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1. Identification

Product identifier used on the label

DF21 Flex Agent

Recommended use of the chemical and restriction on use

Recommended use*: Paints, Coatings and Related Materials; for industrial use only Unsuitable for use: Not intended for sale to or use by the general public.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION 100 Park Avenue Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

2A

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

2. Hazards Identification

Eye Dam./Irrit.

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Sens. STOT SE	1 3 (Vapours may cause drowsiness and dizziness.)	Skin sensitization Specific target organ toxicity — single exposure
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic
Flam. Liq.	2	Flammable liquids

Serious eye damage/eye irritation

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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Repr. 2 (fertility) Reproductive toxicity

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H225 Highly flammable liquid and vapour.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H361 Suspected of damaging fertility.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves, protective clothing and eye protection or face

protection.

P210 Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking.

P264 Wash contaminated body parts thoroughly after handling. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

P242 Use only non-sparking tools.

P241 Use explosion-proof electrical, ventilating and lighting equipment.

P243 Take action to prevent static discharges.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P202 Do not handle until all safety precautions have been read and

understood.

P272 Contaminated work clothing should not be allowed out of the workplace.

P201 Obtain special instructions before use.

Precautionary Statements (Response):

P312 Call a POISON CENTER or physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P337 + P313 If eye irritation persists: Get medical attention.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P370 + P378 In case of fire: Use water spray for extinction.
P333 + P313 If skin irritation or rash occurs: Get medical attention.

P303 + P361 + P353 IF ON SKIN (or hair): Remove or Take off immediately all contaminated

clothing. Rinse skin with water or shower.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

P308 + P313 IF exposed or concerned: Get medical attention.

Precautionary Statements (Storage):

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

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste

collection point.

Hazards not otherwise classified

No applicable information available.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Acetone

CAS Number: 67-64-1

Content (W/W): >= 5.0 - < 7.0%

Synonym: Acetone

cyclohexane

CAS Number: 110-82-7

Content (W/W): >= 0.3 - < 1.0%

Synonym: Hexahydrobenzene; Cyclohexane

n-Butyl acetate

CAS Number: 123-86-4

Content (W/W): >= 15.0 - < 20.0%

Synonym: n-Butyl acetate

bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

CAS Number: 41556-26-7 Content (W/W): >= 0.3 - < 1.0%

Synonym: Decanedioic acid, bis(1,2,2,6,6-pentamethyl-4-piperidyl) ester

Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

CAS Number: 82919-37-7 Content (W/W): >= 0.1 - < 0.2%

Synonym: Decanedioic acid, 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl)

ester

4-chloro-α,α,α-trifluorotoluene

CAS Number: 98-56-6

Content (W/W): >= 5.0 - < 7.0% Synonym: No data available.

4. First-Aid Measures

Description of first aid measures

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General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:

Flush with copious amounts of water for at least 15 minutes. Hold eyelids open to facilitate rinsing. If irritation develops, seek medical attention. Seek medical attention.

If swallowed:

Immediate medical attention required. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Rinse mouth and then drink 200-300 ml of water.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Information on: cyclohexane

Symptoms: Overexposure may cause:, unconsciousness, lethargy, dizziness

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Symptoms: Overexposure may cause:, skin irritation, erythema, nausea, headache, vomiting,

dizziness, diarrhea, abdominal cramps

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Symptoms: Overexposure may cause:, skin irritation, erythema, nausea, headache, vomiting,

dizziness, diarrhea, abdominal cramps

Information on: 4-chloro- α , α , α -trifluorotoluene

Symptoms: Overexposure may cause:, lethargy, nausea, headache, dizziness

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: carbon dioxide, foam, dry powder, water spray

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Unsuitable extinguishing media for safety reasons: water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Vapors and/or decomposition products are irritant and/or toxic. If product is heated above decomposition temperature acrid smoke and fumes will be released.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Notify proper authorities. Do not flood burning material with water due to potential spreading of fire. Flash fire may occur. Run-off water from fire may cause pollution. Contain contaminated water/firefighting water. Remove product from areas of fire, or otherwise cool sealed containers with water in order to avoid pressure build up due to heat. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Use antistatic tools. Extinguish sources of ignition nearby and downwind. Avoid prolonged inhalation. Wear suitable personal protective clothing and equipment. Ensure adequate ventilation.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

A spill of or in excess of the reportable quantity requires notification to state, local and national emergency authorities.

