SAFETY DATA SHEET

50170 DUO-TAK

Section 1. Identification

GHS product identifier	:	50170 DUO-TAK
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	FO20036593
Product type	:	liquid

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

Product use	:	. Adhesive.
Supplier's details	:	**POLYONE CORPORATION** 33587 Walker Road, Avon Lake, OH 44012 1 (440) 930-1000 or 1 (866) POLYONE
Emergency telephone number (with hours of operation)	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).

Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	FLAMMABLE AEROSOLS - Category 1 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
Extremely flammable aerosol.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General : Not applicable.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Chemical name : Mixture
Other means of identification : FO20036593

CAS number/other identifiers

Ingredient name	%	CAS number
Acetone	10 - 30	67-64-1
Hexane	10 - 30	110-54-3
Pentane, 3-methyl-	5 - 10	96-14-0
Pentane, 2-methyl-	5 - 10	107-83-5
Butane, 2,2-dimethyl-	1 - 5	75-83-2
Butane, 2,3-dimethyl-	1 - 5	79-29-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	Causes serious eye irritation.
Inhalation	:	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	:	Causes skin irritation.
Ingestion	:	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	:	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation

coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO_2.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a

		considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a well-ventilated place. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	**OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1,800 mg/m3 750 ppm **Maximum permissible limit of exposure in the short term (short-term exposure limit).** 2,400 mg/m3 1,000 ppm **OSHA PEL (1993-06-30)** PEL: Permissible Exposure Level 2,400 mg/m3 1,000 ppm **NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 590 mg/m3 250 ppm **ACGIH TLV (2015-03-16)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 250 ppm **TLV-STEL: Threshold Limit Value - Short Time Exposure Level** 500 ppm
Pentane, 2-methyl-	**NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 350 mg/m3 100 ppm **Ceiling-A concentration that should not be exceeded at any time during any part of the working day.** 1,800 mg/m3 510 ppm **OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1,800 mg/m3 500 ppm **Maximum permissible limit of exposure in the short term (short-term exposure limit).** 3,600 mg/m3 1,000 ppm **ACGIH TLV (1994-09-01)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 1,760 mg/m3 500 ppm **TLV-STEL: Threshold Limit Value - Short Time Exposure Level** 3,500 mg/m3 1,000 ppm
Pentane, 3-methyl-	**NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 350 mg/m3 100 ppm **Ceiling-A concentration that should not be exceeded at any time during any part of the working day.** 1,800 mg/m3 510 ppm **OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1,800 mg/m3 500 ppm **Maximum permissible limit of exposure in the short term (short-term exposure limit).** 3,600 mg/m3 1,000 ppm

	ACGIH TLV (1994-09-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 1,760 mg/m3 500 ppm **TLV-STEL: Threshold Limit Value - Short Time Exposure Level** 3,500 mg/m3 1,000 ppm
Hexane	**OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 180 mg/m3 50 ppm **OSHA PEL (1993-06-30)** PEL: Permissible Exposure Level 1,800 mg/m3 500 ppm **NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 180 mg/m3 50 ppm **ACGIH TLV (1998-09-01)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 50 ppm
Butane, 2,2-dimethyl-	**NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 350 mg/m3 100 ppm **Ceiling-A concentration that should not be exceeded at any time during any part of the working day.** 1,800 mg/m3 510 ppm **OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1,800 mg/m3 500 ppm **Maximum permissible limit of exposure in the short term (short-term exposure limit).** 3,600 mg/m3 1,000 ppm **ACGIH TLV (1994-09-01)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 1,760 mg/m3 500 ppm **TLV-STEL: Threshold Limit Value - Short Time Exposure Level** 3,500 mg/m3 1,000 ppm
Butane, 2,3-dimethyl-	**NIOSH REL (1994-06-01)** Time Weighted Average (TWA) 350 mg/m3 100 ppm **Ceiling-A concentration that should not be exceeded at any time during any part of the working day.** 1,800 mg/m3 510 ppm **OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1,800 mg/m3 500 ppm **Maximum permissible limit of exposure in the short term (short-term exposure limit).** 3,600 mg/m3 1,000 ppm **ACGIH TLV (1994-09-01)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 1,760 mg/m3 500 ppm **TLV-STEL: Threshold Limit Value - Short Time Exposure Level** 3,500 mg/m3 1,000 ppm

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local

		exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product., When there is a risk of ignition from static electricity, wear anti-static protective clothing., For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection	:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	:	liquid [aerosol]
Color	:	NO PIGMENT
Odor	:	Not available.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	-104.4 °C (-155.9 °F)
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	**Lower:** Not available. **Upper:** Not available.
Vapor pressure	:	134.08 PSI @ 70 °F (21 °C)
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	277.27 °C (531.09 °F)
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	**Dynamic:** Not available. **Kinematic:** Not available.

