

SAFETY DATA SHEET

According to Regulation (EC) No. 2015/830

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code **LIQUID GLASS**
Product name **ISONEM LIQUID GLASS**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

1.3. Details of the supplier of the safety data sheet

Name **ISONEM BOYA VE YALITIM TEKNOLOJILERI INS. SAN. TIC. A.S.**
Full address **ITOB OSB 10001 SK. NO:20 TEKELI**
District and Country **35470 Menderes / IZMIR
TURKEY**
Tel. **+90 232 799 04 95**
Fax **+90 232 437 01 33**
e-mail address of competent person **isonem@isonem.com.tr**
responsible for safety data sheet

1.4. Emergency telephone number

For urgent inquiries refer to **+90 232 799 04 95**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 and amendments

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments

Flammable Liquid Hazard Category 3
Specific Target Organ Toxicity (STOT) - Repeated Exposure Hazard Category 2
Specific Target Organ Toxicity (STOT) - Single Exposure Hazard Category 3
Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 2

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

ISONEM LIQUID GLASS**Signal words:****Danger**

H226	Flammable liquid and vapour.
H373	May cause damage to organs through prolonged or repeated exposure.
H336	May cause drowsiness or dizziness
H315	Causes skin irritation
H319	Causes serious eye irritation

P210	Keep away from heat/sparks/open flames/hot surfaces. - 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.

2.3. Other hazards

Information not available.

SECTION 3. Composition/information on ingredients**3.1. Substances**

Information not relevant.

3.2. Mixtures

Component	CAS NO	EC NO	%	Classification according to Regulation (EC) No 1272/2008 (CLP)
Methyl methacrylate	80-62-6	201-297-1	< 0.8	Flam. Liq. 2 (H225) D STOT SE 3 (H335) D Skin Irrit. 2 (H315) D Skin Sens. 1B (H317) D
Xylene	1330-20-7	215-535-7	15 - 20	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Acute Tox. 4 (H332) STOT RE 2 (H373) STOT Single 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304)
Toluene	108-88-3	203-625-9	< 0.2	Flam. Liq. 2 (H225) Repr. 2 (H361d) STOT RE 2 (H373) STOT SE 3 (H336) Skin Irrit. 2 (H315) Asp. Tox. 1 (H304)

Butyl acetate	123-86-4	204-658-1	25 - 30	Flam. Liq. 3 (H226) STOT SE 3 (H336)
Ethylbenzene	100-41-4	202-849-4	3 - 7	Flam. Liq. 2 (H225) Acute Tox. 4 (H332) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Chronic 3 (H412)
Hydroxyethyl methacrylate	868-77-9	212-782-2	< 0.15	Eye Irrit. 2 (H319) D Skin Sens. 1 (H317) D

SECTION 4. First aid measures

4.1. Description of first aid measures

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

4.2. Most important symptoms and effects, both acute and delayed

None known

4.3. Indication of any immediate medical attention and special treatment needed

Not applicable

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

Keep containers cool by spraying with water if exposed to fire.

5.3. Advice for firefighters

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures.

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

6.4. Reference to other sections

See Sections 8 and 13 for additional information.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

7.2. Conditions for safe storage, including any incompatibilities

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed.

In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C. Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight. Keep away from sources of ignition - refrain from smoking. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Vapours may form explosive mixtures with air.

7.3. Specific end use(s)

Refer to Section 1 or Exposure Scenario if applicable.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

123-86-4 Butyl acetate

United Kingdom: WEL (Workplace Exposure Limits)

150 ppm (TWA)
724 mg/m3 (TWA)
200 ppm (STEL)
966 mg/m3 (STEL)

Europe ILV (Indicative Limit Values):

Not established

Other Value:

Not established

1330-20-7 Xylene

United Kingdom: WEL (Workplace Exposure Limits)

50 ppm (TWA)
220 mg/m3 (TWA)
(skin)
100 ppm (STEL)
441 mg/m3 (STEL)

Europe ILV (Indicative Limit Values):

50 ppm (TWA)
221 mg/m3 (TWA)
100 ppm (STEL)

442 mg/m3 (STEL)

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(skin)
 Other Value: Not established

100-41-4 Ethylbenzene

United Kingdom: WEL (Workplace Exposure Limits) 100 ppm (TWA)

441 mg/m3 (TWA)
 (skin)

125 ppm (STEL)
 552 mg/m3 (STEL)

Europe ILV (Indicative Limit Values):

