dioxide or water should be used Choking digestion, dry sand or earth should be used to
Specific hazards arising from the chemical	
Specific hazards arising from the chemical	Highly flammable liquid and vapor Unstable at room temperature. Vigorous polymerization reaction that can cause an explosion and fire Vapors may be ignited replaces the ignition source Irritation and highly toxic gases by thermal decomposition or combustion can occur while riding Flash point or more can form an explosive mixture



Containers may explode when heated
Highly flammable: heat, sparks, readily ignited by the flame
Water may leak a fire / explosion hazard
Even after digestion can be re-
ignition Upon contact with
moisture can call



Firefighters should wear protective equipment and precaution

Indoor, outdoor, that the risk of steam explosions in sewers
 Flammable / combustible materials
 Some materials can fast flash, but are not easy to ignite
 Vapors can form explosive mixtures with air
 Some may decompose explosively when to fire or heating
 Nonflammable, substance itself decomposes when heated, but the ride may cause corrosive / toxic fumes

C.I. PIGMENT FLUORESCENT

Rescuer Wear proper protective equipment.

C.I. PIGMENT FLUORESCENT

Keep out of the area digestion by keeping a safe distance
 Is melted to a temperature above the flashpoint Please be aware that shipping After the tank fire fighting Evolution Make Cool containers with plenty of water
 Or highs in the tank fire and pressure relief device you retire immediately if any discoloration of tanks
 Please step away from tanks engulfed in fire and flames tank
 For large fire tank fire Please leave ridden back off if using the device unattended digestion impossible
 Rescuer Wear proper protective equipment.
 Keep out of the area by keeping a safe distance be
 Most of the Vapors can spread along the ground heavier than air and accumulate in low areas and confined spaces
 Extinguishing tank fire from maximum distance or when unattended please use the firefighting equipment
 After the tank fire fighting Evolution Make Cool containers with plenty of water
 Or highs in the tank fire and pressure relief device you retire immediately if any discoloration of tanks
 Please step away from tanks engulfed in fire and flames tank
 For large fire tank fire Please leave ridden back off if using the device unattended digestion impossible

Dimethylformamide

Methyl ethyl ketone

Rescuer Wear proper protective equipment.
 Keep out of the area digestion by keeping a safe distance
 Most of the Vapors can spread along the ground heavier than air and accumulate in low areas and confined spaces
 If it's not dangerous Move containers from fire area
 It may be freezing when exposed to direct tank fire. Do not douche won or safety devices
 Extinguishing tank fire from maximum distance or when unattended please use the firefighting equipment
 After the tank fire fighting Evolution Make Cool containers with plenty of water
 Or highs in the tank fire and pressure relief device you retire immediately if any discoloration of tanks
 Please step away from tanks engulfed in fire and flames tank
 For large fire tank fire Please leave ridden back off if using the device unattended digestion impossible

POLY URETHANE RESIN available
 SATURATED COPOLYESTER RESIN available Not



6. ACCIDENTAL RELEASE MEASURES

Personal precautions and emergency procedures	<p>(Dust, fumes, gas, vapor, mist, spray) to (a) Do not breathe. Very fine particles can cause a fire or explosion • Remove all sources of ignition.</p> <p>Wipe spills immediately that, PROTECTION. Follow the protest precautions.</p> <p>Please isolate the contaminated area. Or need to get people who do not meet the protective equipment Do not allow. Remove all sources of ignition. Please be sure to ground all equipment when handling the material Stop the leak if you can do it without risk Do not touch damaged containers or leaked water without wearing adequate protection It can be used for vapor suppression foam to reduce the steam generating When there is no fire, leak Wear protective front of the steam-type protection Please spread a plastic sheet covering the Max</p>
Environmental precautions	<p>Please note that materials and conditions to avoid Waterways, sewers, basements, prevent entry into confined spaces Built a levee for digestion Please collect the water.</p>
Methods for cleaning up	<p>Absorb the spill with inert material (i.e., dry sand or dirt) and put a chemical waste container. Absorb the liquid and wash contaminated area with water and detergent. Dry sand / soil and Cover with plastic sheet to prevent spreading and contact with the back covered with a non-combustible material Blinded and liquid spills large spill to Make a ditch Use explosion-proof tools clean and place in covered plastic containers to collect the spillage and loose Using clean-proof tool Please collect the absorbed matter</p>