Aerosol product

Type of aerosol	:	Spray
Heat of combustion	:	Not available.
Ignition distance	:	Not available.
Enclosed space ignition - Time	:	Not available.

equivalent		
Enclosed space ignition - Deflagration density	:	Not available.
Flame height	:	Not available.
Flame duration	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	:	Keep away from strong acids. Oxidizer.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone				
	LD50 Oral	Rat	5,800 mg/kg	-
	LD50 Oral	Rat	5,800 mg/kg	-
	LC50 Inhalation	Rat	50.1 mg/l	8 h
Hexane				
	LD50 Oral	Rat	15,840 mg/kg	-
	LD50 Oral	Rat	29,700 mg/kg	-
	LC50 Inhalation	Rat	48,000 ppm	4 h
	LC50 Inhalation	Rat	627 mg/l	0.05 h
Butane, 2,3-dimethyl-				

Conclusion/Summary : Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Severe irritant	Rabbit			-
	Skin - Mild irritant	Rabbit			-
	Skin - Mild irritant	Rabbit		24 hrs	-
	Eyes - Moderate irritant	Rabbit		24 hrs	-
	Eyes - Mild irritant	Rabbit			-
	Eyes - Mild irritant	Human			-
Hexane	Eyes - Mild irritant	Rabbit			-

Conclusion/Summary

Skin : Mixture.Not fully tested.
Eyes : Mixture.Not fully tested.
Respiratory : Mixture.Not fully tested.

Sensitization

Conclusion/Summary

Skin : Mixture.Not fully tested.
Respiratory : Mixture.Not fully tested.

Mutagenicity

Conclusion/Summary : Mixture.Not fully tested.

Carcinogenicity

Conclusion/Summary : Mixture.Not fully tested.

Reproductive toxicity

Conclusion/Summary : Mixture.Not fully tested.

Teratogenicity

Conclusion/Summary : Mixture.Not fully tested.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Hexane	Category 3		Narcotic effects
Pentane, 2-methyl-	Category 3		Narcotic effects
Pentane, 3-methyl-	Category 3		Narcotic effects
Butane, 2,2-dimethyl-	Category 3		Narcotic effects
Butane, 2,3-dimethyl-	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Hexane	Category 2		

Aspiration hazard

Product/ingredient name	Result
Hexane	ASPIRATION HAZARD - Category 1
Pentane, 2-methyl-	ASPIRATION HAZARD - Category 1
Pentane, 3-methyl-	ASPIRATION HAZARD - Category 1
Butane, 2,2-dimethyl-	ASPIRATION HAZARD - Category 1
Butane, 2,3-dimethyl-	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression., May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation

coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Mixture.Not fully tested.

General : May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone			
	Acute LC50 8,000 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 6,210,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 8,120,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 7,280,000 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 5,600 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 10,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 7,810,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 7,460,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 6,900 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 8,800,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 7,550,000 µg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 8,098,000 µg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 6,000,000 µg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute EC50 7,200,000 µg/l Fresh water	Aquatic plants - Algae	96 h
	Acute EC50 20.565 mg/l Marine water	Aquatic plants - Algae	96 h
	Acute EC50 11,727,900 µg/l Fresh water	Aquatic plants - Algae	96 h

	Acute EC50 11,493,300 µg/l Fresh water	Aquatic plants - Algae	96 h
	Acute NOEC 4.95 mg/l Marine water	Aquatic plants - Algae	4 d
	Acute NOEC 100 mg/l Marine water	Aquatic plants - Algae	4 d
	Acute NOEC 100 mg/l Marine water	Aquatic plants - Algae	3 d
	Acute NOEC 500.0 mg/l Marine water	Aquatic plants - Algae	4 d
	Chronic NOEC 5 µg/l Marine water	Fish - Fish	42 d
	Chronic NOEC 5 µg/l Marine water	Fish - Fish	42 d
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Fish	28 d
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Fish	28 d
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Fish	28 d
	Chronic NOEC 100.0 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
	Chronic NOEC 1,000 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
	Chronic NOEC 1,000 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
	Chronic NOEC 100.0 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
	Chronic NOEC 100.0 mg/l Fresh water	Aquatic invertebrates. Daphnia	21 d
	Chronic NOEC 16.000 mg/l Fresh water	Aquatic invertebrates. Crustaceans	21 d
	Chronic NOEC 16.000 mg/l Fresh water	Aquatic invertebrates. Crustaceans	21 d
	Chronic NOEC 16.000 mg/l Fresh water	Aquatic invertebrates. Crustaceans	21 d
	Chronic NOEC 16.000 mg/l Fresh water	Aquatic invertebrates. Crustaceans	21 d
	Chronic NOEC 16.000 mg/l Fresh water	Aquatic invertebrates. Crustaceans	21 d
Hexane			
	Acute LC50 2,500 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 113,000 µg/l Fresh water	Fish - Fish	96 h

