

SAFETY DATA SHEET

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200

1. Identification of the substance or mixture and of the supplier

1.1 Product identifier:

Product name: BLUESIL V-04 BLUE

Product No.: PRCO90054236

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

Identified uses: Adhesion promoter for silicone elastomers.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

Elkem Silicones USA Corp.
7979 Park Place Road
29745 York, SC
USA

Telephone: +1 (803) 792-3000

Fax: +1 (803) 684-7202

E-mail: product.stewardship@elkem.com

Supplier:

Elkem Silicones USA Corp.
Two Tower Blvd, Suite 1802
08816-1100 East Brunswick, NJ
USA

Telephone: +1 (732) 227-2060

Fax: +1 (732) 249-7000

1.4 **Emergency telephone number:** +1 (800) 424-9300 CHEMTREC

2. Hazards identification

2.1 Classification of the substance or mixture:

The product has been classified according to the legislation in force.

Hazard Classification:

Physical Hazards:

Flammable liquids	Category 3	H226: Flammable liquid and vapor.
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Health Hazards:

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Carcinogenicity	Category 2	H351: Suspected of causing cancer.
Toxic to reproduction	Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity - Single Exposure	Category 3	H336: May cause drowsiness or dizziness.
Aspiration Hazard	Category 1	H304: May be fatal if swallowed and enters airways.

Environmental Hazards:

Acute hazards to the aquatic environment

Category 3

H402: Harmful to aquatic life.

2.2 Label Elements:

Hazard pictograms:



Signal Word:

Danger

Hazard statements:

H226: Flammable liquid and vapor.
H315: Causes skin irritation.

Precautionary Statements:

Prevention:

P210+P241+P240+P242: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Use explosion-proof electrical/ventilating/lighting/equipment. Ground and bond container and receiving equipment. Use only non-sparking tools.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P273: Avoid release to the environment.

Response:

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302+P350+P332+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
P305+P351+P315: IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention.
P301+P330+P331+P315: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get immediate medical advice/attention.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in GHS classification:

No data available.

3. Composition/information on ingredients

Mixtures:

General information:

Mixture of additives.

Chemical name	Concentration*	Type	CAS number
Solvent naphtha (petroleum), medium aliph.	30 - <50%	Component	64742-88-7
Tetraethyl orthosilicate	20 - <30%	Component	78-10-4
Titanium tetrabutanolate	5 - <10%	Component	5593-70-4
Xylene	1 - <5%	Impurities	1330-20-7
Benzene, trimethyl-	1 - <5%	Impurities	25551-13-7
Butan-1-ol	1 - <3%	Component	71-36-3
Ethylbenzene	0.1 - <1%	Impurities	100-41-4
Toluene	0.1 - <1%	Impurities	108-88-3
n-hexane	0.1 - <1%	Impurities	110-54-3

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:

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

4.1 Description of first aid measures:

Inhalation:

Move into fresh air and keep at rest.
 Get medical attention if symptoms occur.

Skin contact:

Wash contact areas with soap and water.
 Get medical attention promptly if symptoms occur after washing.

Eye contact:

In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes.
 Get medical attention promptly if symptoms occur after washing.

Ingestion:

Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Rinse mouth thoroughly. Get medical attention immediately.

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:

Hazards:

No specific recommendations.

Treatment:

No specific recommendations.

5. Fire-fighting measures

General Fire Hazards:

Vapors may travel considerable distance to a source of ignition and flash back.
 Containers may explode (due to the build-up of pressure) when exposed to extreme heat.

5.1 Extinguishing media:

Suitable extinguishing media:

Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media:

Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture:

Flammable.

Exposure to fire can generate toxic fumes.

5.3 Advice for firefighters:

Special fire fighting procedures:

Water spray should be used to cool containers.

Special protective equipment for fire-fighters:

Firefighters should wear standard protective equipment and a positive pressure self-contained breathing apparatus (SCBA).

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Do not breathe vapor. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental Precautions:

Collect spillage. Do not allow to enter drains, sewers or watercourses.

Spills may be reportable to the National Response Center (800-424-8802). and to state and/or local agencies.

6.3 Methods and material for containment and cleaning up:

Use non-sparking tools. Absorb with sand or other inert absorbent and place into containers. For waste disposal, see Section 13 of the SDS.

6.4 Reference to other sections:

Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.

7. Handling and storage

7.1 Precautions for safe handling:

Precautions:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. In partly emptied containers formation of explosive mixture is possible. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Use spark-proof tools and/or explosion-proof equipment. Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. If ventilation is insufficient, suitable respiratory protection must be provided. See Section 8 of the SDS for Personal Protective Equipment. For further information, refer to section 10: "Stability and Reactivity". Take care to prevent spills, waste and minimize release to the environment. In case of spills, beware of slippery floors and surfaces. Keep equipment under negative pressure.