7. HANDLING AND STORAGE

Handling	<p>Do not handle until all safety precautions have been read and understood. Explosion-proof electrical, ventilating, lighting, (...), please use the equipment. Please use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling the treated area. Or eat when using this product Do not eat, drink, or smoke. The pressure, or cutting, welding, soldering, bonding, drilling, grinding Do not expose the uncovered or heat, flame, sparks, static electricity, or other sources of ignition. After the container is emptied because it may retain product residues. Follow all MSDS / Label precautions. Please use care in handling / storage. Please carefully open the cap before opening. Without proper ventilation. Do not enter the storage area. Please be sure to ground all equipment when handling the material Please note that materials and conditions to avoid Please note column To reduce the risk of oxygen deficiency when working in confined spaces Please lowlands working on the air concentration measurements of oxygen and ventilation</p>
Conditions for safe storage	<p>Heat, flames, sparks · Keep away from hot surfaces. - No smoking. Keep container tightly closed.</p>



Avoid direct sunlight and maintain a low temperature.
Keep in a well-ventilated place. Keep cool.
Store in a locked storage area.



Please maintain the distance between the cargo.

Since the highly reactive substances (...) while it is kept in kg or more (...) Please be careful not to exceed °C.

Please keep in isolation with other substances.

Empty drums are completely drained and properly prevents back into place immediately, please drums regulator properly placed.

Keep away from food and beverages.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits of chemical and biological exposure limits, etc.

National regulations

C.I. PIGMENT FLUORESCENT	TWA - 3.5mg/m ³
Dimethylformamide	TWA - 10ppm 30mg/m ³ (Skin)
Methyl ethyl ketone	TWA - 200ppm 590mg/m ³ STEL - 300ppm
885mg/m ³ POLY URETHANE RESIN	Not available
SATURATED COPOLYESTER RESIN	Not available

ACGIH regulations

C.I. PIGMENT FLUORESCENT	TWA 3 mg / m ³
Dimethylformamide	TWA 10 ppm
Methyl ethyl ketone	TWA 200 ppm
Methyl ethyl ketone	STEL 300 ppm
POLY URETHANE RESIN	Not available
SATURATED COPOLYESTER RESIN	Not available

available

Biological exposure limits

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	15 mg / L (N-Methyl formamide urine, collected at the end of work), 40 mg / L (urine of N-Acetyl-S- (N-methyl carbamoyl) cysteine, weekend work harvested at the end)
Methyl ethyl ketone	2 mg / L (urine of MEK, taken at the end of work)
POLY URETHANE RESIN	Not available
SATURATED COPOLYESTER RESIN	Not available

Engineering Controls

Use process isolation, local exhaust ventilation, or other engineering controls to control Keep the air levels below the exposure guidelines.

Engineering Controls

Save this material, or equipment that is used below to install the safety shower and washing equipment.

Personal Protection

Respiratory Protection

Dimethylformamide	Skin
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Appearance	Solid, Film
Color	Neon Orange
Odor	Not available
Odor threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper / lower flammability or explosive limits	Not available



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Not available Vapor pressure
available

Not

Solubility

Not available



Vapor density	Not available
Specific gravity	Not available
n-octanol / water partition coefficient	Not available
available Ignition temperature	Not available
available	
Decomposition temperature	Not available
Viscosity	Not available
Molecular Weight	Not available

C.I. PIGMENT FLUORESCENT

Appearance	
Appearance	Not available
Color	Neon Orange
Odor	Odorless
Odor threshold	Not available
pH	(Not available)
Melting point / freezing point	(About 3550 °C)
Initial boiling point and boiling range	4200 °C
Flash point	> 500 °C
Evaporation rate	(Not applicable)
Flammability (solid, gas)	Not applicable
available Upper / lower flammability or explosive limits	
Not available Vapor pressure	Not available
available	
Solubility	(Not melt)
Vapor density	(Not applicable)
Specific gravity	1.7-2.1
n-octanol / water partition coefficient	Not available
available Ignition temperature	900 °C
Decomposition temperature	Not available
Viscosity	Not available
Molecular Weight	12.01