100 ppm (TWA)
 442 mg/m3 (TWA)

200 ppm (STEL)
 884 mg/m3 (STEL)

(skin)
 Not established

Other Value:

80-62-6 Methyl methacrylate

United Kingdom: WEL (Workplace Exposure Limits) 50 ppm (TWA)

208 mg/m3 (TWA)
 100 ppm (STEL)

416 mg/m3 (STEL)

Europe ILV (Indicative Limit Values): 50 ppm (TWA)

100 ppm (STEL)

Not established

Other Value:

108-88-3 Toluene

United Kingdom: WEL (Workplace Exposure Limits)

50 ppm (TWA)
 191 mg/m3 (TWA)

(skin)
 100 ppm (STEL)

384 mg/m3 (STEL)

Europe ILV (Indicative Limit Values): 50 ppm (TWA)

192 mg/m3 (TWA)
 100 ppm (STEL)

384 mg/m3 (STEL)
 (skin)

Other Value:

Not established

Derived No Effect Level (DNEL):

Butyl acetate (123-86-4)

Use	Route	DNEL	Units	Effects Type
Worker	Dermal	11	mg/kg/day	Long term, systemic
Worker	inhalation	300	mg/m3	Long term, systemic
Consumer	Oral	2	mg/kg/day	Long term, systemic
Consumer	Dermal	6	mg/kg/day	Long term, systemic
Consumer	inhalation	35.7	mg/m3	Long term, systemic
Worker	inhalation	600	mg/m3	Short term, local
Worker	inhalation	600	mg/m3	Short term, systemic
Worker	inhalation	300	mg/m3	Long term, local
Consumer	inhalation	35.7	mg/m3	Long term, local
Consumer	inhalation	300	mg/m3	Short term, local
Consumer	inhalation	300	mg/m3	Short term, systemic
Worker	Dermal	11	mg/kg/day	Short term, systemic
General Population	Dermal	6	mg/kg/day	Short term, systemic
General Population	Oral	2	mg/kg/day	Short term, systemic

Xylene (1330-20-7)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	442	mg/m ³	Short term, systemic
Worker	inhalation	442	mg/m ³	Short term, local
Worker	Dermal	212	mg/kg	Long term, systemic
Worker	inhalation	221	mg/m ³	Long term, systemic
Consumer	inhalation	260	mg/m ³	Short term, systemic
Consumer	inhalation	260	mg/m ³	Short term, local
Consumer	Dermal	125	mg/kg	Long term, systemic
Consumer	inhalation	65.3	mg/m ³	Long term, systemic
Consumer	Oral	12.5	mg/kg/day	Long term, systemic
Worker	inhalation	221	mg/m ³	Long term, local
Consumer	inhalation	65.3	mg/m ³	Long term, local

Ethylbenzene (100-41-4)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	77	mg/m ³	Long term, systemic
Worker	inhalation	293	mg/m ³	Long term, local
Worker	Dermal	180	mg/kg/day	Long term, systemic
General Population	inhalation	15	mg/m ³	Long term, systemic
General Population	Oral	1.6	mg/kg/day	Long term, systemic

Methyl methacrylate (80-62-6)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	208	mg/m ³	Long term, local
Worker	inhalation	208	mg/m ³	Long term, systemic
Worker	Dermal	1.5	mg/cm ²	Long term, local
Worker	Dermal	13.67	mg/kg/day	Long term, systemic
Worker	Dermal	1.5	mg/cm ²	Short term, local
Consumer	inhalation	104	mg/m ³	Long term, local
Consumer	inhalation	74.3	mg/m ³	Long term, systemic
Consumer	Dermal	1.5	mg/cm ²	Long term, local
Consumer	Dermal	8.2	mg/kg/day	Long term, systemic
Consumer	Dermal	1.5	mg/cm ²	Short term, local

Hydroxyethyl methacrylate (868-77-9)

Use	Route	DNEL	Units	Effects Type
Consumer	Oral	0.83	mg/kg/day	Long term, systemic
Worker	Dermal	1.3	mg/kg/day	Long term, systemic
Consumer	Dermal	0.83	mg/kg/day	Long term, systemic
Worker	inhalation	4.9	mg/m ³	Long term, systemic
Consumer	inhalation	2.9	mg/m ³	Long term, systemic

Toluene (108-88-3)