Hygiene measures:

Provide eyewash station and safety shower.

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local/regional/national regulations. Store in original tightly closed container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Nitrogen blanketing of containers is recommended. Keep in properly labelled containers.

7.3 Specific end use(s):

See the technical data sheet on this product for further information.

8. Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values		Source
Solvent naphtha (petroleum), medium aliph.	TWA	100 ppm	400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL	100 ppm	400 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
	PEL	100 ppm	400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (01 2017)
Tetraethyl orthosilicate	REL	10 ppm	85 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	TWA	10 ppm	85 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	PEL	100 ppm	850 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Xylene	TWA	10 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	STEL	150 ppm	655 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	150 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	100 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
	Benzene, trimethyl-	TWA	25 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	TWA	25 ppm	125 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL	25 ppm	125 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
Butan-1-ol	TWA	20 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	100 ppm	300 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	Ceil_Time	50 ppm	150 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	Ceiling	50 ppm	150 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)

Biological Limit Values:

Chemical Identity	Exposure Limit Values	Source
Xylene (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEI (03 2013)
Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEI (02 2014)
Toluene (toluene: Sampling time: End of shift.)	0.03 mg/l (Urine)	ACGIH BEI (03 2013)
Toluene (o-Cresol, with hydrolysis: Sampling time: End of shift.)	0.3 mg/g (Creatinine in urine)	ACGIH BEI (03 2013)
Toluene (toluene: Sampling time: Prior to last shift of work week.)	0.02 mg/l (Blood)	ACGIH BEI (03 2013)

8.2 Exposure controls:

Appropriate Engineering Controls:

Use explosion-proof ventilation equipment to stay below exposure limits. In case of inadequate ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment:

Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Personal protective equipment should be chosen according to applicable standards, adapted to the conditions of use of the product and in discussion with the supplier of the personal protective equipment.

- Eye/face protection:** Goggles/face shield are recommended.
- Hand Protection:** Protective gloves are recommended.
- Skin and Body Protection:** Wear appropriate clothing to prevent any possibility of skin contact.
- Respiratory Protection:** Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits.

Environmental Controls:

No data available.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

- Appearance:**

 - Physical state:** Liquid
 - Form:** Mobile
 - Color:** Blue

- Odor:** Petroleum
- Odor Threshold:** No data available.
- pH:** Not applicable.
- Melting point/freezing point:** No data available.
- Boiling Point:** 116 °C
- Flash Point:** < 29 °C (Tagliabue Closed Cup)
- Evaporation Rate:** < 1 butyl acetate=1

Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	25 %(V)
Flammability Limit - Lower (%):	1.1 %(V)
Vapor pressure:	< 8 hPa (20 °C)
Relative vapor density:	No data available.
Density:	No data available.
Solubility(ies):	
Solubility in Water:	Partially soluble.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Kinematic viscosity:	No data available.
Dynamic viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information: No data available.

10. Stability and reactivity

10.1 Reactivity:

Not relevant.

10.2 Chemical Stability:

Stable

10.3 Possibility of hazardous reactions:

Will not occur.

10.4 Conditions to avoid:

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible Materials:

Strong oxidizing agents.

10.6 Hazardous Decomposition Products:

Thermal decomposition or combustion may liberate carbon oxides, other toxic gases or vapors and amorphous silica.

11. Toxicological information

Information on likely routes of exposure:

Inhalation: No data available.

Ingestion: No data available.

Skin contact: No data available.

Eye contact: No data available.

11.1 Information on toxicological effects:

Acute toxicity:

Oral:

ATEmix : 3,071.87 mg/kg

Dermal:

ATEmix : 27,307.17 mg/kg

Inhalation: Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):

LC 50 (Rat ; Male ; 4 h ; Aerosol): 10 mg/l ; Method: OECD 403

LC 50 (Rat ; female ; 4 h ; Aerosol): > 16.8 mg/l ; Method: OECD 403

TITANIUM TETRABUTANOLATE (5593-70-4):

LC 50 (Rat): 20,100 mg/l

BUTAN-1-OL (71-36-3):

LC 50 (Rat ; 4 h ; Vapor): > 17.76 mg/l ; Method: OECD 403

ETHYLBENZENE (100-41-4):

Harmful if inhaled.LC 50 (Rat ; Male ; 4 h ; Vapor): 17.8 mg/l

TOLUENE (108-88-3):

LC 50 (Rat ; Female, Male ; 4 h ; Vapor): 28.1 mg/l

N-HEXANE (110-54-3):

Not classifiedLC 50 (Rat ; Male ; 24 h): > 17.6 mg/l ; Method: OECD 403 ; Vapor

Not classifiedLC 50 (Rat ; Male ; 4 h): 0.2594 mg/l ; Method: OECD 403 ; Vapor Results obtained on a similar product.