Dimethylformamide

Appearance	
Appearance	Liquid
Color	Colorless to yellow
Odor	Fishy
Odor threshold	300 mg/m ³
pH	6.7 (0.5mol / L aqueous solution)
Melting point / freezing point	-61 °C
Initial boiling point and boiling range	153 °C
Flash point	58 °C (c.c.)
Evaporation rate	<1 (butyl acetate = 1)
Flammability (solid, gas)	Not applicable
Upper / lower flammability or explosive limits	15.2 / 2.2 %
(100 °C) Vapor pressure	3.87 mmHg (25°C)
Solubility	(Availability)

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Vapor density	2.5 (air = 1)
Specific gravity	0.95 (water=1)
n-octanol / water partition coefficient	-0.87



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Ignition temperature	445 °C
Decomposition temperature	Not available
Viscosity	0.802 cP (25°C)
Molecular Weight	73.09

Methyl ethyl

ketone

Appearance

Appearance	Liquid
Color	Colorless
Odor	Minty, sweet odor
Odor threshold	20 ppm
pH	Not available
Melting point / freezing point	-86 °C
Initial boiling point and boiling range	80 °C
Flash point	-9 °C (c.c.)

Evaporation rate	2.7 (ether = 1)
Flammability (solid, gas)	Not available
Upper / lower flammability or explosive limits	11.5 /
1.8 % Vapor pressure	90.6 mmHg (25°C)
Solubility	29 g/100ml (20°C)
Vapor density	2.41 (air=1)
Specific gravity	0.8 (water=1)
n-octanol / water partition coefficient	0.29
Ignition temperature	505 °C
Decomposition temperature	Not available
Viscosity	0.40 CP (25°C)
Molecular Weight	72.11

POLY URETHANE RESIN

Appearance

Appearance	Liquid
Color	Colorless to yellow
Odor	Fishy
Odor threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper / lower flammability or explosive limits	Not available
Vapor pressure	Not available
Solubility	Not available
Vapor density	Not available
Specific gravity	Not available



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n-octanol / water partition coefficient	Not available
Ignition temperature	Not available
Decomposition temperature	Not available



Viscosity	Not available
Molecular Weight	Not available

SATURATED COPOLYESTER RESIN

Appearance	
Appearance	Pale granules
Color	yellow
Odor	Odorless
Odor threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper / lower flammability or explosive limits	Not available
Vapor pressure (1732°C)	<1 mmHg(20°C)
Solubility	Not available
Vapor density	Not available
Specific gravity	Not available
n-octanol / water partition coefficient	Not available
available Ignition temperature	Not available
available	
Decomposition temperature	Not available
Viscosity	0.73 ± 0.03 dl/g
Molecular Weight	Not available

10. STABILITY AND REACTIVITY

Chemical stability and the possibility of adverse reactions

C.I. PIGMENT FLUORESCENT	Can be decomposed at a high temperature generates a toxic gas
C.I. PIGMENT FLUORESCENT	Unstable at room temperature.
C.I. PIGMENT FLUORESCENT	Friction, heat, sparks can be ignited by a flame
C.I. PIGMENT FLUORESCENT	Powder, exploding into dust, debris, drilling, lathe, cutting, etc., or that can explosively
C.I. PIGMENT FLUORESCENT	Even after digestion can be re-ignition
C.I. PIGMENT FLUORESCENT	Flammable / combustible materials
C.I. PIGMENT FLUORESCENT	Some materials can fast flash
C.I. PIGMENT FLUORESCENT	Molten material that upon contact with the skin can cause serious burns to eyes
C.I. PIGMENT FLUORESCENT	Contact with the skin can cause burns to the eyes
C.I. PIGMENT FLUORESCENT	In case of fire may cause an irritating and toxic
gases Dimethylformamide	Flammable liquid and vapor
Dimethylformamide	Vigorous polymerization reaction that can cause an explosion and
fire Dimethylformamide	Flash point or more can form an explosive mixture
Dimethylformamide	Containers may explode when heated
Dimethylformamide	Highly flammable: heat, sparks, readily ignited by the
flame Dimethylformamide	Water may leak a fire / explosion hazard