Use	Route	DNEL	Units	Effects Type
Worker	inhalation	384	mg/m ³	Short term, local
Worker	inhalation	384	mg/m ³	Short term, systemic
Worker	inhalation	192	mg/m ³	Long term, local
Worker	inhalation	192	mg/m ³	Long term, systemic
Worker	Dermal	384	mg/kg/day	Long term, systemic
General Population	inhalation	226	mg/m ³	Short term, local
General Population	inhalation	226	mg/m ³	Short term, systemic
General Population	inhalation	56.5	mg/m ³	Long term, systemic
General Population	Dermal	226	mg/kg/day	Long term, systemic
General Population	Oral	8.13	mg/kg/day	Long term, systemic
General Population	inhalation	56.5	mg/m ³	Long term, local

Predicted No Effect Concentration (PNEC):

Butyl acetate (123-86-4)

Compartment	PNEC	Units
Fresh water	0.18	mg/l
Soil	0.0903	mg/kg
Intermittent water release	0.36	mg/l
Sewage treatment plant	35.6	mg/l
Marine water	0.018	mg/l
Sediment (fresh water)	0.981	mg/kg
Sediment (marine water)	0.0981	mg/kg

Xylene (1330-20-7)

Compartment	PNEC	Units
Fresh water	0.327	mg/l
Marine water	0.327	mg/l
Intermittent water release	0.327	mg/l
Sewage treatment plant	6.58	mg/l
Sediment (fresh water)	12.46	mg/kg
Sediment (marine water)	12.46	mg/kg
Soil	2.31	mg/kg

Ethylbenzene (100-41-4)

Compartment	PNEC	Units
Fresh water	0.1	mg/l
Marine water	0.01	mg/l
Intermittent water release	0.1	mg/l
Sewage treatment plant	9.6	mg/l
Sediment (fresh water)	13.7	mg/kg
Sediment (marine water)	1.37	mg/kg
Soil	2.68	mg/kg
Oral (Secondary Poisoning)	20	mg/kg food

Methyl methacrylate (80-62-6)

Compartment	PNEC	Units
Fresh water	0.94	mg/l
Marine water	0.94	mg/l
Soil	1.47	mg/kg
Sewage treatment plant	10	mg/l
Sediment (fresh water)	5.74	mg/kg
Intermittent water release	0.94	mg/l

Hydroxyethyl methacrylate (868-77-9)

Compartment	PNEC	Units
Fresh water	0.482	mg/l
Marine water	0.482	mg/l
Sewage treatment plant	10	mg/l
Intermittent water release	1	mg/l
Sediment (fresh water)	3.79	mg/kg
Sediment (marine water)	3.79	mg/kg
Soil	0.476	mg/kg

Toluene (108-88-3)

Compartment	PNEC	Units
Fresh water	0.68	mg/l
Sediment (fresh water)	16.39	mg/l
Soil	2.89	mg/kg
Sewage treatment plant	13.61	mg/l
Marine water	0.68	mg/l
Sediment (marine water)	16.39	mg/l
Intermittent water release	0.68	mg/l

8.2. Exposure controls

Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection: Where exposures are below the established exposure limit, no respiratory protection is required.

Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

Eye protection: Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection: Wear impermeable gloves and suitable protective clothing.

Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

Avoid skin contact.

Hand protection:

Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place.

Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Transparent
Odour	Not available
Odour threshold.	Not available
pH	Not available
Melting point / freezing point.	Not available
Initial boiling point.	Not available
Boiling range.	Not available
Flash point.	Not applicable
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit.	Not available
Upper inflammability limit.	Not available
Lower explosive limit.	Not available
Upper explosive limit.	Not available
Vapour pressure.	Not available
Vapour density	Not available
Relative density.	0,90 ± 0,1
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature.	Not available
Decomposition temperature.	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

SECTION 10. Stability and reactivity

10.1. Reactivity

No information available

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.5. Incompatible materials

Strong oxidizing agents. Avoid contact with acids and alkali"s.

10.6. Hazardous decomposition products

Carbon dioxide
Carbon monoxide (CO).

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Likely Routes of Exposure: Oral, Skin, Eyes, Respiratory System.

Acute toxicity - oral: Not classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - dermal: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - inhalation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Causes skin irritation.

Serious eye damage / eye irritation: Causes serious eye irritation.