Repeated dose toxicity:

Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):

NOAEL: 10 mg/kg ; (Rat ; Male ; Oral) ; Method: OECD 422

NOAEL: 50 mg/kg ; (Rat ; female ; Oral) ; Method: OECD 422

LOAEL: 0.426 mg/l ; (Mouse ; Inhalation - vapour) ; Target Organ(s): Kidney ; Method: OECD 412

TITANIUM TETRABUTANOLATE (5593-70-4):

NOAEL: 125 mg/kg ; (Rat ; Female, Male ; Gavage (Oral)) ; Results obtained on a similar product. Subchronic exposure.

NOAEL: 2.35 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Results obtained on a similar product. Subchronic exposure.

XYLENE (1330-20-7):

NOAEL: 250 mg/kg ; (Rat ; Female, Male ; Oral) ; Method: According to a standardised method. ; Chronic exposure.

NOAEL: 150 mg/kg ; (Rat ; female ; Oral) ; Method: OECD 408 ; Subchronic exposure.

LOAEL: 150 mg/kg ; (Rat ; Male ; Oral) ; Method: OECD 408 ; Subchronic exposure.

BUTAN-1-OL (71-36-3):

NOAEL: 125 mg/kg ; (Rat ; Female, Male ; Oral) ; Gavage (Oral) Subchronic exposure.

NOAEL: 2.35 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: According to a standardised method. ; Results obtained on a similar product. Subchronic exposure.

ETHYLBENZENE (100-41-4):

NOAEL: 75 mg/kg ; (Rat ; Female, Male ; Oral) ; Method: OECD 408 ; Subchronic exposure.

NOAEL: 0.5 mg/l ; (Rat ; Inhalation) ; Subchronic exposure.

TOLUENE (108-88-3):

NOAEL: 625 mg/kg ; (Rat ; Female, Male ; Oral) ; Method: According to a standardised method. ;

Neuropathological effects. Subchronic exposure.

NOAEL: 2.355 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: According to a standardised method. ; Subchronic exposure.

NOAEL: 2.261 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: According to a standardised method. ; Chronic exposure.

N-HEXANE (110-54-3):

NOAEL: 568 mg/kg ; (Rat ; Male ; Gavage (Oral)) ; Subchronic exposure.

LOAEL: 1.76 mg/l ; (Rat ; Male ; Inhalation - vapour) ; Subchronic exposure.

NOAEL: 1.76 mg/l ; (Mouse ; Female, Male ; Inhalation - vapour) ; Method: OECD 413 ; Subchronic exposure.

Skin Corrosion/Irritation:**Based on our knowledge of the composition information: Causes skin irritation.****TETRAETHYL ORTHOSILICATE (78-10-4):**

Not irritating (Rabbit) ; Method: OECD 404

TITANIUM TETRABUTANOLATE (5593-70-4):

Causes skin irritation.

XYLENE (1330-20-7):

Irritating. (Rabbit) ; Method: Expert judgement

BUTAN-1-OL (71-36-3):

Category 2; H315 Highly irritating (Rabbit) ; Method: OECD 404

ETHYLBENZENE (100-41-4):

Moderately irritating (Rabbit ; 24 h)

TOLUENE (108-88-3):

Causes skin irritation. (Rabbit) ; Method: According to a standardised method.

N-HEXANE (110-54-3):

Irritant (Rabbit) ; Method: OECD 404 ; Results obtained on a similar product.

Serious Eye Damage/Eye Irritation:**Based on our knowledge of the composition information: Causes serious eye damage.****TETRAETHYL ORTHOSILICATE (78-10-4):**

Irritant (Human) ; Method: Expert judgement

TITANIUM TETRABUTANOLATE (5593-70-4):

Causes serious eye damage. (Rabbit) ; Method: Expert judgement

XYLENE (1330-20-7):

Irritating. (Rabbit) ; Method: Expert judgement

BUTAN-1-OL (71-36-3):

Causes serious eye damage. Irritant (Rabbit) ; Method: OECD 405

ETHYLBENZENE (100-41-4):
May be slightly irritating. (Rabbit)

TOLUENE (108-88-3):
Not irritating (Rabbit) ; Method: OECD 405

N-HEXANE (110-54-3):
Not irritating (Rabbit) ; Method: OECD 405 ; Results obtained on a similar product.

Respiratory or Skin Sensitization:

Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406

XYLENE (1330-20-7):
Skin sensitization: Not a skin sensitizer. (Mouse) ; Method: OECD 429

BUTAN-1-OL (71-36-3):
Not a skin sensitizer. Method: Expert judgement

ETHYLBENZENE (100-41-4):
Skin sensitization: Not a skin sensitizer. (Human)

TOLUENE (108-88-3):
Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: According to a standardised method.

