

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Tuff Kote Spray
Product code : TK-150-12C

1.2. Recommended use and restrictions on use

Recommended use : Mold Release Agent
Restrictions on use : None known

1.3. Supplier

Nanoplas Inc.
2950 Prairie Street South West
Suite 900
Grandville, MI, 49418
T (616)-452-3707
info@nanomoldcoating.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call INFOTRAC 24hr/day 7days/week
(collect calls accepted)
Within USA, Mexico and Canada: 800-535-5053 ID# 102222
Outside USA, Mexico and Canada: 1-352-323-3500 ID# 102222

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable aerosol Category 1	H222	Extremely flammable aerosol
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Full text of H statements : see section 16		

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H222 - Extremely flammable aerosol
H229 – Pressurized container: may burst if heated.
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.

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P251 - Do not pierce or burn, even after use.
P261 - Avoid breathing spray, vapors, gas.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, protective gloves.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P331 - Do NOT induce vomiting.
P302+P352 - If on skin: Wash with plenty of water.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a doctor if you feel unwell.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 - Dispose of contents/container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None known.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Propane	CAS-No.: 74-98-6	60 – 80
Butane	CAS-No.: 106-97-8	10 – 30
Heptane, branched, cyclic and linear	CAS-No.: 426260-76-6	5-13
Propan-2-ol, isopropyl alcohol, isopropanol	CAS-No.: 67-63-0	<1.0
Naphtha (petroleum), hydrotreated light	CAS-No.: 64742-49-0	<1.0

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Move the affected person to fresh air. Get medical attention if symptoms occur.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution. Get medical attention if irritation develops and persists.
First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects	: Aspiration hazard. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Causes skin irritation. May cause minor eye irritation.
Inhalation	: High concentration of vapors may induce: headache, nausea, dizziness. Intentional abuse may be harmful or fatal. May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin	: Causes skin irritation.
Eyes	: May cause minor eye irritation.
Ingestion	: Aspiration hazard. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Aspiration hazard. If accidentally swallowed obtain immediate medical attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Use dry chemical, CO ₂ , water spray or alcohol-resistant foam.
Unsuitable extinguishing media	: None.

5.2. Specific hazards arising from the chemical

Fire hazard	: Extremely flammable aerosol. Keep away from open flames, hot surfaces and sources of ignition. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Exposure to fire may cause containers to rupture/explode.
Explosion hazard	: Pressurized container: may burst if heated. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray.
Protection during firefighting	: Use shielding to protect from bursting cans. Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Eliminate all ignition sources. Ventilate area. Wear suitable protective clothing. Avoid contact with eyes, skin and clothing.
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6.1.1. For non-emergency personnel

Emergency procedures	: No open flames, no sparks, and no smoking. Avoid breathing gas, spray, mist, vapors. Avoid contact with skin and eyes.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Do not allow product to spread into the environment.

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According to 29CFR 1910.1200 OSHA Hazard Communication Standard

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Absorb and/or contain spill with inert material, then place in suitable container. Notify authorities if product enters sewers or public waters.
- Other information : Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For waste disposal after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure adequate ventilation. Use only outdoors or in a well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Unplug electrical tools, motors, and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances, or any other source of electricity. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Wash hands with water and soap.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : U.F.C. (NFPA 30B) Level III Aerosol.
- Storage conditions : Store locked up. Store in a cool, well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
- Incompatible materials : Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propane (74-98-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Propane
Remark (ACGIH)	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Propane
OSHA PEL (TWA)	1800 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

USA - ACGIH - Occupational Exposure Limits

Local name	2-Propanol
ACGIH OEL TWA	200 ppm
ACGIH OEL STEL	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024

USA - ACGIH - Biological Exposure Indices

Local name	2-Propanol
BEI (BLV)	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns
Regulatory reference	ACGIH 2024

USA - OSHA - Occupational Exposure Limits

Local name	Isopropyl alcohol
OSHA PEL (TWA)	980 mg/m ³ 400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Butane (106-97-8)

USA - ACGIH - Occupational Exposure Limits

Local name	Butane
ACGIH OEL STEL	1000 ppm (EX - Explosion hazard)
Remark (ACGIH)	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation.
Environmental exposure controls	: Do not allow product to spread into the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves

Eye protection:

Use suitable eye protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

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Thermal hazard protection:

Not applicable.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol spray can. Amber Liquid.
Color	: Amber
Odor	: Solvent
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: -104 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.719
Solubility	: Practically insoluble in : water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: < 20.5 mm²/s
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Particle Characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from open flames, hot surfaces and sources of ignition. Do not puncture or incinerate containers.

10.5. Incompatible materials

Keep away from oxidizers, strong acids and strong bases.