Respiratory sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Germ cell mutagenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Reproductive toxicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: May cause drowsiness or dizziness. May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Route of Exposure: inhalation Affected Organs: Central nervous system Lung Liver Kidneys

Aspiration hazard: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

HAZARDOUS INGREDIENT TOXICITY DATA

Butyl acetate (CAS# 123-86-4) has acute oral (rat) and dermal (rabbit) LD50 values of 10,768 mg/kg and >17,600 mg/kg, respectively (RTECS). The acute 4-hr inhalation (rat) LC50 = >2000 ppm (9.5 mg/L)(NTP). Direct contact with this material may cause moderate eye and skin irritation. In humans, exposure concentrations of 200-300 ppm resulted in slight eye and nose irritation while short exposure to 3300 ppm caused extreme irritation of the eyes and nose (HSDB). Overexposure to solvent vapors may cause irritation of the eyes, nose, and throat. Severe inhalation overexposure may cause weakness, drowsiness, and unconsciousness. Prolonged dermal exposure may produce irritation of the skin. This material did not cause mutagenic activity when tested in the bacterial mutagenicity assay. When tested for reproductive effects in rats, fetotoxicity (stunted growth) and abnormalities of the musculoskeletal system was noted at an exposure concentration of 1500 ppm/7h/day during days 7-16 of pregnancy (HSDB).

Xylene has an acute oral LD50 (rat) of 3523 mg/kg, acute dermal LD50 (rabbit) value of 1100 mg/kg, and an acute 4-hour LC50 (rat) of 11 mg/l (vapor). Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties, which may be delayed in onset. High vapor concentrations are anesthetic and central nervous system depressants. Ingestion causes burning sensation in mouth and stomach, nausea vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death. Chronic inhalation can cause headache, loss of appetite, nervousness and pale skin. Skin contact results in moderate irritation and loss of natural oils. Repeated or prolonged skin contact may cause a skin rash. May be absorbed through the skin. Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage. Repeated exposure of eyes to high concentrations of vapor may cause reversible eye damage. Chronic, repeated exposure may cause blood cell damage resulting in low blood cell count. May damage liver and kidneys. Xylene has been investigated for reproductive toxicity and may cause teratogenic effects.

Ethylbenzene has acute oral (rat) and dermal (rabbit) LD50 values of 3500 mg/kg and 5000 mg/kg respectively. The 4-hour inhalation LC50 in rats is 4000 ppm (17.36 mg/L). It is a mild eye (rated 2 on a scale of 10) and a mild skin (rated 4 on a scale of 10) irritant. Prolonged exposure to the vapor of ethylbenzene may cause irritation of the eyes and upper respiratory tract, vertigo, motor ataxia, unconsciousness, and hematological disorders and hepatobiliary complaints. The International Agency for Research on Cancer has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

The following acute toxicity values are available for methyl methacrylate: acute oral LD50 (rat) is approximately 8,400 mg/kg; acute dermal LD50 (rabbit) is >35,000 mg/kg; and acute inhalation LC50 (rat, 4 hour, vapor) is 7093 ppm. Liquid methyl methacrylate (MMA) may cause primary eye or skin irritation. Allergic skin reactions may occur by repeated direct contact. Vapor overexposure may cause irritation to the eyes or respiratory tract and may cause central nervous system depression. In a repeat dose (oral) study, MMA showed behavioral effects at the highest dose of 500 mg/kg. No behavioral effects were seen at the lower doses of 100 and 200 mg/kg. The results of in vitro mutagenicity studies are mixed: MMA was inactive in the Ames and HGPRT assays but active (positive) in the mouse lymphoma assay both with and without metabolic activation, positive in the sister chromatid exchange (SCE) assay and also positive in the chromosomal aberration assay using Chinese hamster ovary (CHO) cells, both with and without metabolic activation. However, results of in vivo mutagenicity studies with MMA are negative. MMA was inactive (negative) in several in vivo mutagenicity studies - in vivo chromosomal aberration (inhalation study) and several in vivo mouse

miconucleus studies (oral route). MMA was not carcinogenic to rats and mice when inhaled at concentrations up to 1000 ppm for 2 years in studies sponsored by the National Toxicology Program. These concentrations produced chronic nasal irritation resulting in inflammation of the nasal cavity and degeneration of the olfactory epithelium.