N-HEXANE (110-54-3):
Skin sensitization: Not a skin sensitizer. (Mouse) ; Method: OECD 429

Germ Cell Mutagenicity:

In vitro: Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):
Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: According to a standardised method.
In vitro mammalian chromosomal aberration test: No clastogenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: OECD 473
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: OECD 476

TITANIUM TETRABUTANOLATE (5593-70-4):
Bacteria: No mutagenic effect. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471
Chromosomal aberration: No clastogenic effect. (Human lymphocytes ; with and without metabolic activation) ; Method: OECD 473
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476

XYLENE (1330-20-7):
Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471
In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: According to a standardised method.
Chromosomal aberration: No clastogenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: According to a standardised method.
In vitro Sister Chromatid Exchange (SCE) assay in mammalian cells: No clastogenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: According to a standardised method.

BUTAN-1-OL (71-36-3):

Bacterial reverse mutation test: No mutagenic effect., with and without metabolic activation (Salmonella typhimurium ; Yes) ; Method: OECD 471

In vitro mammalian cell micronucleus test: No mutagenic effect., with and without metabolic activation (Chinese hamster lung cells ; Yes)

In vitro gene mutations test on mammalian cells: No mutagenic effect., with and without metabolic activation (Chinese hamster lung cells ; Yes) ; Method: OECD 476

ETHYLBENZENE (100-41-4):

Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471

Chromosomal aberration: No clastogenic effect. (Chinese hamster ovary cells ; with and without metabolic activation) ; Method: OECD 473

In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476

TOLUENE (108-88-3):

Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: According to a standardised method.

In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: According to a standardised method.

N-HEXANE (110-54-3):

Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471

In vitro gene mutations test on mammalian cells: negative with metabolic activation, positive without metabolic activation (Mouse lymphoma cells) ; Method: OECD 476

In vivo: Based on our knowledge of the composition information:

XYLENE (1330-20-7):

Rodent dominant Lethal test: negative (Rat ; Subcutaneous) ; Method: OECD 478

Mammalian bone marrow chromosomal aberration test: negative (Rat ; Intraperitoneal)

BUTAN-1-OL (71-36-3):

Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Oral) ; Method: OECD 474

ETHYLBENZENE (100-41-4):

Mammalian erythrocyte micronucleus test: negative (Mouse ; Male ; Oral) ; Method: OECD 474

Unscheduled DNA Synthesis (UDS) Test with mammalian liver cells in vivo: negative (Mouse ; Female, Male ; Inhalation) ; Method: OECD 486

TOLUENE (108-88-3):

Mammalian bone marrow chromosomal aberration test: negative (Rat ; Intraperitoneal)

Rodent dominant Lethal test: negative (Mouse ; Male ; Inhalation)

N-HEXANE (110-54-3):

Rodent dominant Lethal test: negative (Mouse ; Inhalation)

Carcinogenicity:

Based on our knowledge of the composition information: Suspected of causing cancer.

XYLENE (1330-20-7):

Not classified

NOAEL: 500 mg/kg (Rat ; Female, Male ; Ingestion) ; Method: According to a standardised method. ; Gavage (Oral)

NOAEL: 1,000 mg/kg (Mouse ; Female, Male ; Ingestion) ; Method: According to a standardised method. ; Gavage (Oral)

ETHYLBENZENE (100-41-4):

Not classified

NOAEC: 1.1 mg/l (Rat ; Female, Male ; Inhalation) ; Method: OECD 453 ; Not relevant for Human.

TOLUENE (108-88-3):

Not classified

NOAEC: \geq 4.522 mg/l (Rat ; Female, Male ; Inhalation - vapor) ; Method: Similar to OECD 453 ; Chronic exposure.

N-HEXANE (110-54-3):

Not classified

NOAEC: 10.56 mg/l (Mouse ; female ; Inhalation - vapor) ; Method: OECD 451 ; Results obtained on a similar product.

NOAEC: 31.68 mg/ml (Mouse ; Male ; Inhalation - vapor) ; Method: OECD 451 ; Results obtained on a similar product.

NOAEC: $>$ 31.74 mg/l (Rat ; Female, Male ; Inhalation - vapor) ; Method: OECD 451 ; Results obtained on a similar product.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Ethylbenzene Overall evaluation: 2B. Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities.

Reproductive toxicity:

Fertility: Based on our knowledge of the composition information: Suspected of damaging fertility or the unborn child.

TETRAETHYL ORTHOSILICATE (78-10-4):

Not classified

Reproduction/developmental toxicity screening test: NOAEL (parent): \geq 100 mg/kg ; NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Female, Male ; Ingestion) ; Method: OECD 422 ; The product is not considered to affect fertility. Gavage (Oral)

TITANIUM TETRABUTANOLATE (5593-70-4):

Not classified

Fertility study 1 generation: NOAEL (parent): 18.5 mg/l ; NOAEL (F1): 18.5 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor) ; The product is not considered to affect fertility. Results obtained on a similar product.

