

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TURKEY ST/BR + HIPHOS GT & ADIFLOW

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

Use of the Sub-
stance/Mixture : Premix for Animal Feeds

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products
45 Waterview Blvd
US-07054-1298 Parsippany

Telephone : (908) 475-7373
Telefax : (908) 475-7406
E-mail address Responsible/issuing person : sds.nutritionalproducts@dsm.com

1.4 Emergency telephone number

1-800-424-9300 (24 HR CHEMTREC, CA & US); Outside CA & US +1-703-741-5970
(COLLECT CALLS ACCEPTED)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

CAUTION	
Appearance	powder
Odour	No information available.
Hazard Summary	May cause birth defects.

GHS Classification

Combustible dust :
Reproductive toxicity : Category 1B

GHS Label element

Hazard pictograms : 

Signal word : Danger

Hazard statements : May form combustible dust concentrations in air
H360 May damage fertility or the unborn child.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Skin : May cause skin irritation.

Eyes : May cause eye irritation.

Aggravated Medical Condition : None known.

Symptoms of Overexposure : No specific symptoms known.

Carcinogenicity:**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.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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.

Additional hazards and advice

Risk of dust explosion.

Women of childbearing age must avoid any overexposure.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Brief description of the product : Mixture

Hazardous components

Component	CAS-No.	Weight percent
silicon dioxide, amorphous	112926-00-8	5 - 10
nicotinic acid	59-67-6	5 - 10
calcium pantothenate , D-form	137-08-6	1 - 5
menadione sodium bisulfite, trihydrate	6147-37-1	1 - 5
retinyl acetate (vitamin A acetate)	127-47-9	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. After any accidental exposure women should seek medical advice from a physician.
If inhaled	: Move to fresh air. Consult a physician after significant exposure.
In case of skin contact	: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.
In case of eye contact	: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No specific symptoms known.
Notes to physician	: Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES**Flammable properties**

Flash point : Not applicable

Fire fightingSuitable extinguishing media : Water
FoamFurther information : 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.
Consider dust explosion hazard.**Protective equipment and precautions for firefighters**

Specific hazards during fire-fighting : None known.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Evacuate personnel to safe areas.

tive equipment and emergency procedures

Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions

: Do not flush into surface water or sanitary sewer system.
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

: Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

: Avoid formation of respirable particles.
Avoid exposure - obtain special instructions before use.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion

: Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Take precautionary measures against static discharges.

Conditions for safe storage

: Store at room temperature.

Keep container tightly closed and dry.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
silicon dioxide, amorphous	silica gel	TWA	6 mg/m ³	OSHA P0
calcium pantothenate , D-form	137-08-6	TWA	10 mg/m ³	DSM Internal Limit

Personal protective equipment

Respiratory protection

: In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection

: Glove material: for example nitrile rubber

Glove material: for example nitrile rubber
Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.

Eye protection

: Safety glasses with side-shields

- Skin and body protection : 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.
Avoid contact with skin, eyes and clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

- Appearance : powder
- Odour : No information available.
- Odour Threshold : No information available.
- pH : No data available
- Melting point/range : not determined
- Boiling point/boiling range : not determined
- Flash point : Not applicable
- Flammability (solid, gas) : May form combustible dust concentrations in air
- Vapour pressure : Not applicable
- Relative vapour density : Not applicable
- Density : not determined
- Water solubility : not determined
- Partition coefficient: n-octanol/water : Not applicable
- Auto-ignition temperature : No data available
- Thermal decomposition : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available

9.2 Other information

No data available

SECTION 10. STABILITY AND REACTIVITY

- Reactivity : No hazards to be specially mentioned.
- Chemical stability : Stable under recommended storage conditions.
- Possibility of hazardous reactions : Dust may form explosive mixture in air.
- Conditions to avoid : Heat
- Incompatible materials : Strong acids and strong bases
Strong oxidizing agents
- Hazardous decomposition : No decomposition if used as directed.