COUNT ON US

Dimethylformamide

sewers Dimethylformamide

Dimethylformamide

ignition Dimethylformamide

Indoor, outdoor, that the risk of steam explosions in

Vapors can form explosive mixtures with air

Vapors can backfire (flash back), go to the source of

There may be toxic by inhalation and skin absorption



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Methyl ethyl ketone	Highly flammable liquid and vapor
Methyl ethyl ketone	Vigorous polymerization reaction that can cause an explosion and
fire Methyl ethyl ketone	Flash point or more can form an explosive mixture
Methyl ethyl ketone	Containers may explode when heated
Methyl ethyl ketone	Highly flammable: heat, sparks, readily ignited by the
flame Methyl ethyl ketone	Water may leak a fire / explosion hazard
Methyl ethyl ketone	Indoor, outdoor, that the risk of steam explosions in
sewers Methyl ethyl ketone	Vapors can form explosive mixtures with air
Methyl ethyl ketone	Vapors can backfire (flash back), go to the source of
ignition Methyl ethyl ketone	Vapors may cause dizziness or asphyxiation without
awareness POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available
Methyl ethyl ketone	Irritation to skin and eyes and if inhaled or in contact with icing
Conditions to avoid	
C.I. PIGMENT FLUORESCENT	Friction, heat, sparks, flame
C.I. PIGMENT FLUORESCENT	Heat, sparks, open flame ignition sources such as
C.I. PIGMENT FLUORESCENT	Drilling, lathe cutting, such as dust and debris generated
Dimethylformamide	Heat, flames, sparks · Keep away from hot surfaces. – No
smoking. Methyl ethyl ketone	Heat, flames, sparks · Keep away from hot surfaces. – No
smoking. POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available
Materials to avoid	
C.I. PIGMENT FLUORESCENT	Not available
available Dimethylformamide	Not available
available Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	
Hazardous decomposition products	
C.I. PIGMENT FLUORESCENT	Pungent, toxic gas
Dimethylformamide	Irritation and highly toxic gases by thermal decomposition or combustion can occur while riding
Methyl ethyl ketone	Irritation and highly toxic gases by thermal decomposition or combustion can occur while riding
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

C.I. PIGMENT FLUORESCENT	It may cause
irritation. Dimethylformamide	Not available
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

Health Hazard

Information Acute

Toxicity

oral

C.I. PIGMENT FLUORESCENT	LD50 15400 mg/kg Rat
Dimethylformamide	LD50 2800 mg/kg Rat
Methyl ethyl ketone	LD50 2737 mg/kg Rat

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POLY URETHANE RESIN Not
available ATURATED COPOLYESTER RESIN Not
available Transdermal

C.I. PIGMENT FLUORESCENT	LD50 3000 mg/kg Rabbit
Dimethylformamide	LD50 4720 mg/kg Rabbit
Methyl ethyl ketone	LD50 6480 mg/kg Rabbit



COUNT ON US

POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available inhale

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Steam LC50 9400 mg / m³ 2 hr. Mouse (4.7mg / L 4 hours, less than 90% of the estimated steam saturation vapor pressure)

Methyl ethyl ketone Vapor LC50 32 mg / l 4 hr. Mouse
POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available

Skin corrosion or irritation

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Non-irritating (Rabbit),

Methyl ethyl ketone Mild (Human)
POLY URETHANE RESIN Moderate irritation (Rabbit)
available ATURATED COPOLYESTER RESIN Not available

Serious eye damage or irritation

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Severe irritation (Rabbit)

Methyl ethyl ketone It appears not to be irritating by vapor exposure in humans.
POLY URETHANE RESIN Not available
ATURATED COPOLYESTER RESIN Not available

Respiratory sensitization

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Not available
Methyl ethyl ketone Not available
POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available

Skin sensitization

C.I. PIGMENT FLUORESCENT Not available

available Dimethylformamide Not available

Methyl ethyl ketone Not available
POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available

Carcinogenic

Occupational Health and Safety Act

C.I. PIGMENT FLUORESCENT Not available

available Dimethylformamide Not available

Methyl ethyl ketone Not available
POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available

Ministry of Employment and Labor Notice

C.I. PIGMENT FLUORESCENT 2

Dimethylformamide Not available

Methyl ethyl ketone Not available
POLY URETHANE RESIN Not available
available ATURATED COPOLYESTER RESIN Not available



COUNT ON US
available IARC

C.I. PIGMENT FLUORESCENT	2B
Dimethylformamide	3
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not
available ATURATED COPOLYESTER RESIN	Not
available OSHA	
C.I. PIGMENT FLUORESCENT	Not
available Dimethylformamide	Not
available	
Methyl ethyl ketone	Not available