XYLENE (1330-20-7):

Not classified

Fertility study 1 generation: NOAEL (parent): 2.171 mg/l ; NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor)

BUTAN-1-OL (71-36-3):

Not classified

Fertility study 2 generations: NOAEL (parent): 9.6 mg/l ; NOAEL (F1): 9.6 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor) ; Method: OECD 416 ; The product is not considered to affect fertility. Results obtained on a similar product.

ETHYLBENZENE (100-41-4):

Not classified

Fertility study 2 generations: NOAEL (parent): 4.34 mg/l ; NOAEL (F1): 4.34 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation) ; Method: OECD 416 ; The product is not considered to affect fertility.

Fertility study 1 generation: NOAEL (parent): 8.68 mg/l NOAEL (F1): None. ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation) ; Method: OECD 415 ; The product is not considered to affect fertility.

TOLUENE (108-88-3):

The product is not considered to affect fertility.

Fertility study 2 generations: NOAEL (parent): \geq 7.5 mg/l NOAEL (F1): NOAEL (F2): (Rat ; Female, Male ; Inhalation - vapor) ; Method: According to a standardised method.**N-HEXANE (110-54-3):**

Suspected of damaging fertility.

Fertility study 2 generations: NOAEL (parent): 31.68 mg/l NOAEL (F1): NOAEL (F2): (Rat ; Female, Male ; Inhalation) ; Method: OECD 416 ; Effects on fertility Results obtained on a similar product.

Teratogenicity: Based on our knowledge of the composition information: Suspected of damaging fertility or the unborn child.**TETRAETHYL ORTHOSILICATE (78-10-4):**

Not classified

NOAEL (terato): \geq 100 mg/kg ; NOAEL (mater): 50 mg/kg (Rat ; Gavage (Oral)) ; Method: OECD 422 ; The product is not considered to be toxic for development.**TITANIUM TETRABUTANOLATE (5593-70-4):**

Not classified

NOAEL (terato): 10.8 mg/l ; NOAEL (mater): 10.8 mg/l (Rat ; Inhalation - vapor) ; The product is not considered to be toxic for development. Results obtained on a similar product.

XYLENE (1330-20-7):

Not classified

Effects on the progeny are not considered significant as they were observed only in doses leading to maternal toxicity.

(Rat ; Inhalation) ; Method: OECD 414

BUTAN-1-OL (71-36-3):

Not classified

NOAEL (terato): 5,654 mg/kg ; NOAEL (mater): 1,454 mg/kg (Rat ; Ingestion) ; Method: According to a standardised method. ; The product is not considered to be toxic for development.

ETHYLBENZENE (100-41-4):

Not classified

NOAEL (terato): 17.36 mg/l ; NOAEL (mater): 4.34 mg/l (Rat ; Inhalation) ; Method: OECD 414 ; The product is not considered to be toxic for development.

NOAEL (terato): 8.68 mg/l ; NOAEL (mater): 8.68 mg/l (Rabbit ; Inhalation) ; Method: OECD 414 ; The product is not considered to be toxic for development.

TOLUENE (108-88-3):

Suspected of damaging the unborn child.

NOAEL (terato): 1.884 mg/l ; NOAEL (mater): 1.884 mg/l (Rabbit ; Inhalation - vapor) ; Method: OECD 414 ; The product is considered to be toxic for development.

N-HEXANE (110-54-3):

NOAEL (terato): 10.56 mg/kg ; NOAEL (mater): 3.17 mg/l (Mouse ; Inhalation) ; Method: OECD 414 ;
Results obtained on a similar product.

NOAEL (terato): 31.7 mg/kg ; NOAEL (mater): 10.56 mg/l (Rat ; Inhalation) ; Method: OECD 414 ; Results
obtained on a similar product.

Specific Target Organ Toxicity - Single Exposure:

Based on our knowledge of the composition information: May cause drowsiness or dizziness.

TETRAETHYL ORTHOSILICATE (78-10-4):

May cause respiratory irritation. Inhalation: Target Organ(s): Respiratory system

TITANIUM TETRABUTANOLATE (5593-70-4):

May cause drowsiness or dizziness. Oral: Target Organ(s): Central nervous system.

May cause respiratory irritation. Inhalation: Target Organ(s): Respiratory system

XYLENE (1330-20-7):

May cause respiratory irritation. Target Organ(s): Respiratory system

BUTAN-1-OL (71-36-3):

May cause respiratory irritation. May cause drowsiness or dizziness. Inhalation: Target Organ(s):
Respiratory system, Central nervous system.

ETHYLBENZENE (100-41-4):

Based on available data, the classification criteria are not met.

TOLUENE (108-88-3):

May cause drowsiness or dizziness.