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10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Propane (74-98-6)

LC50 Inhalation - Rat [ppm]	> 20000 ppm/4h
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Naphtha (petroleum), hydrotreated light (64742-49-0)

LD50 oral	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit, Animal sex: male, 95% CL: 9,63 - 20,77
LC50 Inhalation - Rat	> 5610 mg/m ³

Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	16.4 ml/kg
LC50 Inhalation - Rat [ppm]	1666.66 ppm/1h
ATE US (dermal)	0 mg/kg body weight

Butane (106-97-8)

LC50 Inhalation - Rat [ppm]	> 20000 ppm/4h
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Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified. This product does not contain any component that is considered a carcinogen by IARC, ACGIH, OSHA or NTP.

Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

IARC group	3 - Not classifiable
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Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.

Naphtha (petroleum), hydrotreated light (64742-49-0)

STOT-single exposure	May cause drowsiness or dizziness.
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Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
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Heptane, branched, cyclic and linear (426260-76-6)

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Not classified

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Naphtha (petroleum), hydrotreated light (64742-49-0)

LOAEC (inhalation, rat, vapor, 90 days)	4.71 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
NOAEC (inhalation, rat, vapor, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)

Aspiration hazard	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: < 20.5 mm²/s
Symptoms/effects	: Aspiration hazard. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Causes skin irritation. May cause minor eye irritation.
Inhalation	: High concentration of vapors may induce: headache, nausea, dizziness. Intentional abuse may be harmful or fatal. May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin	: Causes skin irritation.
Eyes	: May cause minor eye irritation.
Ingestion	: Aspiration hazard. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.

Naphtha (petroleum), hydrotreated light (64742-49-0)

LC50 - Fish [1]	10 mg/l 96 hr
EC50 - Crustacea [1]	4.5 mg/l 48 hr
EC50 - Other aquatic organisms [1]	3.1 mg/l 72 hr
LC50 - Fish [2]	8.2 mg/l 96 hr
EC50 72h - Algae [1]	3.1 mg/l Pseudokirchnerella subcapitata
EC50 72h - Algae [2]	18.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

LC50 - Fish [1]	10000 mg/l Pimephales promelas (Fathead minnow)
EC50 - Crustacea [1]	> 10000 mg/l
LC50 - Fish [2]	9640 mg/l Pimephales promelas (Fathead minnow)
NOEC chronic crustacea	3.37 mg/l

12.2. Persistence and degradability

Tuff Kote Spray

Persistence and degradability	No data available.
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Propane (74-98-6)

Persistence and degradability	Not applicable.
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Naphtha (petroleum), hydrotreated light (64742-49-0)

Persistence and degradability	Inherently biodegradable.
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Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

Persistence and degradability	Readily biodegradable.
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Butane (106-97-8)

Persistence and degradability	Not applicable.
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Heptane, branched, cyclic and linear (426260-76-6)

Persistence and degradability	Inherently biodegradable.
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12.3. Bioaccumulative potential

Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

BCF - Fish [1]	3
Partition coefficient n-octanol/water (Log Kow)	0.05

12.4. Mobility in soil

Propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.5
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
UN1950	1950	1950
14.2. Proper Shipping Name		
Aerosols	AEROSOLS	Aerosols, flammable
14.3. Transport hazard class(es)		
2.1	2.1	2.1
		
14.4. Packing group		
Not applicable	Not applicable	Not applicable

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DOT	IMDG	IATA
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

DOT

UN-No.(DOT)	: UN1950
DOT Special Provisions (49 CFR 172.102)	: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Packaging Non Bulk (49 CFR 173.xxx)	: None
DOT Packaging Bulk (49 CFR 173.xxx)	: None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Protected from sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

IMDG

Special provision (IMDG)	: 63, 190, 277, 327, 344, 381, 959
Packing instructions (IMDG)	: P207, LP200
Packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	: S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69

IATA

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provision (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Tuff Kote Spray

SARA Section 311/312 Hazard Classes	Refer to Section 2 for OSHA Hazard Classification.
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Propane(74-98-6)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List
Propan-2-ol, isopropyl alcohol, isopropanol(67-63-0)	U.S. - New Jersey - Right to Know Hazardous Substance List
Butane(106-97-8)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

According to 29CFR 1910.1200 OSHA Hazard Communication Standard

Revision date : 7/8/2024

Full text of hazard classes and H-statements	
H222	Extremely flammable aerosol
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating

Health

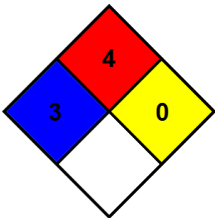
: 3 Serious Hazard

Flammability

: 4 Severe Hazard

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.



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Indication of changes:
Composition/Information on ingredients. All chapters have been modified since the previous version. revised edition.

Safety Data Sheet (SDS), USA

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