COUNT ON US

POLY URETHANE RESIN Not
 available ATURATED COPOLYESTER RESIN Not
 available ACGIH

C.I. PIGMENT FLUORESCENT A3

Dimethylformamide A4

Methyl ethyl ketone Not available

POLY URETHANE RESIN Not
 available ATURATED COPOLYESTER RESIN Not
 available NTP

C.I. PIGMENT FLUORESCENT Not

available Dimethylformamide Not

available

Methyl ethyl ketone Not available

POLY URETHANE RESIN Not
 available ATURATED COPOLYESTER RESIN Not
 available EU CLP

C.I. PIGMENT FLUORESCENT Not

available Dimethylformamide Not

available

Methyl ethyl ketone Not available

POLY URETHANE RESIN Not
 available ATURATED COPOLYESTER RESIN Not
 available

Germ cell mutagenicity

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Mutagenicity testing positive in vivo somatic

Methyl ethyl ketone Mammalian erythrocyte micronucleus test using

Voice POLY URETHANE RESIN Not available

ATURATED COPOLYESTER RESIN Not

available Reproductive toxicity

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide * Employment and Labor Notice 1B

Methyl ethyl ketone by inhalation exposure in rats showed delayed bone abnormalities, mutations of the fetus is not determined.

POLY URETHANE RESIN Not

available ATURATED COPOLYESTER RESIN Not

available

Specific target organ toxicity (single exposure)

C.I. PIGMENT FLUORESCENT Not available

Dimethylformamide Eating disorder in humans, vomiting, abdominal, lumbar, followed by pain in the thigh showing symptoms also disappeared fibrosis of the liver, it appears like a wall thickening in the lung ground cherry in experimental animals

Methyl ethyl ketone in the rat or mouse inhalation exposure test results appear in the relatively low concentration the effect on the central nervous system.

It appears also affect the kidneys at concentrations in the rat courtyard. This prayer appears irritant by inhalation exposure in humans.

POLY URETHANE RESIN Not

available ATURATED COPOLYESTER RESIN Not

available

Specific target organ toxicity (repeated exposure)

C.I. PIGMENT FLUORESCENT The impact of waste on the reference value in the range of Category 1 and pneumoconiosis in the rat inhalation studies of people (epidermal hyperplasia, growth, pulmonary fibrosis, cell proliferation of lung ground cherry, etc.)

Dimethylformamide Causes irregular liver function in humans, hepatocellular hypertrophy in experimental animals' centrality of Futaba, acute hepatocellular injury, SGPT and SGOT activity



Methyl ethyl ketone

rises, appears in the pathologic changes in the liver of young animals
It appears the sensation of numbness in the hands and arms person.
It appears central nervous disorder.

POLY URETHANE RESIN Not
available ATURATED COPOLYESTER RESIN Not
available

Aspiration Hazard

C.I. PIGMENT FLUORESCENT Not available



COUNT ON US

Dimethylformamide	Not available
Methyl ethyl ketone	Ketones less than 13 carbon atoms
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

12. Impact on the environment

Ecotoxicity

Fish

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	LC50 7100 mg/ℓ 96 hr. Lepomis macrochirus
Methyl ethyl ketone	LC50 3220 mg/ℓ 96 hr. Pimephales
PROMELAS POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

C.I. PIGMENT FLUORESCENT	EC50 5600 mg/ℓ 24 hr.
Dimethylformamide	EC50 4500 mg/ℓ 48 hr. Daphnia magna
Methyl ethyl ketone	EC50 5091 mg/ℓ 48 hr. Daphnia magna
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	EC50 > 500 mg/ℓ 96 hr. Scenedesmus subspicatus
Methyl ethyl ketone	EC50 > 500 mg/ℓ 96 hr. Skeletonema costatum
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

Persistence and degradability

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	log Kow -0.87
Methyl ethyl ketone	log Kow 0.29
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	Not available
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

Bio accumulative

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	BCF 0.3 ~ 1.2
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available
C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	100 (%) 14 days



Methyl ethyl ketone

89 (%) 20 days

Mobility in soil

C.I. PIGMENT FLUORESCENT

Not available



COUNT ON US

Dimethylformamide	Not available
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	
Other adverse effects	
C.I. PIGMENT FLUORESCENT	Not available
available Dimethylformamide	Not available
available	
Methyl ethyl ketone	Not available
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