N-HEXANE (110-54-3):

May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure:

Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):

Not classified

TITANIUM TETRABUTANOLATE (5593-70-4):

Based on available data, the classification criteria are not met.

XYLENE (1330-20-7):

May cause damage to organs through prolonged or repeated exposure.

BUTAN-1-OL (71-36-3):

Not classified

ETHYLBENZENE (100-41-4):

May cause damage to organs through prolonged or repeated exposure.

TOLUENE (108-88-3):

May cause damage to organs through prolonged or repeated exposure. Target Organ(s): Central nervous
system.

N-HEXANE (110-54-3):

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:**Based on our knowledge of the composition information: May be fatal if swallowed and enters airways.***TETRAETHYL ORTHOSILICATE (78-10-4):*

Not classified

TITANIUM TETRABUTANOLATE (5593-70-4):

Based on available data, the classification criteria are not met.

XYLENE (1330-20-7):

May be fatal if swallowed and enters airways.

BUTAN-1-OL (71-36-3):

Not classified

ETHYLBENZENE (100-41-4):

May be fatal if swallowed and enters airways.

TOLUENE (108-88-3):

May be fatal if swallowed and enters airways.

N-HEXANE (110-54-3):

May be fatal if swallowed and enters airways.

12. Ecological information**12.1 Toxicity:****Acute toxicity:****Fish: Based on our knowledge of the composition information:***TETRAETHYL ORTHOSILICATE (78-10-4):*

LC 50 (Zebra Fish; 96 h ; semi-static) : > 245 mg/l ; Method: According to a standardised method.

TITANIUM TETRABUTANOLATE (5593-70-4):

LC 50 (Pimephales promelas; 96 h ; Static) : 1,910 mg/l ; Method: OECD 203 ; Results obtained on a similar product.

XYLENE (1330-20-7):

LC 50 (Oncorhynchus mykiss; 96 h) : 2.6 mg/l ; Method: OECD 203 ; Results obtained on a similar product.

BUTAN-1-OL (71-36-3):

LC 50 (Fathead Minnow; 96 h ; Static) : 1,376 mg/l ; Method: OECD 203

ETHYLBENZENE (100-41-4):

LC 50 (Oncorhynchus mykiss; 96 h) : 4.2 mg/l ; Method: OECD 203 ; Fresh water

LC 50 (Atlantic silverside (Menidia menidia); 96 h) : 5.1 mg/l ; Method: According to a standardised method.
; marine water*TOLUENE (108-88-3):*

LC 50 (Coho salmon; 96 h ; Flow through) : 5.5 mg/l

N-HEXANE (110-54-3):

LL50 (Fish; 96 h) : 12.51 mg/l ; Method: QSAR ; Fresh water

Aquatic Invertebrates: Based on our knowledge of the composition information:*TETRAETHYL ORTHOSILICATE (78-10-4):*

EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 75 mg/l ; Method: OECD 202 ; Mortality

TITANIUM TETRABUTANOLATE (5593-70-4):

EC 50 (Water flea (Daphnia magna); 48 h ; Static) : 590 mg/l ; Method: OECD 202 ; Results obtained on a similar product.

XYLENE (1330-20-7):

EC 50 (Water flea (Daphnia magna); 24 h) : 1 mg/l ; Method: OECD 202 ; Results obtained on a similar product.

BUTAN-1-OL (71-36-3):

EC 50 (Water flea (Daphnia magna); 48 h ; Static) : 1,328 mg/l ; Method: OECD 202

ETHYLBENZENE (100-41-4):

EC 50 (Water flea (Daphnia magna); 48 h) : 1.8 - 2.4 mg/l ; Method: According to a standardised method. ; Fresh water

LC 50 (Americamysis bahia; 48 h) : > 5.2 mg/l ; Method: According to a standardised method. ; marine water

LC 50 (Americamysis bahia; 96 h) : 2.6 mg/l ; Method: According to a standardised method. ; marine water

TOLUENE (108-88-3):

EC 50 (Water flea (Ceriodaphnia dubia); 48 h ; semi-static) : 3.78 mg/l ; Method: According to a standardised method.

