DISPERBYK-130

Version 10 | Revision Date 05/17/2026 | Print Date 06/18/2026

SECTION 1. IDENTIFICATION

Product name : DISPERBYK-130

Manufacturer or supplier's details

Company : BYK USA LLC
524 South Cherry Street
Wallingford CT 06492

Telephone : (203) 265-2086
Visit our web site : www.byk.com
E-mail address : BRIEF.BYK.NAFTA@altana.com

Emergency telephone number : 203-265-2086; CHEMTREC 1-800-424-9300 / +1 703-527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Wetting & Dispersing Additive
Restrictions on use : Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Eye irritation : Category 2A

Skin sensitisation : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Kidney)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
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.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Solution of polyamine amides of unsaturated polycarboxylic acids

Hazardous components

HMIRA# 6882 Exemption Granted 30.04.2008

Component	CAS-No.	Concentration (%)
Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine	162627-18-1	>= 30 - < 60
Solvent naphtha, petroleum, light aromatic	64742-95-6	>= 30 - < 60
2-Butoxyethanol	111-76-2	>= 5 - < 10
Triethylenetetramine	112-24-3	>= 1 - < 3

The specific chemical identity/weight percent of proprietary ingredient(s) is a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Cool closed containers exposed to fire with water spray. Will not explode on mechanical impact. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Copper oxides Nitrogen oxides (NOx)
Further information	:	Keep away from heat and sources of ignition. Keep away from oxidizing agents. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Neutralise with acid. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid contact with skin and eyes.

For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Keep away from strong bases.
Keep away from oxidizing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
2-Butoxyethanol		TWA	50 ppm 240 mg/m3	OSHA Z-1
2-Butoxyethanol		TWA	5 ppm 24 mg/m3	NIOSH REL
Triethylenetetramine	112-24-3	TWA	1 ppm	US WEEL

Hazardous components without workplace control parameters

Engineering measures : Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection
Material : Viton

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

		Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	light brown
Odour	:	aromatic
Odour Threshold	:	No data available
pH	:	10, Concentration: 1 % (68 °F (20 °C)) Method: Universal pH-value indicator
Melting point/ range	:	< 32 °F (< 0 °C) Method: derived
Initial boiling point	:	320.00 °F (160.00 °C) Method: derived
Vapour pressure	:	4 hPa (68.00 °F (20.00 °C)) Method: derived
Flash point	:	113.00 °F (45.00 °C) Method: 48 (Abel-Pensky) DIN 51755
Upper explosion limit	:	10.60 %(V)
Lower explosion limit	:	1.00 %(V)
Evaporation rate	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	0.9300 g/cm3 (68.00 °F (20.00 °C)) Method: 4 (20°C oscillating U-tube)
Solubility(ies)		
Water solubility	:	immiscible

Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	> 392 °F (> 200 °C) Method: DIN 51794
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	689.000 mm2/s (68.00 °F (20.00 °C))
		347.000 mm2/s (104.00 °F (40.00 °C))

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents Alkalis
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Skin Absorption
Inhalation
Eyes
Ingestion

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat, male and female): 11,100.000000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	Acute toxicity estimate : > 40 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Acute oral toxicity : LD50 (Rat): > 4,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3670 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 3,480 mg/kg

112-24-3 Triethylenetetramine:
Acute oral toxicity : LD50 (Rat): 2,500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 805 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

Remarks: May cause skin irritation and/or dermatitis.

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Species: Rabbit
Result: Moderate skin irritation

111-76-2 2-Butoxyethanol:
Species: Rabbit
Result: Skin irritation

112-24-3 Triethylenetetramine:

Method: OECD Test Guideline 435
Result: Corrosive

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: Eye irritation
Assessment: Irritating to eyes.
Method: OECD Test Guideline 405
GLP: yes

Remarks: Causes serious eye irritation.

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

Species: Bovine corneal opacity and permeability assay (BCOP)
Result: No eye irritation
Method: OECD Test Guideline 437
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Species: Rabbit
Result: Eye irritation

111-76-2 2-Butoxyethanol:
Species: Rabbit
Result: Eye irritation
Method: OECD Test Guideline 405
GLP: yes

112-24-3 Triethylenetetramine:
Species: Rabbit
Result: Corrosive to eyes

Respiratory or skin sensitisation

Product:

Species: Mouse
Result: Causes sensitisation.
Remarks: active ingredient

Remarks: Causes sensitisation.