13. Disposal Considerations

Methods of disposal

C.I. PIGMENT FLUORESCENT	If specified in the Waste Management Act Dispose of contents and container in accordance with regulations.
in	
Dimethylformamide	If specified in the Waste Management Act Dispose of contents and container in accordance with regulations.
Methyl ethyl ketone	1) Keep treated with neutralization and hydrolysis and oxidation and reduction. 2) Keep the high temperature incineration or hot-melt processing. 3) Keep the solidification process.
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

Disposal Considerations

C.I. PIGMENT FLUORESCENT	(Depending on the content specified in the relevant legislation) Dispose of the container contents.
the	
Dimethylformamide	(Depending on the content specified in the relevant legislation) Dispose of the container contents.
Methyl ethyl ketone	(Depending on the content specified in the relevant legislation) Dispose of the container contents.
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

14. TRANSPORT INFORMATION

UN No.

C.I. PIGMENT FLUORESCENT	1361
Dimethylformamide	2265
Methyl ethyl ketone	1193
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

Proper Shipping Name

C.I. PIGMENT FLUORESCENT	Carbon (the flora and fauna personal) (CARBON animal or vegetable origin)
Dimethylformamide	N, N- dimethylformamide (N, N-DIMETHYLFORMAMIDE)
Methyl ethyl ketone	Ethyl methyl ketone (methyl ethyl ketone) (METHYL ETHYL KETONE (METHYL ETHYL KETONE))
POLY URETHANE RESIN	Not available
available ATURATED COPOLYESTER RESIN	Not available
available	

Hazard class

C.I. PIGMENT FLUORESCENT	4.2
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COUNT ON US

Dimethylformamide	3	
Methyl ethyl ketone	3	
POLY URETHANE RESIN	Not	
available ATURATED COPOLYESTER RESIN		Not
available		
Packing		
C.I. PIGMENT FLUORESCENT	II or III	
Dimethylformamide	III	
Methyl ethyl ketone	II	
POLY URETHANE RESIN	Not	
available ATURATED COPOLYESTER RESIN		Not
available		
Marine pollutants		



COUNT ON US

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	Non-applicable
Methyl ethyl ketone	non-applicable
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

Transport in relation to the user needs to know, or any special safety measures In case of fire emergency

C.I. PIGMENT FLUORESCENT	F-A
Dimethylformamide	F-E
Methyl ethyl ketone	F-E
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

In case of spill emergency

C.I. PIGMENT FLUORESCENT	S-J
Dimethylformamide	S-D
Methyl ethyl ketone	S-D
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

15. Regulatory Information

Occupational Safety and Health Act

C.I. PIGMENT FLUORESCENT	Exposure limits set material
Dimethylformamide	Management Harmful Substances
Dimethylformamide	Working environment measurement target substance (measurement period: 6 months)
Dimethylformamide	Special medical examination the substance (diagnostic period: 6 months)
Dimethylformamide	Exposure limits set material
Dimethylformamide	Limits set material
Methyl ethyl ketone	Management Harmful Substances
Methyl ethyl ketone	Working environment measurement target substance (measurement period: 6 months)
Methyl ethyl ketone	Special medical examination the substance (diagnostic period: 12 months)
Methyl ethyl ketone	Exposure limits set material

Hazardous Chemicals Control Act

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	Toxic substances
Methyl ethyl ketone	Awareness materials
Methyl ethyl ketone	Toxic substances
POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

Dangerous Goods Safety Management Law

C.I. PIGMENT FLUORESCENT	Not available
Dimethylformamide	4 The second kind of petroleum (water-soluble) 2000 ℓ
Methyl ethyl ketone	the first four kinds of petroleum (a non-aqueous liquid)
200 ℓ POLY URETHANE RESIN	Not available
ATURATED COPOLYESTER RESIN	Not available

available Waste Control Act



COUNT ON US

C.I. PIGMENT FLUORESCENT Not
available Dimethylformamide Not
available

Methyl ethyl ketone Hazardous waste
POLY URETHANE RESIN Not
available ATURATED COPOLYESTER RESIN Not
available