Methods and material for containment and cleaning up

Dike spillage. Spills should be contained, solidified, and placed in suitable containers for disposal. Place into appropriately labeled waste containers.

7. Handling and Storage

Precautions for safe handling

Handle and open container with care. WARNING: Empty containers may still contain hazardous residue. Use static lines when mixing and transferring material. Do not puncture, drop, or slide containers. Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing.

Proper ventilation and respiratory protection is required when sanding, flame cutting, welding or brazing coated surfaces. Do not apply to hot surfaces.

Protection against fire and explosion:

Risk of explosion if heated under confinement. Use antistatic tools. Exhaust fans should be explosion proof. Avoid all sources of ignition: heat, sparks, open flame. Provide adequate ventilation to remove solvent vapors from lower levels or work areas and to prevent solvent contact with ignition sources. Sealed containers should be protected against heat as this results in pressure build-up.

Conditions for safe storage, including any incompatibilities

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Segregate from strong bases. Segregate from oxidizing agents. Segregate from incompatible substances. Segregate from strong acids.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Keep container tightly closed. Protect from direct sunlight.

Storage stability:

Consult local fire marshal for storage requirements.

Protect from temperatures above: 49 °C

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Acetone	ACGIH, US: ACGIH, US: OSHA Z1: OSHA Z1A: OSHA Z1A:	TWA value 250 ppm; STEL value 500 ppm; PEL 1,000 ppm 2,400 mg/m3; STEL value 1,000 ppm 2,400 mg/m3 TWA value 750 ppm 1,800 mg/m3;
cyclohexane	ACGIH, US: OSHA Z1: OSHA Z1A:	TWA value 100 ppm ; PEL 300 ppm 1,050 mg/m3 ; TWA value 300 ppm 1,050 mg/m3 ;
n-Butyl acetate	ACGIH, US: ACGIH, US: OSHA Z1: OSHA Z1A: OSHA Z1A:	STEL value 150 ppm; TWA value 50 ppm; PEL 150 ppm 710 mg/m3; STEL value 200 ppm 950 mg/m3; TWA value 150 ppm 710 mg/m3;

Advice on system design:

General mechanical ventilation should comply with OSHA 1910.94. Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:

Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. Wear a NIOSH-certified (or equivalent) organic vapour respirator. Particulate filters should be added during spray operations. Wear respiratory protection if ventilation is inadequate.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Use appropriate chemically impervious gloves as determined by an evaluation of glove performance characteristics and the hazards and potential hazards identified, including but not limited to butyl, natural and synthetic rubber, nitrile, or neoprene.

Eve protection:

Wear face shield if splashing hazard exists. Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

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General safety and hygiene measures:

Work place should be equipped with a shower and an eye wash. Remove contaminated clothing. Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Contact lenses should not be worn. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form: liquid Odour: aromatic

Odour threshold: No applicable information available.

water white, clear Colour:

pH value: No applicable information available. No applicable information available. Melting point: Freezing point: No applicable information available.

132.80 - 282.20 °F Boiling range: 56.00 - 139.00 °C

Sublimation point: No applicable information available.

(ASTM D3278) Flash point: 6.11 °C

43.00 °F (ASTM D3278)

Flammability: No applicable information available.

Lower explosion limit: 0.90 %(V) Upper explosion limit: 12.80 %(V)

No applicable information available. Autoignition: Vapour pressure: No applicable information available.

Density: 8.6714 lb/USg (calculated) (calculated)

1.0391 g/cm3

(20 °C)

Relative density: 1.0391

(20°C)

Vapour density: No applicable information available. Partitioning coefficient n-No applicable information available. octanol/water (log Pow):

Thermal decomposition: No applicable information available. Viscosity, dynamic: No applicable information available.

Viscosity, kinematic: 20.600 mm2/s

Solubility in water: No applicable information available. Solubility (quantitative): No applicable information available. Solubility (qualitative): No applicable information available. No applicable information available. Molar mass: No applicable information available. Evaporation rate:

10. Stability and Reactivity

Reactivity

No applicable information available.

Chemical stability

The product is chemically stable.

Possibility of hazardous reactions

No applicable information available.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static discharge.