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:
Test Type: Mouse Local Lymph Node assay (LLNA)
Species: Mouse
Assessment: The product is a skin sensitiser, sub-category 1B.
Method: OECD Test Guideline 429
Result: The product is a skin sensitiser, sub-category 1B.
GLP: yes

64742-95-6 Solvent naphtha, petroleum, light aromatic:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

111-76-2 2-Butoxyethanol:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

112-24-3 Triethylenetetramine:
Test Type: Buehler Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473

Result: negative
GLP: yes

: Test Type: In vitro mammalian cell gene mutation test (mouse lymphoma)

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks: No data available

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:

Effects on fertility :
Species: Rat
Sex: male and female
Application Route: Oral
NOAEL: 1,000 mg/kg,
F1: 1,000 mg/kg,
Method: OECD Test Guideline 422
GLP: yes

Effects on foetal development : Species: Rat
Application Route: Oral
1,000 mg/kg
1,000 mg/kg

Method: OECD Test Guideline 422
GLP: yes

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Product:

Remarks: No data available

Repeated dose toxicity

Product:

Remarks: Absorption of 2-Butoxyethanol by inhalation and/or repeated skin contact may cause injury to liver, kidney and blood damage.
2-Butoxyethanol is considered fetotoxic; has caused toxic reproductive effects in laboratory animals at maternally toxic doses.
2-Butoxyethanol had both positive and negative results in in vitro mutagenicity studies.
Inhalation of Naphtha has caused fetotoxic effects at maternally toxic doses in laboratory animals.
Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage.
Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.
In a 2 yr. cancer study, the NTP has determined 2-butoxyethanol has a potential to cause cancer (potentially carcinogenic to mice) but there is not enough evidence to list 2-butoxyethanol as a carcinogen. The relevance to humans is unknown.
Cumene is an IARC 2B and NTP Group 2 Carcinogen. Cumene has caused tumors in rats and mice (lung, liver and kidney). Proposed cancer causing mechanisms for lung and liver tumors are similar to human metabolic pathways. The relevance of kidney tumors in humans is uncertain.

Components:

162627-18-1 Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine:
Species: Rat, male and female
NOAEL: 300 mg/kg
Application Route: Oral
Method: OECD Test Guideline 422
GLP: yes
Target Organs: Heart

Aspiration toxicity

Product:

No data available

Components:

64742-95-6 Solvent naphtha, petroleum, light aromatic:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

Product:

Inhalation:

Symptoms:	High concentrations of vapors may be irritating to the respiratory tract. May cause CNS depression (drowsiness, loss of coordination and fatigue); narcosis.

Skin contact:

Symptoms:	Contact will probably cause irritation; may cause skin sensitization.

Eye contact:

Symptoms:	Contact will probably cause severe irritation and corrosion.

Ingestion:

Symptoms:	Ingestion will probably irritate the digestive tract; high dosages may cause CNS depression.

Further information

Product:

Remarks: Absorption of 2-Butoxyethanol may cause acute red blood cell damage and kidney effects. Inhalation of 2-Butoxyethanol has damaged the kidneys of laboratory animals. OSHA PEL-TWA for 2-butoxyethanol = 50 ppm (skin)

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :

Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

EPA Hazardous Waste Code(s) : D001: Ignitable
D018: Benzene

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 1268
Proper shipping name : Petroleum distillates, n.o.s.
Class : 3

Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1268
Proper shipping name	:	PETROLEUM DISTILLATES, N.O.S.
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	yes
Remarks	:	IMDG Code segregation group - none

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

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number	:	UN 1268
Proper shipping name	:	Petroleum distillates, n.o.s.
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID
Marine pollutant	:	no

Container sizes: 5 gallon pails; 2 oz. and 16 oz. samples

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 - Emergency Release Notification

This material does not contain any components with a section 304 EHS RQ.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

This material does not contain any components with a SARA 302 RQ.

SARA 311/312 Hazards : Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2

of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This product contains the following toxic chemical(s) 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.

2-Butoxyethanol	111-76-2	7.8 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Cumene	98-82-8	.9 %

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

2-Butoxyethanol	111-76-2	7.8 %

Non-volatile (Wt) : 48 - 54 %
Method: 23 (20min/150°C)
DIN EN ISO 3251
Non-volatile information is not a specification.

Massachusetts Right To Know

2-Butoxyethanol	111-76-2
Triethylenetetramine	112-24-3

Pennsylvania Right To Know

Fatty acids, C18-unsatd., trimers, reaction products triethylenetetramine	162627-18-1
Solvent naphtha, petroleum, light aromatic	64742-95-6
2-Butoxyethanol	111-76-2
Triethylenetetramine	112-24-3
Cumene	98-82-8
Naphthalene	91-20-3
Ethyl benzene	100-41-4

New Jersey Right To Know

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : 800963-5070

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Cumene, Naphthalene, Ethyl benzene, Benzene, which is/are known to the State of California to cause cancer, and Toluene, Benzene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

TSCA	:	All substances listed as active on the TSCA inventory
Section 5a	:	No substances are subject to a Significant New Use Rule.
Section 4 / 12(b)	:	No substances are subject to TSCA 12(b) export notification requirements.
DSL	:	We certify that all of the components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

Revision Date : 05/17/2026

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.