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Butane, 2,2-dimethyl-	3.82	-	low
Pentane, 3-methyl-	3.6	-	low
Acetone	-0.23	-	low
Hexane	4	501.19	high
Butane, 2,3-dimethyl-	3.42	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Listed

Ingredient	CAS #	Status	Reference number
Acetone	67-64-1	Listed	

Section 14. Transport information

U.S.DOT 49CFR Ground/Air/Water	:	Not regulated for transportation.
International Air ICAO/IATA	:	Consult mode specific transport rules
International Water IMO/IMDG	:	Consult mode specific transport rules

Section 15. Regulatory information

U.S. Federal regulations :

United States - TSCA 12(b) - Chemical export notification: None of the components are listed.
United States - TSCA 4(a) - Final Test Rules: Not listed
United States - TSCA 4(a) - ITC Priority list: Not listed
United States - TSCA 4(a) - Proposed test rules: Not listed
United States - TSCA 4(f) - Priority risk review: Not listed
United States - TSCA 5(a)2 - Final significant new use rules: Not listed
United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed
United States - TSCA 5(e) - Substances consent order: Not listed
United States - TSCA 6 - Final risk management: Not listed
United States - TSCA 6 - Proposed risk management: Not listed
United States - TSCA 8(a) - Chemical risk rules: Not listed
United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed
United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined
United States - TSCA 8(a) - Preliminary assessment report (PAIR): Not listed
United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed
United States - TSCA 8(d) - Health and safety studies: Not listed
United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed **Ethyl benzene**

United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Listed
United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Listed **Methane, 1,1'-oxybis-**
Propane

Butane

United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Not listed
United States - Department of commerce - Precursor chemical: Not listed

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed
Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Chemical Name	CAS-No.	RQ for component
Acetone	67-64-1	5,000 lb(s) 2,270 kg 5,000 lb(s) 2,270 kg
Hexane	110-54-3	5,000 lb(s) 2,270 kg

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Classification
Butane, 2,2-dimethyl-	1 - 5	F, AH
Pentane, 3-methyl-	5 - 10	F, AH
Pentane, 2-methyl-	5 - 10	F, AH

Acetone	10 - 30	F, AH
Hexane	10 - 30	F, AH, CH
Butane, 2,3-dimethyl-	1 - 5	F, AH

SARA 313

	Product name	**CAS number**	**%**
Form R - Reporting requirements	Hexane	110-54-3	10 - 30
Supplier notification	Hexane	110-54-3	10 - 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : The following components are listed:
Acetone
Hexane

New Jersey : The following components are listed:
Butane, 2,3-dimethyl-
Butane, 2,2-dimethyl-
Methane, 1,1'-oxybis-
Pentane, 2-methyl-
Propane
Butane
Acetone
Hexane

Pennsylvania : The following components are listed:
Butane, 2,3-dimethyl-

Butane, 2,2-dimethyl-

Methane, 1,1'-oxybis-

Pentane, 3-methyl-

Pentane, 2-methyl-

Propane

Butane

Acetone

Hexane

California Prop. 65

This PolyOne product does not contain any chemical known to the State of California to cause cancer, or birth defects or other reproductive harm, in concentrations that require a warning notice under California's Proposition 65. This statement relies in part on information provided by the buyer of this PolyOne product. PolyOne does not control or have complete knowledge of the end uses to which that buyer or any other entity in the chain of distribution and marketing may put this PolyOne product. Therefore, the buyer of this PolyOne product, each entity that uses this PolyOne product in formulating another product, and each entity in the chain of distribution and marketing of any product that includes the material in this PolyOne product must make its own decision as to giving a Proposition 65 warning.

United States inventory (TSCA 8b) : All components are listed or exempted.

Canada inventory : All components are listed or exempted.

International regulations

Inventory list

Australia	:	Not determined.
Canada	:	All components are listed or exempted.
China	:	Not determined.
Europe inventory	:	Not determined.
Japan	:	Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.
Turkey	:	Not determined.
United States	:	All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29

CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.
The customer is responsible for determining the PPE code for this material.

History

Date of printing	:	06/22/2017
Date of issue/Date of revision	:	06/21/2017
Date of previous issue	:	04/11/2017
Version	:	1.3
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	:	Not available.

Notice to reader

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