products

SECTION 11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
(Calculation method)
- Skin irritation : Prolonged skin contact may cause skin irritation.
- Eye irritation : Dust contact with the eyes can lead to mechanical irritation.
- Genotoxicity in vitro
retinyl acetate : not mutagenic, not genotoxic (Various test systems)
- Teratogenicity
retinyl acetate : Teratogenic
embryotoxic
- STOT - single exposureAcute exposure
menadione sodium bisulfite, : May cause respiratory irritation.
trihydrate
- Experience with human exposure
retinyl acetate : RDA (Recommended Daily Allowance) 0.8 mg pure vitamin A
(retinol) per day
established for men
RDA (Recommended Daily Allowance) ca. 0.7 mg pure vita-
min A (retinol) per day
established for women
- Experience with human exposure: Skin contact
- nicotinic acid : Skin: temporary redness, temporary itching
- menadione sodium bisulfite, : Skin contact may provoke the following symptoms:
trihydrate
Toxic skin damage (especially on damp skin), Skin irritation,
Discoloration, Drying of the skin, Blistering
- retinyl acetate : Skin contact may provoke the following symptoms:
Local irritation
- Experience with human exposure: Ingestion
retinyl acetate : Acute overdose produces the following symptoms:
Headache, Irritability, Tiredness, Drowsiness, Nausea, Vo-
miting, Signs of increased intracranial pressure, Generalized
desquamation of the skin (after ca. 24 hours)
- Further information
menadione sodium bisulfite, : Exposure to this product may cause interaction to any person
trihydrate being treated with a coagulation inhibitor (warfarin; coumarin
base).

retinyl acetate : Danger of cumulative effects.

SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish
menadione sodium bisulfite, trihydrate : Oncorhynchus mykiss (rainbow trout)
LC50 (96 h) 0.43 mg/l
(nominal concentration)
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
menadione sodium bisulfite, trihydrate : Daphnia magna (Water flea)
EC50 (48 h) 0.73 mg/l
(nominal concentration)
(OECD Test Guideline 202)

No data is available on the product itself.

Persistence and degradability

Biodegradability
menadione sodium bisulfite, trihydrate : Not readily biodegradable.
17 % (28 d)
(OECD Test Guideline 301A)

retinyl acetate : Not readily biodegradable.
33 % (28 d)
(OECD Test Guideline 301B)

No data is available on the product itself.

Bioaccumulative potential

Bioaccumulation : No data available

Partition coefficient: n-octanol/water : Not applicable

Mobility in soil

Distribution among environmental compartments : No data available

Results of PBT and vPvB assessment

Assessment : Not applicable

Other adverse effects

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 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Discharge into the environment must be avoided.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.

User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.

Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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**

Not regulated as a dangerous good

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Fire Hazard
Chronic Health Hazard

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

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

silicon dioxide, amorphous	silica gel	5 - 10 %
sodium sulphate	7757-82-6	1 - 5 %

Pennsylvania Right To Know

Mixture of sodium /calcium ascorbyl-2-phosphate and inorganic components	Not Assigned	10 - 20 %
rice hulls	Not Assigned	10 - 20 %
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	7695-91-2	10 - 20 %
silicon dioxide, amorphous	silica gel	5 - 10 %
nicotinic acid	59-67-6	5 - 10 %
sodium sulphate	7757-82-6	1 - 5 %

New Jersey Right To Know

Mixture of sodium /calcium ascorbyl-2-phosphate and inorganic components	Not Assigned	10 - 20 %
rice hulls	Not Assigned	10 - 20 %
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	7695-91-2	10 - 20 %
silicon dioxide, amorphous	silica gel	5 - 10 %
nicotinic acid	59-67-6	5 - 10 %

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

TSCA : Not On TSCA Inventory

: Mixture of sodium /calcium ascorbyl-2-phosphate and inorganic components

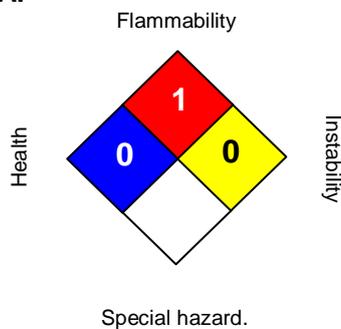
: rice hulls

- : silicon dioxide, amorphous
- : menadione sodium bisulfite, trihydrate
- : Protein hydrolyzates, vegetable
- : Maltodextrin
- : calcifediol hydrate

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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.

Abbreviations: ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CPR = Controlled Products Regulations. DSL = Canadian Domestic Substance List. DOT = Department of Transportation. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HCS = Hazardous Communication Standard. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IMDG = International Maritime Dangerous Good. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.