By other domestic and foreign regulatory

National regulation

POPs Control Act



COUNT ON US

C.I. PIGMENT FLUORESCENT Not applicable
 applicable Dimethylformamide Not applicable
 applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 available ATURATED COPOLYESTER RESIN Not applicable
 available
 Foreign regulatory

USA management information (OSHA Regulation)

C.I. PIGMENT FLUORESCENT Not applicable
 applicable Dimethylformamide Not applicable
 applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 available ATURATED COPOLYESTER RESIN Not applicable
 available

USA management information (CERCLA Regulation)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide 45.3599 kg 100 lb
 Methyl ethyl ketone 2267.995 kg 5000 lb
 POLY URETHANE RESIN Not applicable
 available ATURATED COPOLYESTER RESIN Not applicable
 available

USA management information (EPCRA 302 Regulation)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide Not applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable
 applicable

USA management information (EPCRA 304 Regulation)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide Not applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable
 applicable

USA management information (EPCRA 313 Regulation)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide Not applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable
 applicable

USA management information (materials Rotterdam Convention)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide Not applicable
 Methyl ethyl ketone Not applicable
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable
 applicable

USA management information (Stockholm Convention substances)



COUNT ON US

C.I. PIGMENT FLUORESCENT	Not applicable
Dimethylformamide	Not applicable
Methyl ethyl ketone	Not applicable
POLY URETHANE RESIN	Not applicable
applicable ATURATED COPOLYESTER RESIN	Not applicable

USA management information
(Montreal Protocol on Substances)

C.I. PIGMENT FLUORESCENT	Not applicable
Dimethylformamide	Not applicable
Methyl ethyl ketone	Not applicable

**COUNT ON US**

POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable

EU classification (Classification)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide Repr. Cat. 2; R61Xn; R20/21Xi; R36
 Methyl ethyl ketone F; R11Xi; R36R66R67
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable

EU classified information (Risk phrases)

C.I. PIGMENT FLUORESCENT Not applicable
 Dimethylformamide R61, R20/21, R36
 Methyl ethyl ketone R11, R36, R66, R67
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable

EU classified information (safety phrases)

C.I. PIGMENT FLUORESCENT Not applicable
 applicable Dimethylformamide S53, S45
 Methyl ethyl ketone S2, S9, S16
 POLY URETHANE RESIN Not applicable
 applicable ATURATED COPOLYESTER RESIN Not applicable

16. OTHER INFORMATION

Source of data

C.I. PIGMENT FLUORESCENT

Corporate Solution from Thomson Micromedex(<http://csi.micromedex.com>)
 ECB-ESIS (European chemical Substances Information System)
 (<http://ecb.jrc.it/esis>) ECOTOX Database, EPA(<http://cfpub.epa.gov/ecotox>)
 IUCLID Chemical Data Sheet, EC-ECB
 International Chemical Safety Cards
 (ICSC)(<http://www.nihs.go.jp/ICSC>) TOXNET, U.S. National Library of
 Medicine(<http://toxnet.nlm.nih.gov>)

The Chemical Database, The Department of Chemistry at the University of Akron(<http://ull.chemistry.uakron.edu/erd>)

Dimethylformamide

HSDB (smell) HSDB
 (Odor threshold) HSDB
 (pH)
 ICSC (Melting / freezing
 point) ICSC (Boiling range)
 ICSC (Flashpoint)
 ICSC (Explosion range of upper / lower limit) HSDB
 (Vapor pressure)
 ICSC(Solubility) ICSC
 (Vapor Density) ICSC
 (importance)
 ICSC (n- octanol / water partition
 coefficient) ICSC (Ignition temperature)
 IUCLID(Biodegradable)

Fdc[®]



COUNT ON US

Methyl ethyl ketone

HSDB (smell) HSDB

(Odor threshold) HSDB

(pH)

ICSC (Melting / freezing point)



COUNT ON US

ICSC (Boiling

range) ICSC

(Flashpoint)

ICSC (Explosion range of upper / lower limit) HSDB

(Vapor pressure)

ICSC(Solubility)

ICSC (Vapor Density) ICSC

(importance)

ICSC (n- octanol / water partition

coefficient) ICSC(Ignition temperature)

IUCLID(Biodegradable)

Date First	2015-01-05
Revision number and date	
Revision number	2 times
Date of last revision	2017-01-06