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Incompatible materials

strong oxidizing agents, strong bases, strong acids

Hazardous decomposition products

Decomposition products: carbon dioxide, carbon monoxide

Thermal decomposition:

No applicable information available.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Acetone

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. High concentrations in the air may cause narcosis.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of acute toxicity:Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Assessment of acute toxicity:Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Assessment other acute effects

Assessment of STOT single:

Possible narcotic effects (drowsiness or dizziness).

Irritation / corrosion

Assessment of irritating effects: Eye contact causes irritation.

Information on: Acetone

Assessment of irritating effects: Irritating to eyes. Not irritating to the skin. Repeated exposure may cause skin dryness or cracking.

Information on: cyclohexane

Assessment of irritating effects: Skin contact causes irritation. EU-classification Not irritating to the eyes.

Information on: n-Butyl acetate

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Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Not irritating to the skin. May cause slight irritation to the eyes.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of irritating effects: May cause slight irritation to the skin. Not irritating to the eyes.

Information on: Methyl 1.2.2.6.6-pentamethyl-4-piperidyl sebacate

Assessment of irritating effects: May cause slight irritation to the skin. Not irritating to the eyes.

Information on: 4-chloro-α,α,α-trifluorotoluene

Assessment of irritating effects: May cause slight irritation to the skin. Not irritating to the eyes.

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of sensitization:

Sensitization after skin contact possible.

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Assessment of sensitization:

Sensitization after skin contact possible.

Aspiration Hazard

No applicable information available.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Acetone

Assessment of repeated dose toxicity: The substance may cause damage to the testes after repeated ingestion of high doses, as shown in animal studies. The substance may cause damage to the hematological system after repeated ingestion of high doses. The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.

Information on: cyclohexane

Assessment of repeated dose toxicity: Repeated exposure to the substance by inhalative administration leads to effects similar to those found after single exposure.

Information on: n-Butyl acetate

Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of repeated dose toxicity: The substance may reversibly affect the nervous system, but there are no indications of permanent nerve cell damage. The effects were only observed at doses/concentrations not relevant for classification and/or practical use conditions.

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Assessment of repeated dose toxicity: The substance may reversibly affect the nervous system, but there are no indications of permanent nerve cell damage. The effects were only observed at doses/concentrations not relevant for classification and/or practical use conditions.

Information on: 4-chloro-α,α,α-trifluorotoluene

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Assessment of repeated dose toxicity: Repeated exposure to the substance by oral administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by inhalative administration leads to effects similar to those found after single exposure. May affect the liver and kidneys as indicated in animal studies. Overexposure may cause blood

abnormalities.

Genetic toxicity

Assessment of mutagenicity: No applicable information available.

Carcinogenicity

Assessment of carcinogenicity: No applicable information available.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect.

Information on: Acetone

Assessment of reproduction toxicity: As shown in animal studies, the product may cause damage to the testes after repeated high exposures that cause other toxic effects.

Information on: bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No applicable information available.

12. Ecological Information

No applicable information available.

13. Disposal considerations

Waste disposal of substance:

Do not incinerate closed containers. The use and processing of this product, or addition of other constituents, may cause it to be considered a hazardous waste. Do not discharge into drains/surface waters/groundwater.

Incinerate or dispose of in a RCRA-licensed facility. Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:

WARNING: Empty containers may still contain hazardous residue. Dispose of in accordance with national, state and local regulations.

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14. Transport Information

Land transport

USDOT

Hazard class: 3 Packing group: II

ID number: UN 1866

Hazard label: 3

Proper shipping name: RESIN SOLUTION

Sea transport

IMDG

Hazard class: 3 Packing group: II

ID number: UN 1866

Hazard label: 3 Marine pollutant: NO

Proper shipping name: RESIN SOLUTION

Air transport

IATA/ICAO

Hazard class: 3 Packing group: II

ID number: UN 1866

Hazard label: 3

Proper shipping name: RESIN SOLUTION

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
NJ	67-64-1	Acetone
	123-86-4	n-Butyl acetate
	98-56-6	4-chloro-α,α,α-trifluorotoluene
PA	67-64-1	Acetone
	123-86-4	n-Butvl acetate

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including P-CHLORO-#,#,#-TRIFLUOROTOLUENE (PARA-CHLOROBENZOTRIFLUORIDE, PCBTF), which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

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NFPA Hazard codes:

Health: 2 Fire: 3 Reactivity: 0 Special:

HMIS III rating

Health: 2^m Flammability: 3 Physical hazard:0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2021/06/11

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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