N-HEXANE (110-54-3):

EL50 (Water flea (Daphnia magna); 48 h) : 21.85 mg/l ; Method: QSAR ; Fresh water

Aquatic plants: Based on our knowledge of the composition information:**TETRAETHYL ORTHOSILICATE (78-10-4):**

EC 50 (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : > 22 mg/l ; Method: OECD 201

NOEC (growth rate) (Algae (Pseudokirchneriella subcapitata); 72 h ; Static) : >= 22 mg/l ; Method: OECD 201

TITANIUM TETRABUTANOLATE (5593-70-4):

EC 50 (Green algae (Scenedesmus subspicatus); 72 h ; Static) : > 820 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

NOEC (growth rate) (Green algae (Scenedesmus subspicatus); 72 h ; Static) : 201 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

XYLENE (1330-20-7):

ErC50 (Algae; 48 h) : 1.3 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

NOEC (growth rate) (Algae; 72 h) : 0.44 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

BUTAN-1-OL (71-36-3):

NOEC (growth rate) (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : 129 mg/l ; Method: OECD 201

EC 50 (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : 225 mg/l ; Method: OECD 201

ETHYLBENZENE (100-41-4):

EC 50 (Algae (Pseudokirchneriella subcapitata); 96 h) : 3.6 mg/l ; Method: According to a standardised method. ; Fresh water Based on cell number

NOEC (Algae (Pseudokirchneriella subcapitata); 96 h) : 3.4 mg/l ; Method: According to a standardised method. ; Fresh water Based on cell number

EC 50 (Skeletonema costatum; 96 h) : 7.7 mg/l ; Method: According to a standardised method. ; marine water Based on cell number

NOEC (Skeletonema costatum; 96 h) : 4.5 mg/l ; Method: According to a standardised method. ; marine water Based on cell number

TOLUENE (108-88-3):
NOEC (biomass) (Skeletonema costatum; 72 h ; Static) : 10 mg/l ; Method: OECD 201

N-HEXANE (110-54-3):
EL50 (Algae; 48 h) : 9.285 mg/l ; Structure-activity relationship (SAR)
NOEL (Algae; 48 h) : 2.077 mg/l ; Structure-activity relationship (SAR)

Toxicity to microorganisms: No data available.

Chronic Toxicity:

Fish: Based on our knowledge of the composition information:

XYLENE (1330-20-7):
NOEC (Oncorhynchus mykiss; 56 d) : 1.3 mg/l ; Results obtained on a similar product.

TOLUENE (108-88-3):
NOEC (growth rate) (Coho salmon; 40 d ; Flow through) : 1.4 mg/l

N-HEXANE (110-54-3):
NOELR (Fish; 28 d) : 2.8 mg/l ; Method: QSAR ; Fresh water

Aquatic Invertebrates: Based on our knowledge of the composition information:

TITANIUM TETRABUTANOLATE (5593-70-4):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : 4 mg/l ; Results obtained on a similar product.

XYLENE (1330-20-7):
NOEC (Water flea (Ceriodaphnia dubia); 7 d) : 0.96 mg/l ; Method: According to a standardised method. ;
Results obtained on a similar product.

BUTAN-1-OL (71-36-3):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : 4.1 mg/l ; Method: OECD 211

ETHYLBENZENE (100-41-4):
NOEC (Water flea (Ceriodaphnia dubia); 7 d) : 0.96 mg/l ; Method: According to a standardised method. ;
Fresh water

TOLUENE (108-88-3):
NOEC (Water flea (Ceriodaphnia dubia); 7 d ; semi-static) : 0.74 mg/l ; Method: According to a standardised
method.

N-HEXANE (110-54-3):
NOELR (Water flea (Daphnia magna); 21 d) : 4.888 mg/l ; Method: QSAR ; Fresh water

12.2 Persistence and Degradability:

Biodegradation: Based on our knowledge of the composition information:

TETRAETHYL ORTHOSILICATE (78-10-4):
98 % (activated sludge, domestic (adaptation not specified) ; 28 d ; Dissolved organic carbon (DOC)) ;
Method: According to a standardised method. ; Readily biodegradable

TITANIUM TETRABUTANOLATE (5593-70-4):
92 % (sewage, domestic, non-adapted ; 20 d ; Oxygen depletion) ; Method: According to a standardised
method. ; Readily biodegradable Results obtained on a similar product.

XYLENE (1330-20-7):
The product is considered to be readily biodegradable.

BUTAN-1-OL (71-36-3):

92 % (sewage, domestic, non-adapted ; 20 d ; Oxygen depletion) ; Readily biodegradable

ETHYLBENZENE (100-41-4):

70 - 80 % (activated sludge, domestic (adaptation not specified) ; 28 d) ; Method: OECD 301 B ; Readily biodegradable The 10-day window requirement is fulfilled.

TOLUENE (108-88-3):

69 % ; The product is easily biodegradable.

N-HEXANE (110-54-3):

98 % (activated sludge, domestic (adaptation not specified) ; 28 d) ; Method: OECD 301 F ; Readily biodegradable Results obtained on a similar product. The 10-day window requirement is fulfilled.

BOD/COD Ratio: No data available.

12.3 Bioaccumulative potential:**Bioconcentration Factor (BCF): Based on our knowledge of the composition information:****XYLENE (1330-20-7):**

Bioconcentration Factor (BCF): 25.9 (Oncorhynchus mykiss ; 56 d) ; The product is not bioaccumulating. Results obtained on a similar product.