Hydroxyethyl methacrylate (CAS # 868-77-9) has acute oral (rat) and dermal (rabbit) LD50 values of > 5000 mg/kg and > 3000 mg/kg, respectively. This material may cause moderate eye and mild skin irritation. Repeated skin contact with hydroxyethyl methacrylate may cause skin sensitization (guinea pig). Cases of sensitisation also observed in humans. No indications of teratogenic effects in experimental animals. The substance was not mutagenic in the Ames test. Toluene has acute oral (rat) and dermal (rabbit) LD50 values of 4,328 mg/kg and 12124 mg/kg, respectively. The acute 4-hour inhalation (rat, female) LC50 value is 5,060 ppm (19.07 mg/L). Toluene is a severe eye and moderate skin irritant. Inhalation overexposure to toluene vapor can cause headache, fatigue, nausea, and central nervous system depression. Sustained inhalation of high levels of toluene has been shown to cause reversible kidney and liver damage. Subchronic inhalation of toluene vapors have caused permanent hearing loss, decreased learning capabilities and damage to the eyes in laboratory animal tests. Deliberate inhalation of high concentrations of toluene vapor by pregnant women has been shown to adversely affect the fetus. These fetotoxic effects include intrauterine growth retardation and delayed postnatal development. The fetotoxic effects of toluene seen in laboratory animals are similar to those seen in humans. Ingestion of toluene in laboratory animals caused mild gastritis and harmful effects on the respiratory system, kidneys, liver and heart. Ingestion in laboratory animals also caused harmful effects on the central nervous system and death. It has also been reported that subchronic ingestion of toluene caused brain and bladder damage in laboratory animals. Due to synergistic effects, the toxicity of toluene may be enhanced by exposure to n-hexane, benzene, xylene, acetylsalicylic acid and chlorinated hydrocarbons. The literature reports that toluene is an aspiration hazard, that acute oral exposure resulted in reversible visual dysfunction, and that chronic exposure has caused altered immune function in animals. Toluene is a chemical known to the State of California to cause reproductive toxicity.

SECTION 12. Ecological information

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

The ecological assessment for this material is based on an evaluation of its components.
This material is not classified as dangerous for the environment

12.1 ECOTOXICITY

Not available

12.2 PERSISTENCE AND DEGRADABILITY

Not available

12.3 BIOACCUMULATIVE POTENTIAL

Not available

12.4 MOBILITY IN SOIL

Not available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

12.6 OTHER ADVERSE EFFECTS

Not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

Packaging disposal

Handle contaminated packages in the same way as the product itself. Disposal of emptied and cleaned packaging must be made in accordance with applicable local and national regulations.

Disposal-relevant information

Do not release directly or indirectly to surface water, ground water, soil or public sewage system.

SECTION 14. Transport information

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

ADR/RID/ADN

Dangerous Goods X
UN Proper Shipping Name: Resin solution
Transport Hazard Class: 3
UN Number: UN1866
Packing Group: III
Transport Label Required: Flammable liquid
Shipped under Exception: Carriage in accordance with 2.2.3.1.5
Tunnel restriction code: D/E
Comments: Not intended for shipment by inland waterways in tank vessels.

IMO

Dangerous Goods X
UN Proper Shipping Name: Resin solution
Transport Hazard Class: 3
UN Number: UN1866
Packing Group: II
Transport Label Required: Flammable liquid

ICAO / IATA

Dangerous Goods X
UN Proper Shipping Name: Resin solution
Transport Hazard Class: 3
Packing Group: III
UN Number: UN1866
Transport Label Required: Flammable liquid

SECTION 15. Regulatory information

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

Substances subject to Restrictions for certain applications (Annex XVII of Regulation (EC)No 1907/2006):

Yes

Refer to Annex XVII of REACH for details of the restricted applications.

Water Endangering Class (Germany): 2 according to VwVwS, 17.05.1999

Inventory Information

European Economic Area (including EU): When purchased from a Annex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

United States (USA):

All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada:

All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS. **China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 16-17).

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Component Risk and Hazard Phrases

Butyl acetate

H226 - Flammable liquid and vapour.

H336 - May cause drowsiness or dizziness.

Xylene

H226 - Flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H373 - May cause damage to organs through prolonged or repeated exposure.

Ethylbenzene

H225 - Highly flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H332 - Harmful if inhaled.

H373 - May cause damage to organs through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

Methyl methacrylate

H225 - Highly flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H335 - May cause respiratory irritation.

Hydroxyethyl methacrylate

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

Toluene

H225 - Highly flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H336 - May cause drowsiness or dizziness.

H373 - May cause damage to organs through prolonged or repeated exposure.

H361d - Suspected of damaging the unborn child.

History

Date of issue: 30-03-2018

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Version: 2

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper use.