BUTAN-1-OL (71-36-3):

Bioconcentration Factor (BCF): 3.16 ; Method: QSAR

ETHYLBENZENE (100-41-4):

Bioconcentration Factor (BCF): 1 (Oncorhynchus kisutch) ; The product is not considered to have a bioaccumulative potential.

TOLUENE (108-88-3):

Bioconcentration Factor (BCF): 90 ; Potential to bioaccumulate is low.

N-HEXANE (110-54-3):

Bioconcentration Factor (BCF): 501 ; The product is considered to have a bioaccumulative potential. Structure-activity relationship (SAR)

Partition coefficient (n-octanol/water): Based on our knowledge of the composition information:**TETRAETHYL ORTHOSILICATE (78-10-4):**

Log Kow: 3.18 (40 °C) ; Method: Measured ; at pH 7

TITANIUM TETRABUTANOLATE (5593-70-4):

Log Kow: 0.88 (20 °C) ; Results obtained on a similar product.

XYLENE (1330-20-7):

Log Kow: 3.16 (20 °C)

BUTAN-1-OL (71-36-3):

Log Kow: 1 (25 °C) ; Method: OECD 117 ; at pH 7

ETHYLBENZENE (100-41-4):

Log Kow: 3.6 (20 °C)

TOLUENE (108-88-3):

Log Kow: 2.73 (20 °C)

N-HEXANE (110-54-3):
Log Kow: 4 (20 °C)

12.4 **Mobility in soil:**

No data available.

12.5 **Other adverse effects:**

No data available.

13. Disposal considerations

13.1 **Waste treatment methods:**

Disposal methods:

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability.

Contaminated Packaging:

Contaminated packages should be as empty as possible.

Waste code:

EPA RCRA HAZARDOUS WASTE CODE: D001

14. Transport information

DOT

14.1 UN number or ID number:	UN 1993
14.2 UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3
EmS No.:	128,
14.4 Packing Group:	III
14.5 Environmental hazards:	Not a Marine Pollutant
14.6 Special precautions for user:	None.

IMDG / IMO

14.1 UN Number:	UN 1993
14.2 UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
14.4 Packing Group:	III
14.5 Environmental hazards:	Not a Marine Pollutant
14.6 Special precautions for user:	None.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	Not applicable.

IATA

14.1 UN number or ID number:	UN 1993
14.2 Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3

14.4 Packing Group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	None.
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

15. Regulatory information

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity:</u>	<u>Reportable quantity:</u>
Xylene	100 lbs
Ethylbenzene	1000 lbs
Toluene	1000 lbs
n-hexane	5000 lbs
Butan-1-ol	5000 lbs

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Hazard categories:

Flammable liquids, Skin Corrosion/Irritation, Serious Eye Damage/Eye Irritation, Specific Target Organ Toxicity - Single Exposure, Carcinogenicity, Toxic to reproduction, Aspiration Hazard

SARA 304 Emergency Release Notification:

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:

<u>Chemical Identity:</u>	<u>Reporting threshold for other users:</u>	<u>Reporting threshold for manufacturing and processing:</u>
Xylene	10000 lbs	25000lbs
Ethylbenzene	10000 lbs	25000lbs
Toluene	10000 lbs	25000lbs
n-hexane	10000 lbs	25000lbs
Butan-1-ol	10000 lbs	25000lbs

US State Regulations:

US. California Proposition 65:



This product can expose you to chemicals including: Ethylbenzene (<0.7%), Toluene (<0.7%), Benzene (<0.07%) : 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.

US. New Jersey Worker and Community Right-to-Know Act:

<u>Chemical Identity:</u>
Tetraethyl orthosilicate
Xylene
Benzene, trimethyl-
Ethylbenzene
Toluene
n-hexane
Butan-1-ol

US. Massachusetts RTK - Substance List:

Chemical Identity:

Xylene
 Benzene, trimethyl-
 Ethylbenzene
 Toluene
 n-hexane

US. Pennsylvania RTK - Hazardous Substances:

Chemical Identity:

Tetraethyl orthosilicate
 Xylene
 Benzene, trimethyl-
 Ethylbenzene
 Toluene
 n-hexane
 Butan-1-ol

US. Rhode Island RTK: No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

US TSCA Inventory:	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Australia AICS:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.

16. Other information, including date of preparation or last revision

HMIS Hazard ID:

Health		2
Flammability		2
Physical Hazards		0
PERSONAL PROTECTION	C	

Health	*	2
Flammability		3
Physical Hazards		0
PERSONAL PROTECTION	H	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect
 C - Safety Glasses, Gloves & Apron H - Goggles, Gloves, Apron & Vapor Respirator

NFPA Hazard ID:



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 02/26/2021

Version #: 9.0

Further Information:

No data available.

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.